Robinson ENGINEERING

Municipal Expertise - Commercial & Commitment

Dana E. Ludwig, PE, CFM, CPESC
Direct Line: (815) 412-2702
Email: dludwig@reltd.com

May 30, 2018

Project No. 16-770.CHN

Illinois Environmental Protection Agency
Water Pollution Control
Compliance Assurance Section #19
P.O. Box 19276
Springfield, IL 62794-9276

RE: Village of Channahon
NPDES Permit MS4 Annual Report
Reporting Cycle 2017-2018
Permit No. ILR40 - 0623

Dear Sir/Madam:

Enclosed please find the following items in regard to the NPDES Permit for Storm Water Discharges from Municipal Separate Storm Sewer Systems (MS4) for the Village of Channahon:

- MS4 Annual Facility Inspection Report for 2017-2018
- Various Attachments supporting Minimum Control Measures

The Village did not fund any construction projects over one acre during the reporting cycle.

This year, the Village has worked with other entities to satisfy permit obligations. Support documentation from Lower DesPlaines Watershed Group (LDWG) and Lower DuPage River Watershed Coalition (LDRWC) are also enclosed with this letter.

This documentation has also been emailed to epa.ms4annualinsp@illinois.gov. If you have any questions, please call me at (815) 412-2702.

Very truly yours,

ROBINSON ENGINEERING, LTD.

Dana E. Ludwig

Dana E. Ludwig, PE, CFM, CPESC
Senior Project Manager

Encl.

xc: Don Kinzler, Engineering Project Manager – Village of Channahon
Jay Patel – IEPA-Des Plaines office

Illinois Environmental Protection Agency

Bureau of Water • 1021 N. Grand Avenue E. • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Division of Water Pollution Control
ANNUAL FACILITY INSPECTION REPORT
for NPDES Permit for Storm Water Discharges from Separate Storm Sewer Systems (MS4)

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Compliance Assurance Section at the above address. Complete each section of this report.

Report Period: From March, 2017 To March, 2018

Permit No. ILR40 0623

MS4 OPERATOR INFORMATION: (As it appears on the current permit)

Name: Village of Channahon Mailing Address 1: 24555 S. Navajo Dr.

Mailing Address 2: County: Will

City: Channahon State: IL Zip: 60410 Telephone: 815-467-8398

Contact Person: Donald R. Kinzler, PE, CFM Email Address: dkinzler@channahon.org
(Person responsible for Annual Report)

Name(s) of governmental entity(ies) in which MS4 is located: (As it appears on the current permit)

Will County

Grundy County

THE FOLLOWING ITEMS MUST BE ADDRESSED.

A. Changes to best management practices (check appropriate BMP change(s) and attach information regarding change(s) to BMP and measurable goals.)

1. Public Education and Outreach ☐
2. Public Participation/Involvement ☐
3. Illicit Discharge Detection & Elimination ☐
4. Construction Site Runoff Control ☐
5. Post-Construction Runoff Control ☐
6. Pollution Prevention/Good Housekeeping ☐

B. Attach the status of compliance with permit conditions, an assessment of the appropriateness of your identified best management practices and progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and your identified measurable goals for each of the minimum control measures.

C. Attach results of information collected and analyzed, including monitoring data, if any during the reporting period.

D. Attach a summary of the storm water activities you plan to undertake during the next reporting cycle (including an implementation schedule.)

E. Attach notice that you are relying on another government entity to satisfy some of your permit obligations (if applicable).

F. Attach a list of construction projects that your entity has paid for during the reporting period.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Owner Signature: Date: 05-25-18

Donald R. Kinzler, PE, CFM
Printed Name:

Engineering Project Manager
Title:

EMAIL COMPLETED FORM TO: epa.ms4annualinsp@illinois.gov

or Mail to: ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL
COMPLIANCE ASSURANCE SECTION #19
1021 NORTH GRAND AVENUE EAST
POST OFFICE BOX 19276
SPRINGFIELD, ILLINOIS 62794-9276

LONG-TERM HOUSEHOLD HAZARDOUS WASTE FACILITY INFORMATION

A-1

- **Open Year Round (Excluding holiday weekends)**
- **All Illinois Residents May Drop-off household hazardous waste at Long-Term Facilities**
- **www.epa.illinois.gov/topics/waste-management/waste-disposal/household-hazardous-waste/collections/index**

Long-Term Household Hazardous Waste Facility in Naperville
156 Fort Hill Drive, Naperville, IL 60540
Days/Hours of Operation (Closed on Holiday Weekends):
Sat: 9 am – 2 pm
Sun: 9 am – 2 pm
www.naperville.il.us/hhw.aspx Ph# (630)420-6095

Long-Term Household Hazardous Waste Facility in Chicago
1150 N. North Branch (on Goose Island), Chicago, IL 60642
Days/Hours of Operation (Closed on Holidays):
Tues: 7 am – 12 pm
Thur: 2 pm – 7 pm
First Saturday of the month 8 am -
www.cityofchicago.org/city/en/de
ons and permitting/svcs/househ
recycling-facilitiy-overview.html

Materials Accepted at the Long-Term Sites:
Aerosol Paints, Automotive fluids, Batteries (Rechargeable, lithium, car batteries), Small Fire extinguishers, Flammables, Fluorescent bulbs, Compact Fluorescent Light Bulbs (unbroken only), Household cleaners, Mercury, Oil Based Paints & stains, Poison, Pesticides, Fertilizers, scription Medications n-controlled only), pane tanks (20 pound or less), Solvents & ppers, & Thermostats.

Went in 215 New Res. Packets
On Cable + ~~(both sides)~~
37 copies @ counter

ELECTRONICS DROP-C ired & 2 TV Limit)

Channahon Township with Families of Faith 24466 W. Eames St/ Rt 6 Channahon 1st & 3rd Thursday of the month 5 pm to 7 pm	Wil 57 (Ot 2nd & 4th Tuesday of the month 5 pm to 7 pm	Vilmington Water St., gton 2nd & 4th Thursday of the month 5 pm to 7 pm

Please visit www.willcountygreen.com for a full list of drop-off locations & additional info.

willcoun
The will power to re

22 additional copies Just this side @ front counter

815-727-8834

HOUSEHOLD HAZARDOUS WASTE DROP OFF EVENT

Open to Will County Residents Only!
(Exception: All Residents of Channahon & Minooka may participate.)

Saturday, Nov. 11th, 2017

Faded/Tattered US flags will be collected by Boy Scout Troop 444 for dignified retirement.

8:00 am to 3:00 pm

Families of Faith Church Parking Lot
24466 W. Eames St (Rt 6), Channahon, IL 60410

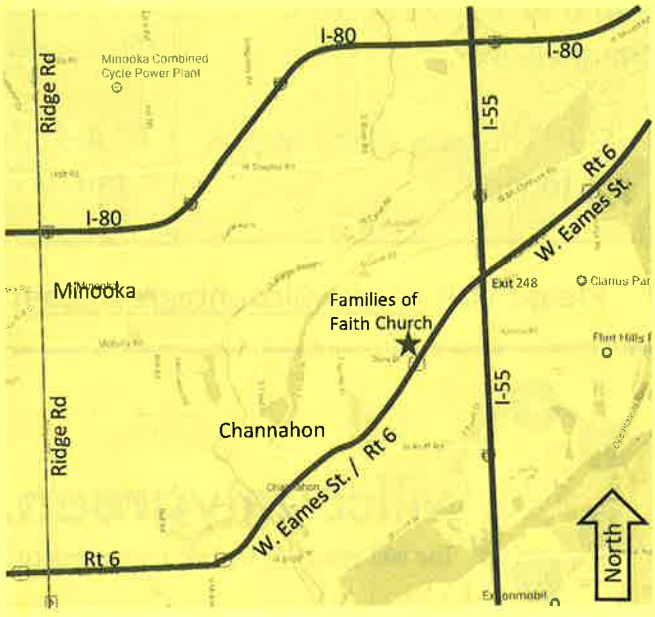
Acceptable Wastes

- Household Chemicals
- Oil Based Paints/Stains
- Latex Based Paint/Stain
- Paint Thinners/Solvents
- Aerosol Paints & Pesticides
- Rechargeable Batteries
- Fluorescent Light Bulbs
- Compact Fluorescent Bulbs
- Mercury Containing Items
- Handheld Propane Cylinders
- Lawn & Garden Chemicals & Fertilizers
- Antifreeze
- Used Oil
- Used Oil Filters
- Old Gasoline
- Lead Acid Batteries
- Used Parts Cleaner
- Driveway Sealer
- Drain Cleaners
- Pool Chemicals
- Used Cooking Oil

Unacceptable Wastes

- Alkaline Batteries
- Fire Extinguishers
- Business Wastes
- Agricultural Wastes
- Medical Wastes
- Institutional Wastes
- Radioactive Wastes
- Controlled Substances
- Governmental Wastes
- Gas Cylinders (Except one pound propane)
- Electronics
- Televisions/CRT'S
- Tires
- Garbage
- Sharps/Needles
- Empty Containers
- Smoke Detectors
- Ammunition
- Fireworks/Explosives

Do NOT bring these items!



815-727-8834

willcountygreen.com

The **will** power to rethink, renew, reduce and recycle.

Event Sponsored By:
Will County Land Use Department,
Resource Recovery & Energy Division

Location Sponsor:
Families of Faith Church & Academy

Only Tap Water **Delivers**

Only Tap Water Delivers
Public Health

In a world where an estimated 3 million people die every year from preventable waterborne disease, water systems in North America allow us to drink from virtually any public tap with a high assurance of safety.

- A safe water supply is critical to protecting the public health – the first obligation of all water suppliers. Without our modern water systems, diseases such as cholera and dysentery would be part of everyday life.
- In the United States, water utilities monitor for more than 100 contaminants and must meet close to 90 regulations for water safety and quality. Those water standards are among the world's most stringent.
- States may also require utilities to meet additional standards.
- Community water supplies are tested every day. Tap water undergoes far more frequent testing than bottled water.
- Many North American water systems add small amounts of fluoride to their water supplies to help prevent tooth decay. Child cavity rates have been reduced by 20-40% where fluoridation has been implemented.

Did You Know?

Every year, water utilities provide customers with a detailed report on the quality of their drinking water. To find your utility's report, contact your local utility or visit www.drinktap.org.

UN focuses on safe water in 'Water for Life' decade

- Underscoring the public health value of a safe water supply, the United Nations has dubbed 2005-2015 the 'Water for Life Decade.'
- The UN seeks to reduce by half the proportion of people without access to safe drinking water by the year 2015.
- "Water and Sanitation is one of the primary drivers of public health. I often refer to it as 'Health 101' ..."

  Dr LEE Jong-wook, Director-General, World Health Organization

American Water Works Association

The Authoritative Resource on Safe Water

Only Tap Water **Delivers**

We don't often pause to consider the incredible value of a safe, reliable water supply — and the water system that delivers it — in our everyday lives. But consider what tap water does that no other water can do.

Only tap water delivers ...

... public health protection.

In a world where an estimated 3 million people die every year from preventable waterborne disease, our water systems allow us to drink from virtually any public tap with a high assurance of safety. Each community water supply meets rigorous federal and state health-protective standards.

... fire protection.

A well-maintained water system is critical in protecting our communities from the ever-present threat of fire. A system that provides reliable water at an adequate pressure can be the difference between a small fire and an urban inferno. The ability to suppress fires also influences new home construction, business location decisions and insurance rates.

... support for the economy.

Businesses or housing developments do not succeed without a safe and sustainable water supply. Tap water is critical to businesses' day-to-day operations and is often a primary ingredient in the products they create. The incredible value of water is magnified during times of drought and when populations expand into arid climates.

... the overall quality of life we enjoy.

Any measure of a successful society — low mortality rates, economic diversity, productivity, and public safety — is in some way related to access to safe water. In North America, we take for granted that safe water is always accessible to drink, to wash our clothes, to water our lawns and for a myriad of other purposes. When water service is interrupted, we're all reminded of the extraordinary value of water resources and service.

American Water Works Association

The Authoritative Resource on Safe Water

prairierivers network

Rain Gardens for Illinois

WHAT IS A RAIN GARDEN?

Do you have a wet basement, water that pools on your property, or a winter skating rink that results from downspout water rushing down your driveway? With a little effort, you can put that water to work and create a very attractive landscape feature! A rain garden is a vegetated depression specially designed to capture and use rain and snowmelt, collectively known as storm water.

Rain gardens receive storm water runoff from upstream drainage areas such as roofs, driveways, and lawns. Water that pools in rain gardens nourishes the plants and filters into the soil. Rain gardens imitate natural filtering systems such as wetlands.

You don't have to be an engineer to make a rain garden, and the numerous economic and environmental benefits will last for years!

RAIN GARDEN BENEFITS

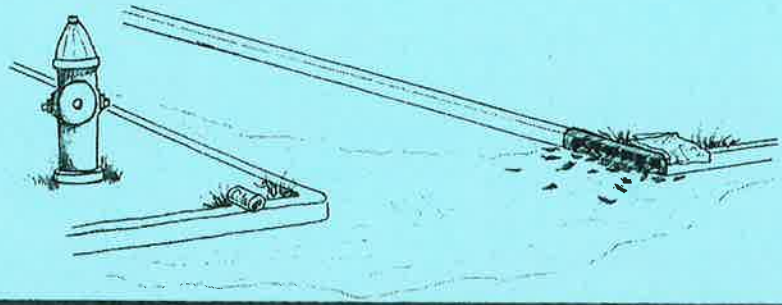
Rain gardens provide a number of benefits:

- offer a unique, beautiful landscape feature
- provide habitat for plants and wildlife such as hummingbirds and butterflies
- reduce flooding and water damage
- absorb more water than traditional lawns
- recharge ground water
- remove pollutants from storm water

WHY WORRY ABOUT STORM WATER?

Precipitation that is unable to filter into the ground moves into basements and streets, sometimes causing flood damage. As storm water flows downhill across lawns and impermeable surfaces, it picks up debris, soil, and chemical contaminants. This polluted water runs into storm drains and empties into rivers and lakes, often without treatment.

The influx of storm water into Illinois waterways not only makes our water resources less clean, but also causes the destabilization of banks and increases downstream flooding. Waterways need to be protected from the negative impacts of storm water because they are a source of drinking water, recreation, and wildlife habitat.



BASIC STEPS FOR CREATING A RAIN GARDEN

1. Choose a location
2. Determine rain garden size
3. Call JULIE (dial 811)
4. Dig the depression
5. Install inflow and outflow conveyances
6. Mulch the rain garden
7. Plant the rain garden
8. Water and weed regularly

Please refer to the text in this brochure for more details on each step.

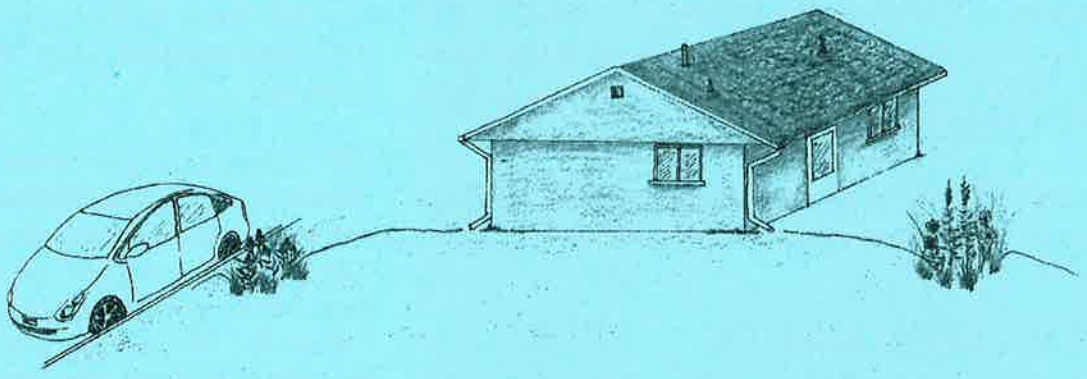
SELECTING A LOCATION FOR THE RAIN GARDEN

Rain gardens are a great way to reduce storm water runoff and beautify the landscape in residential, commercial, and industrial settings. The first step of installing a rain garden is deciding where to put it! Suitable locations include courtyards, lawns, and next to buildings, roads, driveways, or sidewalks. Avoid spots that are unlikely to receive storm water runoff from surrounding areas.

The most efficient way to determine the location of your rain garden is to observe your property during and after a rainfall. Note both where the water comes from and the area it travels to and pools. An ideal place for a rain garden is an existing low spot where water collects but also drains over time. Or, create your own depression close to an existing downspout. You can also be neighborly and intercept water that flows off your property.

A few more factors to consider when deciding on the location of your rain garden include:

- place rain garden at least 10 feet from building foundations
- avoid underground utility lines, septic fields, and tree roots
- the water table should be greater than 2 feet deep
- a location with partial or full sunlight will dry out faster and allow the use of native prairie plants



SOIL TESTING

If you need help determining the properties of your soil, you can submit a sample for particle size analysis at a soil testing laboratory. The University of Illinois Extension maintains a list of laboratories located in Illinois and neighboring states.

When you have a location in mind, dig a small hole approximately 6 inches deep and determine the soil type and water permeability. Sandy soils are gritty, whereas clay soils are sticky when wet. Fill the hole with water and observe how long it takes to drain. The soil is suitably permeable if the water disappears in 24 hours. Sandy, permeable soils are ideal because rain gardens should drain within a few days. When clay soil is present or permeability is low, you can:

- relocate the rain garden to more permeable soil
- amend the soil with sand and organic matter
- create a water garden

DIGGING THE RAIN GARDEN

Before digging the rain garden, determine the surface area, depth, and shape that are appropriate for your site and drainage conditions. A shape that works well is a bean-shape, with the long side facing upslope in order to catch as much storm water runoff as possible. Your rain garden should be approximately 10-30% of the drainage areas providing runoff. The depth of the rain garden should generally be 3-12 inches. If clay soils are present, the rate of water percolation into the ground will be low and therefore the rain garden should be relatively shallow and large in area. If the soil has good permeability (≥1 inch/hour), the rain garden can be on the deeper and smaller side of the suggested ranges.

It is best to dig your rain garden in the spring or early summer. The sides should be gently sloped, so that the rain garden resembles a saucer instead of a bowl. Use soil you have excavated to level out the bottom. The excess soil can also be used to create a berm on the downslope side of the rain garden. When working on the berm, you can install a rock-lined overflow spillway or a drain pipe so that you have more control of the rate of water loss. This extra step is only recommended if you are concerned about the rain garden overflowing or the soil is high in clay. Direct storm water to the rain garden with a downspout extension or shallow channel. Water can also come from sump pump outlets. Add decorative rock to soften the impact of incoming water.

PLANTING THE RAIN GARDEN

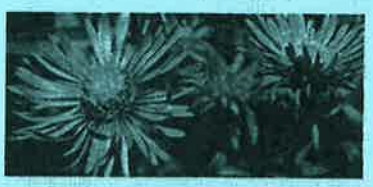
- Use native species because they are adapted to local conditions, benefit wildlife, have deep root systems, and are often perennial
- Avoid species that are aggressive or exotic
- Choose plants with different bloom times so the rain garden remains colorful during the growing season

- Remove existing vegetation to reduce plant competition (non-toxic techniques include sod cutters and layers of black plastic or newspaper)
- Place species according to moisture tolerance, light requirements, and plant height (ex. wettest spot in rain garden should have the more moisture-tolerant species)
- Consider clumping species for visual effect
- Add 2-4 inches of mulch to help remove pollutants, maintain moisture, and prevent erosion and weeds

NATIVE PLANTS

River Oats

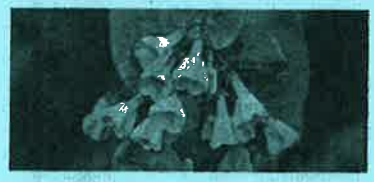
Gray Sedge



New England Aster

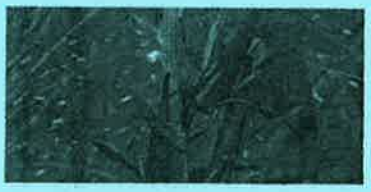
Swamp Milkweed

Golden Alexander



Virginia Bluebells

Great Blue Lobelia



Cardinal Flower

PLANTS FOR SUN AND SHADE

SUNNY GARDEN

Common Name	Height	Color	Bloom Time
Blue Flag Iris	2-3'	Blue	May-Jun
Golden Alexander	1-2'	Yellow	May-Jun
Great Blue Lobelia	2-4'	Blue	Aug-Sep
Joe-Pye Weed	3-6'	Pink	Jul-Sep
Mountain Mint	2-4'	White	Jul-Sep
New England Aster	1-5'	Purple	Aug-Oct
Palm Sedge	1-3'	Green	Apr-Jun
River Oats	2-3'	Green	Jul-Oct
Swamp Milkweed	2-4'	Pink	Jul-Aug

SHADY GARDEN

Common Name	Height	Color	Bloom Time
American Bellflower	2-6'	Violet	Jun-Oct
Bottlebrush Grass	2-5'	Green	Jun-Aug
Cardinal Flower	2-4'	Red	Jul-Sep
Cinnamon Fern	2-4'	Green	No flower
Dutchman's Breeches	1'	White	Apr-May
Gray Sedge	1-3'	Green	May-Sep
Jack-In-The-Pulpit	1-2'	Green	Apr-Jul
Orange Jewelweed	2-5'	Orange	Jun-Sep
Virginia Bluebells	1-3'	Blue	Apr-May

For more plant ideas, visit:

Illinois Wildflowers - **www.illinoiswildflowers.info**

Blue Thumb Plant Selector - **www.bluethumb.org/plants**

MAINTAINING THE RAIN GARDEN

The care needed to maintain a functioning rain garden does not differ greatly from a regular flower garden. Fertilizers are not needed, but compost can be blended into the soil to increase nutrients. Consider fencing the rain garden initially to keep your plants safe from hungry herbivores!

During the first year, the rain garden will need regular watering (~1 inch/ week) and weeding. Over time, the plants will grow larger and develop deep root systems. Simultaneously, the need for weeding and watering will decrease.

Each spring, remove the dead material from the previous growing season. Also replenish the mulch and make sure the inflow and outflow conveyances are clear of debris.

MOSQUITOES

Mosquitoes will not breed successfully in well-drained rain gardens. It takes 10-14 days for a mosquito to fully develop from egg to adult. Rain gardens should filter water completely within a few days.

OTHER RESOURCES

More details about rain gardens are available from:

Prairie Rivers Network
www.prairierivers.org/raingardens

Wisconsin Department of Natural Resources
dnr.wi.gov/runoff/rg

This rain garden brochure is a product of Prairie Rivers Network. To learn more, call us to schedule a rain garden presentation. If you build a rain garden, please send your stories and pictures to info@prairierivers.org.

prairieriversnetwork

1902 Fox Drive, Suite G
Champaign, IL 61820
217-344-2371
www.prairierivers.org

Illustrations by Karie Neukomm and photographs by Michael Jeffords and John Hilty.

A-1

EPA United States Environmental Protection Agency

EPA 841-F-03-003

Protecting Water Quality *from* URBAN RUNOFF

Clean Water Is Everybody's Business

In urban and suburban areas, much of the land surface is covered by buildings and pavement, which do not allow rain and snowmelt to soak into the ground. Instead, most developed areas rely on storm drains to carry large amounts of runoff from roofs and paved areas to nearby waterways. The stormwater runoff carries pollutants such as oil, dirt, chemicals, and lawn fertilizers directly to streams and rivers, where they seriously harm water quality. To protect surface water quality and groundwater resources, development should be designed and built to minimize increases in runoff.

The most recent National Water Quality Inventory reports that runoff from urbanized areas is the leading source of water quality impairments to surveyed estuaries and the third-largest source of impairments to surveyed lakes.

Did you know that because of impervious surfaces like pavement and rooftops, a typical city block generates more than 5 times more runoff than a woodland area of the same size?

How Urbanized Areas Affect Water Quality

Increased Runoff

The porous and varied terrain of natural landscapes like forests, wetlands, and grasslands traps rainwater and snowmelt and allows them to filter slowly into the ground. In contrast, impervious (nonporous) surfaces like roads, parking lots, and rooftops prevent rain and snowmelt from infiltrating, or soaking, into the ground. Most of the rainfall and snowmelt remains above the surface, where it runs off rapidly in unnaturally large amounts.

Storm sewer systems concentrate runoff into smooth, straight conduits. This runoff gathers speed and erosional power as it travels underground. When this runoff leaves the storm drains and empties into a stream, its excessive volume and power blast out streambanks, damaging streamside vegetation and wiping out aquatic habitat. These increased storm flows carry sediment loads from construction sites and other denuded surfaces and eroded streambanks. They often carry higher water temperatures from streets, roof tops, and parking lots, which are harmful to the health and reproduction of aquatic life.

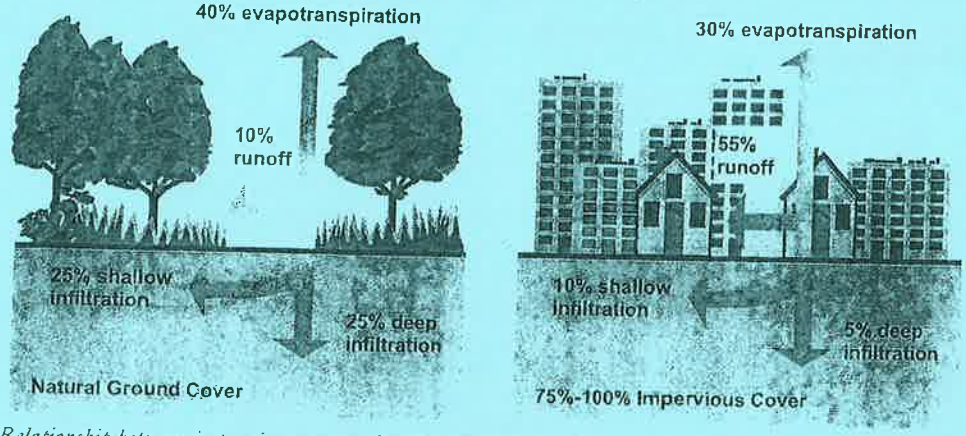
The loss of infiltration from urbanization may also cause profound groundwater changes. Although urbanization leads to great increases in flooding during and immediately after wet weather, in many instances it results in lower stream flows during dry weather. Many native fish and other aquatic life cannot survive when these conditions prevail.

Increased Pollutant Loads

Urbanization increases the variety and amount of pollutants carried into streams, rivers, and lakes. The pollutants include:

- Sediment
- Oil, grease, and toxic chemicals from motor vehicles
- Pesticides and nutrients from lawns and gardens
- Viruses, bacteria, and nutrients from pet waste and failing septic systems
- Road salts
- Heavy metals from roof shingles, motor vehicles, and other sources
- Thermal pollution from dark impervious surfaces such as streets and rooftops

These pollutants can harm fish and wildlife populations, kill native vegetation, foul drinking water supplies, and make recreational areas unsafe and unpleasant.



Relationship between impervious cover and surface runoff. Impervious cover in a watershed results in increased surface ruunoff. As little as 10 percent impervious cover in a watershed can result in stream degradation.

Managing Urban Runoff

What Homeowners Can Do

To decrease polluted runoff from paved surfaces, households can develop alternatives to areas traditionally covered by impervious surfaces. Porous pavement materials are available for driveways and sidewalks, and native vegetation and mulch can replace high maintenance grass lawns. Homeowners can use fertilizers sparingly and sweep driveways, sidewalks, and roads instead of using a hose. Instead of disposing of yard waste, they can use the materials to start a compost pile. And homeowners can learn to use Integrated Pest Management (IPM) to reduce dependence on harmful pesticides.

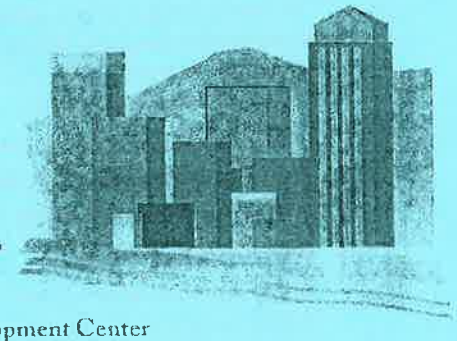
In addition, households can prevent polluted runoff by picking up after pets and using, storing, and disposing of chemicals properly. Drivers should check their cars for leaks and recycle their motor oil and antifreeze when these fluids are changed. Drivers can also avoid impacts from car wash runoff (e.g., detergents, grime, etc.) by using car wash facilities that do not generate runoff. Households served by septic systems should have them professionally inspected and pumped every 3 to 5 years. They should also practice water conservation measures to extend the life of their septic systems.

Controlling Impacts from New Development

Developers and city planners should attempt to control the volume of runoff from new development by using low impact development, structural controls, and pollution prevention strategies. Low impact development includes measures that conserve natural areas (particularly sensitive hydrologic areas like riparian buffers and infiltrable soils); reduce development impacts; and reduce site runoff rates by maximizing surface roughness, infiltration opportunities, and flow paths.

Controlling Impacts from Existing Development

Controlling runoff from existing urban areas is often more costly than controlling runoff from new developments. Economic efficiencies are often realized through approaches that target "hot spots" of runoff pollution or have multiple benefits, such as high-efficiency street sweeping (which addresses aesthetics, road safety, and water quality). Urban planners and others responsible for managing urban and suburban areas can first identify and implement pollution prevention strategies and examine source control opportunities. They should seek out priority pollutant reduction opportunities, then protect natural areas that help control runoff, and finally begin ecological restoration and retrofit activities to clean up degraded water bodies. Local governments are encouraged to take lead roles in public education efforts through public signage, storm drain marking, pollution prevention outreach campaigns, and partnerships with citizen groups and businesses. Citizens can help prioritize the clean-up strategies, volunteer to become involved in restoration efforts, and mark storm drains with approved "don't dump" messages.



Related Publications

Turn Your Home into a Stormwater Pollution Solution!
www.epa.gov/nps

This web site links to an EPA homeowner's guide to healthy habits for clean water that provides tips for better vehicle and garage care, lawn and garden techniques, home improvement, pet care, and more.

National Management Measures to Control Nonpoint Source Pollution from Urban Areas
www.epa.gov/owow/nps/urbanmm

This technical guidance and reference document is useful to local, state, and tribal managers in implementing management programs for polluted runoff. Contains information on the best available, economically achievable means of reducing pollution of surface waters and groundwater from urban areas.

Onsite Wastewater Treatment System Resources
www.epa.gov/owm/onsite

This web site contains the latest brochures and other resources from EPA for managing onsite wastewater treatment systems (OWTS) such as conventional septic systems and alternative decentralized systems. These resources provide basic information to help individual homeowners, as well as detailed, up-to-date technical guidance of interest to local and state health departments.

Low Impact Development Center
www.lowimpactdevelopment.org

This center provides information on protecting the environment and water resources through integrated site design techniques that are intended to replicate preexisting hydrologic site conditions.

Stormwater Manager's Resource Center (SMRC)
www.stormwatercenter.net

Created and maintained by the Center for Watershed Protection, this resource center is designed specifically for stormwater practitioners, local government officials, and others that need technical assistance on stormwater management issues.

Strategies: Community Responses to Runoff Pollution
www.nrdc.org/water/pollution/storm/stoinx.asp

The Natural Resources Defense Council developed this interactive web document to explore some of the most effective strategies that communities are using around the nation to control urban runoff pollution. The document is also available in print form and as an interactive CD-ROM.

For More Information

U.S. Environmental Protection Agency
Nonpoint Source Control Branch (4503T)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

www.epa.gov/nps

February 2003

LONG-TERM HOUSEHOLD HAZARDOUS WASTE FACILITY INFORMATION

- **Open Year Round (Excluding holiday weekends)**
- **All Illinois Residents May Drop-off household hazardous waste at Long-Term Facilities**
- **www.epa.illinois.gov/topics/waste-management/waste-disposal/household-hazardous-waste/collections/index**

Long-Term Household Hazardous Waste Facility in Naperville
156 Fort Hill Drive, Naperville, IL 60540
Days/Hours of Operation (Closed on Holiday Weekends):
Sat: 9 am – 2 pm
Sun: 9 am – 2 pm
www.naperville.il.us/hhw.aspx Ph# (630)420-6095

Long-Term Household Hazardous Waste Facility in Chicago
1150 N. North Branch (on Goose Island), Chicago, IL 60642
Days/Hours of Operation (Closed on Holidays):
Tues: 7 am – 12 pm
Thur: 2 pm – 7 pm
First Saturday of the month 8 am – 3 pm
www.cityofchicago.org/city/en/depts/cdph/provdrs/inspections and permitting/svcs/household-chemicals---computer-recycling-facilitiy-overview.html Ph# (312)744-7672

Materials Accepted at the Long-Term Sites:
Aerosol Paints, Automotive fluids, Batteries (Rechargeable, lithium, car batteries), Small Fire extinguishers, Flammables, Fluorescent bulbs, Compact Fluorescent Light Bulbs (unbroken only), Household cleaners, Mercury, Oil Based Paints & stains, Poison, Pesticides, Fertilizers, Prescription Medications (Non-controlled only), Propane tanks (20 pound size or less), Solvents & strippers, & Thermostats.

ELECTRONICS DROP-OFF LOCATIONS (ID required & 2 TV Limit)

Channahon Township with Families of Faith	Will County/City of Joliet	City of Wilmington
24466 W. Eames St/ Rt 6 Channahon	57 W. Marion St, Joliet (Ottawa & Marion Parking Lot)	1165 S. Water St., Wilmington
1st & 3rd Thursday of the month 5 pm to 7 pm	2nd & 4th Tuesday of the month 5 pm to 7 pm	2nd & 4th Thursday of the month 5 pm to 7 pm

Please visit www.willcountygreen.com for a full list of drop-off locations & additional info.

willcountygreen.com
The will power to rethink, renew, reduce and recycle.

815-727-8834

Businesses that will take Used Appliances

Call to get business hours and verify that they will take your used appliance. A cost may be involved, be sure to confirm it when calling.

Channahon Township/Assessor's Office
25461 S. Fryer St., 815-467-2569
Residents will need to take item to the office. Call to verify hours.

Fairway Recycling
1124 E. Washington St., Morris 815-941-4550
Drop off only

Cardinal Recycling
2600 Beyer Rd., Morris (1 mile west of Menards)
815-416-1449 www.cardinalrecycling.com

Environmental Field Services
800-480-4337
www.efsnational.com Charge is $32.00

Hierz Scrap
4345 S Verona Rd., Verona 815-287-2445
Call for charges

Berlinsky Scrap Yard
212 Page Ave., Joliet 815-726-4334
www.berlinksyscrap.com
Residents will need to take items to the yard. They only take water heaters, washer & dryers at no charge

ComEd Fridge/Freezer Program
888-806-2273 FREE (working condition only)
www.comed.com/sites/homesavings/pages/appliancerecycling.aspx

Oil Recycling Locations

Auto Zone
525 W Rt. 6
Minooka 815-467-1263
(limit 5 gal. per day, also accept used auto batteries)

Andy's Auto Services
201 N. Division St.
Morris 815-942-0100

Jiffy Lube
2021 S Rt. 59
Plainfield 815-609-7328

Compact Fluorescent Light Bulbs

Home Depot
621 Brook Forest Ave.
Shorewood 815-725-6301

Will County Forest Preserve
17540 W Laraway Rd.
Joliet 815-727-9700

Ace Hardware
855 S Ridge Rd.
Minooka 815-467-7300

Tire Recycling & Disposal

McCoy's
Rt. 6 & Tryon
Channahon 815-467-2258
Call for charge

Lucenta Tire
24059 S Municipal Dr
Channahon 815-467-1275
Call for charge

Tire Tracks
18612 NW Frontage Rd
Shorewood 815-439-9999
Call for charge

For more information on local recycling centers visit: www.willcountygreen.com or http://www.grundyco.org/planzone/pdfs/GreenGuide.pdf

This is for informational purposes only, the Village holds no responsibility and is subject to change
Updated 12/2/11

LONG-TERM HOUSEHOLD HAZARDOUS WASTE FACILITY INFORMATION

A-1

- **Open Year Round (Excluding holiday weekends)**
- **All Illinois Residents May Drop-off household hazardous waste at Long-Term Facilities**
- **www.epa.illinois.gov/topics/waste-management/waste-disposal/household-hazardous-waste/collections/index**

Long-Term Household Hazardous Waste Facility in Naperville
156 Fort Hill Drive, Naperville, IL 60540
Days/Hours of Operation (Closed on Holiday Weekends):
Sat: 9 am – 2 pm
Sun: 9 am – 2 pm
www.naperville.il.us/hhw.aspx Ph# (630)420-6095

Long-Term Household Hazardous Waste Facility in Chicago
1150 N. North Branch (on Goose Island), Chicago, IL 60642
Days/Hours of Operation (Closed on Holidays):
Tues: 7 am – 12 pm
Thur: 2 pm – 7 pm
First Saturday of the month 8 am – 3 pm
www.cityofchicago.org/city/en/depts/cdph/provdrs/inspections_and_permitting/svcs/household-chemicals---computer-recycling-facilitiy-overview.html Ph# (312)744-7672

Materials Accepted at the Long-Term Sites:
Aerosol Paints, Automotive fluids, Batteries (Rechargeable, lithium, car batteries), Small Fire extinguishers, Flammables, Fluorescent bulbs, Compact Fluorescent Light Bulbs (unbroken only), Household cleaners, Mercury, Oil Based Paints & stains, Poison, Pesticides, Fertilizers, Prescription Medications (Non-controlled only), Propane tanks (20 pound size or less), Solvents & strippers, & Thermostats.

ELECTRONICS DROP-OFF LOCATIONS (ID required & 2 TV Limit)

Channahon Township with Families of Faith	Will County/City of Joliet	City of Wilmington
24466 W. Eames St/ Rt 6 Channahon	57 W. Marion St, Joliet (Ottawa & Marion Parking Lot)	1165 S. Water St., Wilmington
1st & 3rd Thursday of the month 5 pm to 7 pm	2nd & 4th Tuesday of the month 5 pm to 7 pm	2nd & 4th Thursday of the month 5 pm to 7 pm

Please visit www.willcountygreen.com for a full list of drop-off locations & additional info.

willcountygreen.com
The will power to rethink, renew, reduce and recycle.

815-727-8834

Businesses that will take Used Appliances

Call to get business hours and verify that they will take your used appliance. A cost may be involved, be sure to confirm it when calling.

Channahon Township/Assessor's Office
25461 S. Fryer St., 815-467-2569
Residents will need to take item to the office. Call to verify hours.

Fairway Recycling
1124 E. Washington St., Morris 815-941-4550
Drop off only

Cardinal Recycling
2600 Beyer Rd., Morris (1 mile west of Menards)
815-416-1449 www.cardinalrecycling.com

Environmental Field Services
800-480-4337
www.efsnational.com Charge is $32.00

Hierz Scrap
4345 S Verona Rd., Verona 815-287-2445
Call for charges

Berlinsky Scrap Yard
212 Page Ave., Joliet 815-726-4334
www.berlinksyscrap.com
Residents will need to take items to the yard. They only take water heaters, washer & dryers at no charge.

ComEd Fridge/Freezer Program
888-806-2273 FREE (working condition only)
www.comed.com/sites/homesavings/pages/appliancerecycling.aspx

Oil Recycling Locations

Auto Zone
525 W Rt. 6
Minooka 815-467-1263
(limit 5 gal. per day, also accept used auto batteries)

Andy's Auto Services
201 N. Division St.
Morris 815-942-0100

Jiffy Lube
2021 S Rt. 59
Plainfield 815-609-7328

Compact Fluorescent Light Bulbs

Home Depot
621 Brook Forest Ave.
Shorewood 815-725-6301

Will County Forest Preserve
17540 W Laraway Rd.
Joliet 815-727-9700

Ace Hardware
855 S Ridge Rd.
Minooka 815-467-7300

Tire Recycling & Disposal

McCoy's
Rt. 6 & Tryon
Channahon 815-467-2258
Call for charge

Lucenta Tire
24059 S Municipal Dr
Channahon 815-467-1275
Call for charge

Tire Tracks
18612 NW Frontage Rd
Shorewood 815-439-9999
Call for charge

For more information on local recycling centers visit: www.willcountygreen.com or http://www.grundyco.org/planzone/pdfs/GreenGuide.pdf

This is for informational purposes only, the Village holds no responsibility and is subject to change.
Updated 12/2/11

Channahon Township in Partnership w/Families of Faith
24466 W Eames Street
1st and 3rd Thursday 5pm-7pm (lines will be cutoff at 7pm)
(closed on holidays)

- Limit 2 Televisions per vehicle
- ID Required to prove Will County area residency
- List of Items Accepted at Will County Drop-Off locations:

ELECTRONIC ITEMS BANNED FROM DISPOSAL

Televisions (Flat Screen, Projection, CRT)
Computer Monitors (Flat Screen, CRT)
Printers
Computers (Desktops, Laptops, Notebooks, Tablets, E-Readers)
Electronic Keyboards
Fax Machines
Videocassette Recorders
Portable Digital Music Players (iPods, MP3s)
CD/DVD/Blu-ray players
DVD Players/Recorders
Video Game Consoles
Small Scale Servers
Scanners
Electronic Mice
Digital Converter Boxes
Cable Receivers, Satellite Receivers
Computer Cable
Computer speakers
Cell Phones
Portable Digital Assistants (PDAs)
Zip Drives

Items NOT Banned but also accepted for Electronic Recycling

All types of telephones
Calculators
Camcorders
CB Radio/CB Scanners
Digital Cameras / SLR Cameras
Digital Photo Frames
Digital Projectors
Fans
GPS Devices
Hands-Free Phone Headsets
Microwaves
Power Tools
Radar Detectors
Radio
Shredders
Stereo receivers
String Lights
UPS/battery backup devices
Vacuums (stick, robot, canister)

Televisions (most popular item):

- CRT TVs and monitors contain leaded glass and may be considered hazardous - recycle with care
- Ask retailers to take your old TV whenever you purchase a new one - some offer this free of charge
- **Front Door Service is available through A-Team Recyclers for $40 per TV. Please call 815-630-4308**
- Some Best Buy stores offer Front-Door Service for Televisions for $100. Please call first.
- Plainfield, Mokena, Shorewood, and Bolingbrook are offering collection services through their waste/recycling contractors.

A-1

Computers, Printers, Cell Phones, Fax Machines - Erase the Memory on these Devices

Computers often contain highly personal information from bank data to tax records. Before donating your computer or bringing it to a recycling program of any kind, clean the hard drive.

Reformat the hard drive or purchase a program that writes over the hard drive. The process can be slow, because such a program writes to the disk repeatedly. Prepare to run it overnight.

It is the duty of the user of any recycling program to ensure data erasure. Will County assumes no responsibility to protect any electronic data remaining in electronics deposited in the electronic recycling program If you need more detailed instructions e-mail or call the County Land Use – Resource Recovery & Energy offices.

When utilizing a Will County Drop-Off or Collection Event, please be assured that the contracted electronic recycling company cleans the hard drives of all types of computers with Department of Defense approved software.

If the hard drive is damaged and cannot be cleaned with software, it is wiped clean with a magnet and shredded for recycling.

Other Drop-Off Options for some Electronics (No TVs, CRT monitors):

Remember to erase computers, laptops, cell phones, printers before dropping off.

Aurora - Best Buy 1208 Fox Valley Center 630-499-5788	Bolingbrook - Best Buy 315 N. Weber Road 630-759-9708	Bolingbrook - E-Scrap 3 Northpoint Court 630-378-1300	Bolingbrook - Staples 740 E. Boughton Road 630-783-3510
Frankfort - Staples 20015 S LaGrange Road 815-806-8334	Joliet - Best Buy 2351 Mall Loop Drive 815-609-0771	Joliet - A Team 359 Airport Drive 815-630-4308	Naperville - Staples 1552 South Route 59 630-305-0253
Naperville - Staples 1125 E Ogden Avenue 630-357-2985	Orland Park - Best Buy 15854 S. LaGrange Rd 708-349-9251	Orland Park - Staples 15515 S. 95th Avenue 708-364-0712	Oswego - Best Buy 2600 US Route 34 630-551-4-3233
Plainfield - Staples 13305 S. Route 59 815-577-2964	Shorewood - Staples 992 Brook Forest Ave. 815-609-2387	Tinley Park - Best Buy 7330 W. 191st Street 815-469-1306	Tinley Park - Staples 16189 South Harlem Avenue 708-532-1611

On cable 24/7

Did you know……

Nearly 70% of the pollution in our streams and lakes comes from storm water. Properly designed rain gardens can remove up to 99% of common pollutants in rainfall runoff. Information is available at Village Hall.

Yard waste such as leaves, branches and twigs makes up over 25% of our waste stream.

A-6, B-6

Used Paint Disposal Alternatives

- Keep Painting! What better place to put that last pint or so of paint but right up there on the wall where it blends in perfectly with all the other paint you just put up there.
- Paint Something Else! Use an old piece of cardboard, some scrap lumber, or the inside of your garage. Just about anywhere would probably work to use up that last bit of paint. Again, let the can dry and recycle or dispose of it.
- Use an Absorbent like Kitty Litter! Kitty litter, sawdust, shredded paper or just about anything else that will absorb moisture and let the paint dry out should work here. You may be able to empty the can, dry it out, and recycle it.
- Give it to Someone! Look around and you may find somebody who needs to paint a small area.
- Store it for Later! For "touch-ups“ , cover the opening with plastic wrap, and make sure the lid fits securely so the paint doesn't leak. Then turn the paint can upside down! This creates a tight seal, and keeps the paint fresh to use again.

A-6, B-6

Landscape Waste

There are many landscape waste disposal options:

- Leave grass clippings and leaves on the lawn as a nutrient.
- Mulch grass clippings, leaves, and wood chips for lawn and garden application.
- Take landscape waste to a permitted compost facility.
- Participate in community landscape waste collections.
- Construct an on-site, well maintained, household compost bin. Use the compost as a soil amendment.

Did you know that landscape waste has been banned from landfills since July I, 1990.

A-6, B-6

10 THINGS YOU CAN DO TO PREVENT STORM WATER RUNOFF POLLUTION

- Use fertilizers sparingly & sweep up driveways, sidewalks & gutters
- Never dump anything down storm drains or in streams
- Vegetate bare spots in your yard
- Compost your yard waste
- Use least toxic pesticides follow labels & learn how to prevent pest problems
- Direct downspouts away from paved surfaces; consider starting a rain garden
- Take your car to the car wash instead of using your driveway
- Check your car for leaks and recycle your motor oil
- Pick up after your pet
- Have your septic tank pumped & system inspected regularly

EPA UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

A-6, B-6

WASTE MANAGEMENT

Don't forget your WM stickers!
The stickers must be attached to each bag of yard waste.
The stickers can also be used for additional garbage bags outside the tote.

WM stickers are $1.75 and available at:
Channahon Village Hall
The Private Bank
Casey's General Store

A-6, B-6

A-6, B-6

10 THINGS YOU CAN DO TO PREVENT STORM WATER RUNOFF POLLUTION

- Use fertilizers sparingly & sweep up driveways, sidewalks & gutters
- Never dump anything down storm drains or in streams
- Vegetate bare spots in your yard
- Compost your yard waste
- Use least toxic pesticides follow labels & learn how to prevent pest problems
- Direct downspouts away from paved surfaces; consider starting a rain garden
- Take your car to the car wash instead of using your driveway
- Check your car for leaks and recycle your motor oil
- Pick up after your pet
- Have your septic tank pumped & system inspected regularly

A-6, B-6

Yard Waste pick-up April 1 thru November 30

[redacted]

Channahon Township
25461 S. Fryer Street

The COMPACTOR is open to Channahon Township residents only.

HOURS OF OPERATION

Saturdays 8:00am - 2:00pm (year round)

Wednesdays 3:00 – 7:00pm (April thru October)

****As of Feb 13th, 2016 Electronics will no longer be accepted at this facility.**

A-6, B-6

A-6, B-6

Melanie Arnold

From: Nicole Norris
Sent: Thursday, April 5, 2018 2:18 PM
To: Don Kinzler
Subject: Re: NPDES MS4 Permit Annual Report Data

Don, here is the data I have collected. Please let me know if you need anything else from me.

Website/Facebook Data

Household Hazardous Waste Drop Off Event

Website: 749 hits

Facebook: 6,095 people reached

Electronic Waste Event

Website: 1,419 hits

Facebook: 1,184 people reached

Christmas Tree Pickup

Website: 539 hits

Facebook: 1,673 people reached

Leaf Pickup

Website: 415 hits

Facebook: 2,511 people reached

Electronic Waste Recycling Event

Website: 1,430 hits

Facebook: 3,309 people reached

A-6, B-6

I&M Canal Clean Up

Website: 363 hits

Facebook: 424 people reached

2017 Water Quality Report

Website: 407 hits

Facebook: 13,932 people reached

Thanks,

Nicole M. Norris

Marketing and Communications Manager

nnorris@channahon.org | **P** 815.467.6644 | **F** 815.467.9774
Village of Channahon | www.channahon.org
24555 S. Navajo Drive, Channahon, IL 60410

On Fri, Mar 16, 2018 at 10:42 AM, Don Kinzler <dkinzler@channahon.org> wrote:

> To All,
>
> It's that time of year again. I am completing the Village's NPDES-MS4 Permit (Village-wide stormwater discharges) Annual Report, due June 1st.
>
> Please provide requested information by Friday, April 20th. The IEPA closely regulates this permit with virtually annual audits and, when warranted, will increase audit frequency, make surprise inspections, issue disciplinary actions and fines, etc.
>
> The Village's MS4 program has been audited by the IEPA regularly, most recently in 2016, and I expect another this year. The program has received good marks due largely to the data all of you are able to provide.
>
> **The reporting period is from March 1, 2017 to February 28, 2018.**
>
> **Please take the time to look carefully for the following data and information**:
>
> - **Everyone**: I need documentation of everyone's training during the reporting period whereby the subject matter would have even a remote impact on stormwater runoff or ecological benefit. These would include:
>
> - Erosion and sediment control seminars.

JOB SHADOW AGENDA, 02-01-16

- ASK QUESTIONS, INTERUPT
- **QUESTIONS, Tell me some things about you:**
  - **What are your favorite school subjects?**
  - **What career are you interested in?**
    - **Emphasize basic education skills required for that career.**
  - **Do you like math? Science? Reading & writing? Computers? Working with others?**
    - **These are considered "General Education" and are required for all college degrees. They are also the most important part of almost any career.**
- **QUESTION: Will your water faucets work when there is a power outage?** Write down your answer, we'll come back to this later.

The *Engineering Project Manager (E.P.M.)*

- **HANDOUTS: E.P.M. Job Description; E.P.M. Responsibilities; Business Card**
- Background – How I got here
  - Minimal effort in high school; hated math; didn't think I was smart enough for college. Just wanted to be a blue collar worker.
  - Going from H.S. to college is the same as going from junior high to H.S.; it's just the next step.
  - Following H.S.: 19 yrs – Industrial Maintenance/Welder/IL State Certified Pipefitter (carbon steel, stainless steel, titanium).
  - Jobs: Material Service Concrete Pipe Plant (Lockport), Caterpillar, Amoco Chemical.
  - College: 2.5 yrs including summers, JJC; 2.5 yrs UIC. Bachelor of Science, Civil Engineering.
  - Diploma, Professional Engineer's License, Certified Floodplain Manager Certification
    - Means I get to have a bunch of fancy letters behind my name (P.E., CFM)
  - Another engineer mentioned Channahon was looking for a staff engineer. I applied, interviewed and was hired.
- What I like best: the diversity of duties that are part of my job; same as when I was in industrial maintenance. Different problems to solve nearly every day keeps it interesting.
- I typically work 40 hrs per week; some overtime when projects are under construction.

The Road Program, Maintaining Village Roadways

- Rating the Roads
  - Helps me decide which roads need maintenance, and what type.
  - PASER Manual
  - **ACTIVITY: Rate Navajo Dr.**
  - **HANDOUTS:**
    - **Ratings spreadsheet for roads in Navajo Dr. area**

- Same road may have several segments based on when they were constructed – Navajo has three
  - **Basic math to calculate overall rating, square yards of surface area**
- **Current PASER map for VOC**

- Annual Road Projects
  - **QUESTION: Is HMA pavement impervious, or does water soak into it?**
  - **HANDOUT: Pictures from VOC road projects**
  - Road Maintenance:
    - Reconstruction and resurfacing
    - Includes repairs to curb & gutter, utility structures (manholes) and sidewalks
    - **Show IDOT Standard Specs manual**
    - **Show 2016 Road Maintenance contract**
  - Crack Fill & Fog Seal: roads, bike paths and parking areas.
    - Rt 6 bike paths near HS sealed 2016
  - Pavement Preservation (rejuvenating roads)
    - CRF west of Navajo 2015
  - Spray Patching (briefly explain)
  - Shoulder Program (briefly explain)
  - **Physics used to evaluate deterioration and proper repair methods**
  - **Math used in EOPC, budgeting, converting units**
  - **Reading/writing skills for authoring contracts, communications with contractor, consultants, Village Board, and much more.**
- Many of these maintenance projects are measured in square yards.
  - **ACTIVITY: On graph paper, calculate area of asphalt, in square yards, for Navajo Dr. from Liberty to Sioux.**
    - **L = 0.310 miles, W = 29 ft**
    - **To get SY, we need sf, so we need L in feet**
    - **How many ft in 0.310 miles?**
    - **1 mile = 5280 ft**
    - **L ft = 0.310 miles x 5280 ft = 1,636.8 ft**
    - **Sf = L ft x W ft 1,636.8 ft x 29 ft = 47,467.2 sf**
    - **How many sf in a SY?**
    - **Draw tic-tac-toe board; draw square around t-t-t board**
    - **The large square is 1 SY Each small square is 1 sf**
    - **How many sf in 1 SY? 9**
    - **So, we multiply 47,467.2 sf x (1 SY/9 sf) = 5,274.1 SY of asphalt surface area to treat**

New Development, e.g. North Hansel Estates

- Review Final Engineering & Final Plat
  - Can be hard to find things in all those black lines
  - **ACTIVITY: Highlight water, sanitary and storm on final engineering plans**
- Improvement Completion Guarantee (ICG)
  - A type of insurance provided by the developer to make sure public improvements are constructed if the developer can't finish. Does not provide funds to finish buildings, parking lots, etc.
  - **Math used for estimating and determining guarantee amount**
  - **Reading & writing skills to understand legal documents**
- Construction (briefly explain)
  - **Math used onsite to check road and curb slopes, keep track of asphalt tonnage, and much more.**
- ICG reduction (briefly explain)
  - **Math used to calculate correct reduction amount.**
- Record Drawings and Punch List (briefly explain) –
  - Show NHE RDs and PL
- Acceptance and Maintenance Guarantee – briefly explain

Stormwater Management with New Development

- Typical subdivision storm sewer system and detention basin
  - Undeveloped, Pervious Surfaces (farm fields and natural ground cover): rainwater soaks into the ground travels, what doesn't travels slow through the grass; not much stormwater runoff.
  - Developed, Impervious Surfaces (rooftops, driveways, sidewalks, roads, concrete storm sewer): less rainwater soaks in; what doesn't travels very fast over the hard surfaces; lots of stormwater runoff that can cause flooding to other homes.
- **QUESTION: How do we slow down the runoff?**
  - Detention Ponds – capture runoff and release it slowly to be more like the undeveloped runoff.
  - **Math used to determine volume the detention pond must hold, restrictor size (how big a hole lets out the water), how much water a proposed pond will hold, and much more.**
  - **QUESTION: the unit of volume for detention is acre-ft. What is that?**
  - **QUESTION: How many gallons is in 2.7 acre-ft?** 1 ac-ft = 325,851 gal
- **QUESTION: Do you know where your stormwater goes?**
  - **ACTIVITY/HANDOUT: Navajo area storm sewer map; trace storm sewer routing from your house to the detention basin; where does it go from there?**

Village Utilities Infrastructure

- **REPEAT QUESTION: Will your water faucets work when there is a power outage?** Kind of a trick question as it depends on where your water comes from.

- The Village water supply is “powered” by the weight of the water in the water towers. This weight pushes the water through pipes all the way to your faucet. Although electricity is needed to pump fresh water into the towers, back-up generators would insure this water supply would not be interrupted.
    - **Physics & math principals used to determine how tall a water tower must be and how far it can push the water**
- Those not connected to the Village water supply will have a well and holding tank. The well uses electricity to pump water from the ground to a pressurized holding tank in the house. Although some water would still be available in the tank when the electricity goes out, it would not take long the tank to empty out and loose pressure until power is restored.
- Village sanitary system and septic systems: gravity flow does not need electricity, but ejector pits do!
    - **Math and physics principals used to determine required slope of sanitary pipe to insure necessary flow, what size pipe is needed, how far the pipe can go before it comes out of the ground, and much more.**
- Overall Village utilities maps in 2nd Floor Conference room
    - **ACTIVITY/HANDOUT: Navajo area utility map; what VOC utilities are there where you live?**

Floodplain Management

- **HANDOUT: flooding pictures.**
- Current FIRM map
    - **ACTIVITY: Can you where you live on this map?**
- Future DFIRM map
    - **ACTIVITY: Can you find where you live this map?**

Melanie Arnold

From: Janet Cherbak
Sent: Wednesday, May 9, 2018 3:26 PM
To: Don Kinzler
Subject: RE: NPDES Figures and 2018 Trail Maintenance Areas

Hello Don,
We had 305 participants at the I & M Canal Clean-Up in April of 2017. We also had 67 junior high students who participated in native restoration planting activities, that should contribute as conservation awareness.
About Amberleigh and Yellow Pine asphalt maintenance, assuming the park district did the original installation, perhaps I should look at the spec from the construction, so we know what type of equipment to allow on the paths there? Are we doing the crack filling will the larger equipment there?
Thank you,
Janet

Janet Cherbak, PLA, CPSI
Park Planning & Natural Resource Manager

Channahon Park District
24856 W. Eames St
Channahon, Illinois 60410
Main Line: 815-467-7275
Direct Line: 815-521-3103
www.ChannahonPark.org

IAPD/IPRA Distinguished Accredited Agency
NPRA National Gold Medal Grand Award

CHANNAHON PARK DISTRICT
Est. 1971

From: Don Kinzler [mailto:dkinzler@channahon.org]
Sent: Monday, May 07, 2018 3:36 PM
To: Janet Cherbak
Subject: RE: NPDES Figures and 2018 Trail Maintenance Areas

Hi Janet,

Sidewalk signs weren't down yet on April 19th, but I'm told they are now.

The IEPA annual report has to be submitted by the end of this month. I would appreciate if you could get me your data asap as it will have to be organized into appropriate sections of the report.

Attached is the 6 year maintenance cycle and a corresponding map. Next year is the last year of the cycle, then we'll repeat. The program also seals pavement in some Village parking areas, but the Park District and Township only contribute to bike path work. This year's bike paths are South Ridge Road, Yellow Pine and Amberleigh Park.

Regards,

Don

From: Janet Cherbak [mailto:jcherbak@channahonpark.org]
Sent: Wednesday, April 18, 2018 9:56 AM
To: Don Kinzler (dkinzler@channahon.org) <dkinzler@channahon.org>
Subject: MPDES Figutres and 2018 Trail Maintenance Areas

Hello Don,
Thank you for the email confirming that the barricades will come down at the trail near Deer Path Park. I have not been by to confirm, but I will look at when in the area.
On another note, when do you need the 2017 MPDES participant figures for your reporting? I need a deadline, so I can prioritize accordingly!
Lastly, when you are going out to bid for the trail maintenance later this year, can you send me the locations that are within our parks so I can know ahead of time where this work will take place? I think you did do this last summer, but I'd like to make sure we know about work near our parks, in case it affects any programming, and so I can communicate to everyone who needs to know here.
Thank you,
Janet

Janet Cherbak, PLA, CPSI
Park Planning & Natural Resource Manager

Channahon Park District
24856 W. Eames St
Channahon, Illinois 60410
Main Line: 815-467-7275
Direct Line: 815-521-3103
www.ChannahonPark.org

IAPD/IPRA Distinguished Accredited Agency
NPRA National Gold Medal Grand Award

C-1

Village of Channahon

Outfall Location Map

Legend

- Final Outfalls

1:12,000

MAY 2018

SHOREWOOD
JOLIET
MINOOKA
CHANNAHON
ELWOOD
MORRIS
1:100,000

Melanie Arnold

From: Bruce Vaickus
Sent: Monday, November 13, 2017 10:56 AM
To: Don Kinzler
Subject: Re: FW: Connecting drain to storm sewer

Don, We finished the hook up today.

On Wed, Nov 8, 2017 at 2:43 PM, Don Kinzler <dkinzler@channahon.org> wrote:

> Regards,
>
> *Don*
>
> ---
>
> **From:** Don Kinzler [mailto:dkinzler@channahon.org]
> **Sent:** Friday, May 05, 2017 1:09 PM
> **To:** 'Sue Ryan' <sophianokia@yahoo.com>
> **Cc:** Bruce Vaickus (bvaickus@channahon.org) <bvaickus@channahon.org>
> **Subject:** RE: Connecting drain to storm sewer
>
> Hi Sue,
>
> Celtic contacted me yesterday about it. I am having them call our Public Works superintendent to schedule a time for making the connection.
>
> Regards,
>
> *Donald R. Kinzler,P.E.,CFM*
> Engineering Project Manager
> Village of Channahon
> 24555 Navajo Dr.
> Channahon, IL 60410
> Ph:(815) 467-6644
> Fx:(815) 467-8398
>
> ---
>
> **From:** Sue Ryan [mailto:sophianokia@yahoo.com]
> **Sent:** Friday, May 05, 2017 12:20 PM

To: Dkinzler@Channahon.org
Subject: RE: Connecting drain to storm sewer

Hi Don,

I spoke to you before about getting my sump pump discharge drain connected to the city storm sewer located at the corner of my property. I have gotten the work done to get the drain pipe, to the storm sewer. It's now ready for connection. I really need this done as soon as possible because the water will not drain well until this next step is completed because it was pitched down to run away from the house and to the sewer. Now the water will have to rise maybe 10" in order to drain on the ground until it is connected, so that's a problem, if it will even work.

Thank you for your prompt attention to get this connected. Please let me know what the plan here is.

Sue Ryan

26448 W Spur Ct.

Channahon, IL 60410

Phone 815-467-1566

--
Bruce Vaickus
Utilities and Streets Superintendent
Village of Channahon
(815) 467-6644
(815) 467-0854

Public Works Department Work Order

Work Order No.	**6819**
Date	5/31/2017
Requested by	Kinzler, D
Assigned to	Vaickus, B
Assigned to	Browning, G
To Be Completed By	5/31/2017
Division	Streets
JULIE #	
Request	Inspect storm sewer manhole on attached map leading to the pond. Note any thing not to be in manholes or if there is eveidence of illegal dumping. The address of the property is 26500 McKinley Woods Road.
Work Performed	Inspected every inlet, entry point and outfall, curb and cutter for evidence of any illegal dumping. No evidence was found at this time. Note: In the afternoon of the same date I notice a lawn service "spraying" product on the lawn two lots north of the above address. BV
Date complete	5/31/2017
Completed by	Browning, G
Completed by	Jake

C-2

VILLAGE OF
CHANNAHON
24555 S. NAVAJO DRIVE • CHANNAHON, ILLINOIS 60410
(815) 467-6644 • FAX (815) 467-9774 • www.channahon.org

February 13, 2018

Champion Drywall Inc.
24121 S. Northern Illinois Dr.
Channahon, IL 60410

RE: Development Regulations

Dear Mr.Robbins,

Just a brief recap on our meeting we had with you this past Friday February 9, 2018 alongside Don Kinzler and Steve Kuczkowski. 30 days from today (March 15, 2018) we will follow up with you. In the meantime Mr.Robbins you informed us that you will be contacting and working with GEOTECH to modify or find a solution in regards to your site plan that is in conflict with the accessory structure that has been installed without a permit. Additionally, it is installed in a stormwater detention basin area, which is not allowed like we discussed. If no solution is possible, the accessory structure must be completely removed. Along with any fill used for construction.

Should there be a specific hardship preventing compliance, please contact me to discuss alternative solutions.

Sincerely,

Gabriel Zavala
Code Enforcement Officer

VILLAGE OF
CHANNAHON
24555 S. NAVAJO DRIVE • CHANNAHON, ILLINOIS 60410
(815) 467-6644 • FAX (815) 467-9774 • www.channahon.org

TO: **Isaac Ramsay, Patrick Moone; Farnsworth Group**

FROM: **Michael C. Petrick, Director of Community Development & Information Systems**

CC: **Ed Dolezal, Public Works Director; Steve Kuczkowski, Chief Building Inspector; Donald Kinzler, Engineering Project Manager**

DATE: **December 13, 2017**

SUBJECT: **Casey's General Store Final Engineering Review 1**

The Village of Channahon has received the following:

- *Site Improvement Plans for CASEY'S General Store* prepared by Farnsworth Group dated 10/30/17.
- *Storm Water Drainage Report for Casey's General Store* prepared by Farnsworth Group dated October 2017.
- *Lighting Plan Submitted by Red Leonard Associates, dated 08/24/2017*

There are two large "elephants in the room" that should be addressed, which may clear up some of the following engineering comments.

1. The proposed detention basin for the new site encompasses both the current well location and portions of the current septic field for the existing Casey's facility. As the grading for detention happens early in the construction process, the well and septic field abandonment will need to occur contemporaneously with mass grading. This will render the existing facility unusable, and not fit for occupancy. As it has been stated that Casey's desire is for the existing facility to remain operational until such time that the new facility is ready to open, this presents a problem.
2. The development is proposed to be constructed on a parcel much larger than is required for the site plan. Per ordinance, the entire parcel is what must be considered for the purpose of improvements. The "development area limits" as specified are not an acceptable delineation for where required improvements to the parcel would to end. For example, the parcel as depicted will require the installation of street trees on all 4 sides of the property, including Willard St. and Joliet St. Likewise, requirements for sidewalks and utility extensions would also extend across the limits of the parcel. If some of the parcel is being constructed, the entire parcel must be completed per ordinances. If this is undesirable, staff would suggest to reconsider subdividing the parcel. Creating a parcel that would be adequate to contain the proposed development and a separate parcel(s) for the unneeded balance of the property will limit the overall improvements required at this time.

Please provide a written response to the below comments (including VOC comments) and (3) three copies of full size site plans as well as all other materials submitted for review.

Based upon review of the submitted materials, we offer the following comments:

General

1.1 Provide Population Equivalent (PE) calculations for this development.

1.2 Submit an Engineer's Opinion of Construction Cost for proposed improvements.

1.3 An NPDES permit is required for this work. Provide a copy of the permit submittal now, and a copy of the permit when received. No work is allowed on site prior to Village receipt of the executed IRL10 permit.

1.4 Show and label all existing and proposed ROW, easements and building setbacks on all plan view sheets and exhibits; except Existing Topography And Demolition Plan which should have only existing conditions information.

1.5 On all applicable sheets, identify Tract 1 and Tract 2 as defined in the Legal Description on Sheet C1.0.

1.6 Provide AutoTURN or similar exhibits for design trucks ingress/egress through the site. This should include typical delivery trucks, fire trucks and fuel delivery trucks expected for business specific needs.

1.7 Proposed changes to Route 6 will require a permit through IDOT. Submit a permit request and engineering plans to IDOT for review and approval. Provide copies of all correspondence and submittals to and from IDOT for Village records, including the Traffic Impact Study.

1.8 The plan indicates full removal of Center Street pavement, but lacks details and specifications regarding construction of the new pavement. As a minimum, the plans should include a plan and profile, cross sections showing existing and proposed conditions, existing and proposed typical sections, design criteria for proposed pavement, etc.

1.9 Show/call out IDOT ROW boundaries on all plan sheets.

1.10 Remove ‘Approximate Project Limits’ and ‘Casey’s Development Area Limits’ boundaries and callouts from all sheets and the Storm Water Drainage Report. The Casey’s development must include the entire legal property on which development will occur.

1.11 Provide documents for review which dedicate ROW to the Village for that portion of Center St from IDOT ROW to the south end of the property.

1.12 Municipal easements are required from both properties, as applicable, for the detention basin including access, overland flood routes, watermain, water service up to the service valve, fire hydrants, sanitary main, etc.

1.13 Provide cross access easement from the new entrance to the Old Casey’s property.

1.14 Please consider angling fueling stations NW to SE to aid traffic flow through the development frontage.

1.15 The Village may require additional improvements to the Rt 6 & Center St intersection as a result of subsequent submittals and IDOT comments.

1.16 Provide a plan for transitioning from the Old Casey’s to the new store; when does abandonment of the existing well and septic occur vs new construction? For example, proposed detention basin construction, which must be take place with initial earthwork, will result in the well and septic no longer being usable due to disturbance and possible contamination. The well is called out to be abandoned and the septic field will be impacted by detention basin construction on the Old Casey’s

lot – demolition of the existing site, or the provision of water and sewer to the old site will be required.

1.17 Onsite PCC pavement and curb & gutter design will be examined with building plan submittal.

Plans

2. Cover Sheet – Sheet C1.0

2.1 Provide an engineer's drainage certification.

2.2 The Index to Sheets should include Sheet C5.1

2.3 The sheet numbers for the Landscaping Plan sheets should be the same in the Index to Sheets and on the sheets title blocks.

3. General Notes and Legend - Sheet C2.0

3.1 There are numerous examples of sanitary sewer, storm sewer and water main notes which do not comply with Village Ordinances (especially Ch. 154 and appendices) available at the Village website, www.channahon.org. Please revise as necessary.

3.2 Delete Grading & Erosion Control notes 19.1.1 and 19.1.2.

3.3 Identify the symbol of a triangle with dot in the center and cross hair tics which is shown on several sheets, but not on the legend.

3.4 Add to Grading & Erosion Control Note 18: "THE VILLAGE OF CHANNAHON SHALL BE NOTIFIED IMMEDIATELY WHEN EXISTING DRAINAGE TILES ARE FOUND REGARDLESS OF CONDITION OR FUNCTIONALITY. THE VILLAGE SHALL HAVE FINAL APPROVAL OF ANY REPAIR, CONNECTION, ABANDONMENT OR OTHER METHODS FOR MITIGATING EXISTING DRAINAGE TILES DISCOVERED ONSITE."

4. Existing Topography and Demolition Plan - Sheet C3.0

4.1 Identify all existing improvements that are to be demolished.

4.2 Revise the shading used to depict tree removal so existing contours can be seen.

4.3 Call out full depth sawcuts for all pavement removals.

4.4 Show the size of the existing culvert under Center Street.

4.5 Provide the north invert elevation for the 12 inch CMP under Joliet St.

4.6 Extend topography to 100 ft beyond east and south property boundaries.

4.7 Provide existing invert elevations for the sanitary manhole.

4.8 Specify that the existing well and septic shall be abandoned in accordance with Will County Health Department requirements.

5. Layout Plan - Sheet C4.0

5.1 Indicate the type of curb to be used on the site.

5.2 Provide dimensions and ties for the PCC pad above the fuel tanks.

5.3 Show dimensions and ties for the trash enclosure on this sheet.

5.4 Provide sidewalk along the entire frontage of Center Street from Joliet St to Rt 6 sidewalk.

5.5 Provide sidewalk along the frontage of Willard St. from exiting sidewalk to the north, to Joliet St. on the South

5.6 Provide sidewalk along the frontage of Joliet St., to connect the new legs of sidewalk installed along Willard St. and Center St.

5.7 Show detectible warnings at sidewalk crossings with entrances.

5.8 Provide pavement tapers to transition from the wider south PCC pavement/curb termini to existing Center St pavement.

5.9 Extend curb and gutter on both sides of Center St from Rt 6 through the entrance.

5.10 The proposed ROW dedication along S. Center St. makes the location of improvements encroach on setback limits. As the site parcel is located on a corner, a front yard setback requirement is in effect for both the north and east sides of the parcel.

6. Grading and Erosion Control Plan - Sheet 5 .0

6.1 Show all erosion control measures on this sheet using the symbols in the legend on Sheet C2.0. Include the location for a Stabilized Construction Entrance.

6.2 Show the size of the existing culvert under Center Street.

6.3 Indicate on the plan whether the proposed elevations are top of curb or edge of pavement.

6.4 Identify the sidewalk around the building as “Sidewalk Type Special” to correspond with the detail on sheet C9.0 and add a note to refer to the detail.

6.5 Review the proposed grading adjacent to the car wash and provide a top of foundation for the building that is compatible with the island curb grades and provides slope away from the building across the island.

6.6 Identify the 100-year flood route(s) through the site.

6.7 Provide an NPDES Permit Inspector Certification with the following certification block, name, address, 24 hr. telephone contact and signature line for the NPDES Permit Inspector:

NPDES PERMIT INSPECTOR CERTIFICATION

I HEREBY CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR THIS SITE WHICH AUTHORIZES STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES. I FURTHER ACCEPT

LEGAL RESPONSIBILITY FOR INSPECTION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES AS PERTAINS TO SAID NPDES PERMIT BEGINNING WITH INITIAL SITE DISTURBANCE AND ENDING WHEN THOSE MEASURES ARE NO LONGER NECESSARY AS PROVIDED IN THE NPDES PERMIT AND VERIFIED BY THE VILLAGE OF CHANNAHON. NO OTHER NOTE OR PROVISION IN THE ASSOCIATED STORMWATER POLLUTION PREVENTION PLAN, FINAL ENGINEERING PLANS, OR OTHER DOCUMENT ELIMINATES THIS RESPONSIBILITY

6.8 Specify Class 1A mix for permanent seeding along roadways.

6.9 Indicate 6" of topsoil and seeding for all green areas including the rights of way.

6.10 Show location for a concrete washout facility away from storm structures and add to the legend.

6.11 Show a probable stockpile location and associated erosion control.

6.12 Show temporary ditch checks in the ditches along Center Street.

6.13 Provide inlet protection at the culvert under Center Street.

6.14 Include a Storm Water and Pollution Prevention Plan with all necessary notes and requirements.

6.15 Provide proposed contours throughout the site.

7. Grading Plan – Detention Basin – Sheet C5.1

7.1 Include this sheet in the Index to Sheets on the Cover Sheet.

7.2 Include erosion control items on this sheet.

7.3 Include the invert elevation of the flared end section in the detention basin.

7.4 Define the grading in the bottom of the Strom Water Management Facility.

7.5 Add the required and provided 2 yr and 100 yr HWLs and detention volumes to the detention basin notes.

7.6 Provide a cross-section through the proposed detention basin on the plans.

7.7 Show the size of the existing culvert under Center Street and indicate replacement with one size and type. Extend this culvert on both sides of the street to provide minimum 4:1 slopes from the edge of the shoulder to the invert of the culvert.

7.8 Ordinance requires a designed Emergency Overflow Weir for detention basins.

8. Utility Plan – Sheet C6.0

8.1 The Village is concerned that the rate of detention infiltration may actually increase current flooding issues at the south end of the property. Please provide a clay lined detention basin with restricted outfall.

8.2 Provide pipe materials which conform to Village Ordinance for all storm sewer, sanitary sewer, and water main/services. HDPE or PVC can be used for rain gutter connections to storm sewer manholes.

8.3 Indicate a size for the water service.

8.4 Provide identifying information and rim elevation for valves-in-vaults and the water service valve box.

8.5 Show the location of the (Fire Department Connection) FDC and provide a fire hydrant no more than 75 feet away.

8.6 The Sanitary Sewer Data shows the existing N/S invert as 513.83, but the plan view call out identifies that elevation as CENTER ELEV. Please clarify and provide the existing N/S invert elevations.

8.7 Indicate the method of connection to the existing sanitary manhole, a mechanical core and boot is required. An external drop connection is required for invert elevation differentials of ≥ 2 ft.

8.8 Indicate the method of connection for a water service to the car wash service.

8.9 Provide information regarding filtering/reuse of the wastewater from the carwash. IEPA Schedule J and Schedule N will be required along with the standard permit application.

8.10 The information for Utility Crossing #5 is incorrectly labeled as UC#4 in the Utility Crossings table.

8.11 Review the frame and grate specified for the onsite inlet structures to verify that it is compatible with the curb and gutter type. The Neenah R-3278-A fits a 17" gutter flag.

8.12 A commercial sanitary service connection to sanitary main piping is not allowed; nor does the Village want a new manhole constructed over the main. Revise the car wash sanitary discharge to connect to the 6" sanitary service on site.

8.13 Extend sanitary sewer main across property frontage to west property line.

8.14 Label and provide information for the grease trap including pipe invert elevations and rim elevation. Reference the detail on sheet C8.0.

9. Water Main Extension Plan – Sheet C6.1

9.1 The watermain extension must be 12" DIP.

9.2 Valves-in-vaults are required every 1000 ft (minimum) along watermain.

9.3 The maximum distance between fire hydrants on watermain is 300 ft with adjustments to match high points in the main and advantageous proximity to buildings.

9.4 Provide a watermain Plan & Profile sheet(s) for the full extent of watermain improvements.

9.5 Watermain must be placed in Village ROW or municipal easement.

9.6 Revise the water service tap to comply with Village Ordinance.

9.7 Extend 12" watermain across property frontage to west property line.

9.8 Show existing water main and appurtenances at the connection point.

9.9 Note full depth saw cut of the existing Joliet Street pavement and provide a detail of the proposed pavement patch.

9.10 Revise Water Main Construction Notes which do not comply with Village Ordinances (especially Ch. 154 and appendices) available at the Village website, www.channahon.org

9.11 Add Water Main Construction Notes for:

a. Fire hydrant materials and installation per Village Ordinance. Note that Clow Medallion hydrants are now allowed along with the Mueller Super Centurion 250.

b. Valves and valve vault materials and installation.

9.12 Revise Note 4 to require a minimum horizontal separation per the Standard Specifications for Water & Sewer Main Construction in Illinois.

9.13 Reconfigure the terminal end of the water main extension to a valve in vault followed by 2 sections of pipe and a fire hydrant assembly; use mechanical connections at all stub assembly joints. This stub will be tested, disinfected and remain in service until a future connection is made.

10. Roadway Plan – Sheet C7.0

10.1 Provide a typical section for the widening.

10.2 Relocate the existing curb inlets to the new curb location.

11. Roadway Plan – Sheet C7.1

11.1 Provide a consistent cross slope for the proposed turn lane widening.

12. Sanitary & Storm Sewer Details – Sheet C8.0

12.1 Replace applicable details with Village of Channahon standard details available on the Village website.

12.2 Include the standard IDOT detail for Flared End Section and Grate.

12.3 Include a detail for Sanitary Sewer Clean-Out.

12.4 Include a detail for Sanitary Sewer Clean-Out frame and lid for pavement areas.

12.5 Include a detail for the proposed trench drain.

12.6 Add a plan sheet to allow inclusion of the necessary Village water main details including, but not limited to those for fire hydrants, valve vaults, typical service tap connection, etc.

12.7 Remove the sanitary service connection detail which will not be allowed.

12.8 Revise Sewer Pipe Bedding Detail to comply with Village Ordinance.

12.9 Provide additional IDOT storm sewer details, as necessary, for Rt 6 work.

12.10 Remove grease trap detail, it will be reviewed with building plans plans.

13. Standard Site Details – Sheet C9.0

13.1 Provide a detail for the sidewalk in the public right-of-way.

13.2 Utilize the Standard Specifications for Water & Sewer Main Construction in Illinois Standard Drawing No. 1 and No. 2 for roadway crossings.

13.3 Utilize IDOT curb & gutter details showing tied connections to PCC pavement for Rt 6 work and the Center St entrance.

14.4 Comment – no response required: certain aspects included on site details will be reviewed with building permit application.

14. Standard Site Details – Sheet C10.0

14.1 Remove the Culvert Headwall w/Dissipaters detail and add the IDOT standard detail for precast flared end section.

15. Erosion Control Details – Sheet C11.0

15.1 Provide a detail for the Inlet Protection at the culvert under Center Street.

16. Storm Water Drainage Report

16.1 The Village is concerned that the rate of detention infiltration may actually increase current flooding issues at the south end of the property. Please provide a clay lined detention basin with restricted outfall.

16.2 Remove all references to design "instruction" or "recommendations" by Village Staff. Information and ideas discussed in meetings is to be analyzed and verified by the designer and incorporated into the plans only if deemed appropriate by the designer.

16.3 In the Hydroflow Hydrographs Extension (HHE) models, Type II distributions should not be used. For 24-hour duration storms, the appropriate Huff Third Quartile distribution should be used. Please revise the analyses.

16.4 The allowable site release rates for the 2 and 100-year events are to be based on the proposed development area regardless of soil infiltration rates. Required detention volume should be based on these rates.

16.5 The stormwater report provides results and calculations for the 10 and 100-year events. The 2-year should also be provided in the report.

16.6 Existing onsite depressional storage that is to be displaced by a proposed development is to be compensated at a one to one ratio and added to the proposed detention basin. Please provide these calculations and include a discussion on this in the narrative.

16.7 In the report narrative, the total site area, proposed development area, and offsite tributary areas were somewhat unclear. Please clarify or provide a table. The Casey's development must include the entire legal property on which development will occur.

16.8 Provide storm sewer calculations and a sub-basin map.

16.9 Provide grate capacity calculations.

16.10 Provide an inundation map for the 100-year event.

16.11 Provide emergency overflow calculations for the event of an outfall failure.

16.12 Revise detention volume calculations to assume commercial development of the Old Casey's lot and the property between the new and Old Casey's.

16.13 Provide a vicinity topographic map identifying all off-site areas draining to the development and watershed boundaries for areas draining through or from the development.

16.14 Provide overall site drainage maps showing existing and proposed drainage through the site; include flows from offsite sources entering the property; verify proposed improvements do not block drainage to or from the existing culverts at Center Street and Joliet Street. Analyze possible impacts to offsite tributary areas.

16.15 Provide a stage vs. storage table for the detention basin.

16.16 Provide a curve number exhibit corresponding to CN calculations.

17. Landscape Plan L1

17.1 Foundation planting is required along the principal structure per 158.36(D)(5)

17.2 Foundation planting is suggested along the car wash structure

17.3 Plantings are required around the sign base, per 158.36(D)(6)

17.4 Please delineate snow storage easement 158.36(E)(1)(b)(2)

17.5 Parking lot islands, as required per 158.36(E)(1) are not indicated on plans. At a minimum, parking islands must serve as "endcaps" to rows of parking.

18. Lighting Plan

18.1 Lighting F.C. is adequate for a commercial zoned site according to the provided photometric diagram. However, shields, diffusers, or other glare reducing devices may be required in-practice to prevent glare or disruption to neighboring properties.

Citizen Inquiry

Inquiry No.	1179	**Received by**	Vaickus, B
Date	4/24/2017		
Name	, Daryl		
Address	26250 Sylvan Meadow Dr		
Phone	(630) 800-8403	**Alt Phone**	
Subdivision		**Unit**	
Request/Concern	The storm sewer in his backyard is covered with plastic. Please inspect		
Action Taken	It was silt screening and advised resident that it need to stay on until construction in area was completed and sewer is draining fine		
Date Complete	4/25/2017		
By	Kratochvil, C		
By			
Work Order No.			

Citizen Inquiry

Inquiry No.	1180	**Received by**	Reiter, S
Date	4/26/2017		
Name	Malone, Ron		
Address	26501 Melissa Dr		
Phone		**Alt Phone**	(708) 280-9991
Subdivision		**Unit**	
Request/Concern	large amounts of water is sitting in the drainage ditch by their house. Please inspect. Please contact the resident prior to going out there.		
Action Taken	All 4 basins were clear of debris. 1 basin lid was off and put back into place with all the rain the grooound is just to wet at this time needs to drain and dry out		
Date Complete	5/2/2017		
By	Browning, G		
By			
Work Order No.			

Citizen Inquiry

Inquiry No.	1182	**Received by**	Reiter, S
Date	5/3/2017		
Name	Williams, Mike		
Address	25410 Cherry St		
Phone		**Alt Phone**	(815) 260-3310
Subdivision		**Unit**	
Request/Concern	Several years back Public Works (he believes) put concrete blocks to act as barriers from the creek behind his house (Cherry & Bridge St). A large concrete barrier has fallen in the creek. Please inspect and remove the concrete block from the creek and replace the block that is missing.		
Action Taken	Concrete blocks were put back in place		
Date Complete	5/5/2017		
By	Link, R		
By			
Work Order No.			

Citizen Inquiry

Inquiry No.	1188	**Received by**	Dolezal, E
Date	6/13/2017		
Name	Bugajski, Jim		
Address	24532		
Phone	(708) 712-8543	**Alt Phone**	
Subdivision		**Unit**	
Request/Concern	Yard at 24532 Serrasno Ct. is eroding at outfall of storm sewer pipe.		
Action Taken	This issue was identified on the subdivision improvement punch list. We will contact the developer. Building Department is not issuing permits or real estate transfer stamps. Letter of Credit is pronbably useless due to FDIC bailout of bank. Jim has been made aware of the situation.		
Date Complete	6/20/2017		
By	Dolezal, E		
By			
Work Order No.			

Citizen Inquiry

Inquiry No.	1189	**Received by**	Reiter, S
Date	7/5/2017		
Name	, Tisha		
Address	25923 Sandy Knoll Dr		
Phone	(815) 919-8474	**Alt Phone**	
Subdivision		**Unit**	
Request/Concern	Please inspect her parkway. The ground is caving in. The resident has added dirt to it on several occasions. The area is marked with orange spray paint		
Action Taken	Filled with concrete and dirt. Trench line problem.		
Date Complete	7/10/2017		
By	Helms, J		
By			
Work Order No.			

Citizen Inquiry

Inquiry No.	1190	**Received by**	Reiter, S
Date	7/6/2017		
Name	Tanton, Tom		
Address	23953 Majestic Dr		
Phone	(815) 467-2863	**Alt Phone**	(815) 954-7338
Subdivision		**Unit**	
Request/Concern	Large hole next to the driveway behind the storm drain. Please repair. (this was also repaired on 8/5/16 CI #1160). Also please reevaluate his parkway tree for removal.		
Action Taken	Filled hole with concrete and dirt. Talked to Bruce about the tree we can remove it when we get there.		
Date Complete	7/10/2017		
By	Helms, J		
By			
Work Order No.			

Citizen Inquiry

Inquiry No.	1196	**Received by**	Dolezal, E
Date	9/7/2017		
Name	Gurnitz, Matt		
Address	25010 Canal St		
Phone		**Alt Phone**	
Subdivision		**Unit**	
Request/Concern	Dear Ed, I was wondering if there is anything that the village of Channahon can do with the over flow of water from rainfall that is collecting in my driveway and backyard? The neighbors and I believe that it could be from Subway not having proper drainage for rainwater. The building itself is elevated above the surrounding houses.		
Action Taken			
Date Complete			
By			
By			
Work Order No.			

Citizen Inquiry

Inquiry No.	1198	**Received by**	Vaickus, B
Date	12/8/2017		
Name	Prince, Gerrit		
Address	24337 Edwin Dr		
Phone	(815) 467-6868	**Alt Phone**	
Subdivision	Rolling Acres	**Unit**	
Request/Concern	Neighbor's sump pump (24345 Edwin) is discharging at the end of his driveway causing an accumulation of water and ice.		
Action Taken			
Date Complete			
By			
By			
Work Order No.			

Citizen Inquiry

Inquiry No.	1199	**Received by**	Vaickus, B
Date	2/21/2018		
Name	Kane, Jenea		
Address	22800 Michael Dr		
Phone	(217) 821-1788	**Alt Phone**	
Subdivision		**Unit**	
Request/Concern	Basement flooded. She believes that it is a storm drain issue. Wanted to know who is responsible to cleaning the storm drains.		
Action Taken	No problems with storm sewers. Spoke to her about possible it being a sump pump issue. She will speak to husband. Told her any more problems to call me. We may have to have building inspector get involved.		
Date Complete	2/22/2018		
By	Vaickus, B		
By			
Work Order No.			

Citizen Inquiry

Inquiry No.	1189	**Received by**	Reiter, S
Date	7/5/2017		
Name	, Tisha		
Address	25923 Sandy Knoll Dr		
Phone	(815) 919-8474	**Alt Phone**	
Subdivision		**Unit**	
Request/Concern	Please inspect her parkway. The ground is caving in. The resident has added dirt to it on several occasions. The area is marked with orange spray paint		
Action Taken	Filled with concrete and dirt. Trench line problem.		
Date Complete	7/10/2017		
By	Helms, J		
By			
Work Order No.			

Citizen Inquiry

Inquiry No.	1190	**Received by**	Reiter, S
Date	7/6/2017		
Name	Tanton, Tom		
Address	23953 Majestic Dr		
Phone	(815) 467-2863	**Alt Phone**	(815) 954-7338
Subdivision		**Unit**	
Request/Concern	Large hole next to the driveway behind the storm drain. Please repair. (this was also repaired on 8/5/16 CI #1160). Also please reevaluate his parkway tree for removal.		
Action Taken	Filled hole with concrete and dirt. Talked to Bruce about the tree we can remove it when we get there.		
Date Complete	7/10/2017		
By	Helms, J		
By			
Work Order No.			

Citizen Inquiry

Inquiry No.	1199	**Received by**	Vaickus, B
Date	2/21/2018		
Name	Kane, Jenea		
Address	22800 Michael Dr		
Phone	(217) 821-1788	**Alt Phone**	
Subdivision		**Unit**	
Request/Concern	Basement flooded. She believes that it is a storm drain issue. Wanted to know who is responsible to cleaning the storm drains.		
Action Taken	No problems with storm sewers. Spoke to her about possible it being a sump pump issue. She will speak to husband. Told her any more problems to call me. We may have to have building inspector get involved.		
Date Complete	2/22/2018		
By	Vaickus, B		
By			
Work Order No.			

Melanie Arnold

From: Don Kinzler
Sent: Tuesday, August 29, 2017 11:35 AM
To: 'Gordene Donley'
Subject: RE: Drainage Issue
Attachments: 26524 Melissa.pdf; 26524 Melissa GIS.PDF

Hi Gordene,

I stopped to look at the problem yesterday. The original grading design, attached, shows runoff from properties is supposed to flow north and south to the rear property lines, then east to the detention pond. There is also a storm drain at the northeast corner of 26516 Melissa (highlighted green).

I suspect the main issue are sump discharges continuing to contribute water to the area long after the rain stops. This is common on the west side of town where there are more clay soils. When sump discharges are connected to storm sewer, we don't see these issues. Even if there is ponding following a rain event, it will at worst evaporate within a few days. It is important to note that discharging sump pumps to rear yards is both allowed and common.

Unfortunately, the Village considers these as homeowner issues. One possible remedy would be to join with adjacent property owners to install a sump collection pipe along the rear property lines to the rear yard storm inlet at 26516 Melissa; then connect sump discharges to the collection pipe. If undertaken, this work would have to be permitted through the Village with any permit fees waived.

Please feel free to call or email with any questions.

Regards,

Donald R. Kinzler,P.E.,CFM
Engineering Project Manager
Village of Channahon
24555 Navajo Dr.
Channahon, IL 60410
Ph:(815) 467-6644
Fx:(815) 467-8398

From: Gordene Donley [mailto:gordenedonley@gmail.com]
Sent: Wednesday, August 23, 2017 7:04 PM
To: Don Kinzler <dkinzler@channahon.org>
Subject: Fwd: Drainage Issue

Hi there, Thank you for the quick response. My address is 26524 West Melissa Drive

Begin forwarded message:

From: Don Kinzler <dkinzler@channahon.org>
Subject: Drainage Issue
Date: August 23, 2017 at 8:46:01 AM CDT
To: gordenedonley@gmail.com

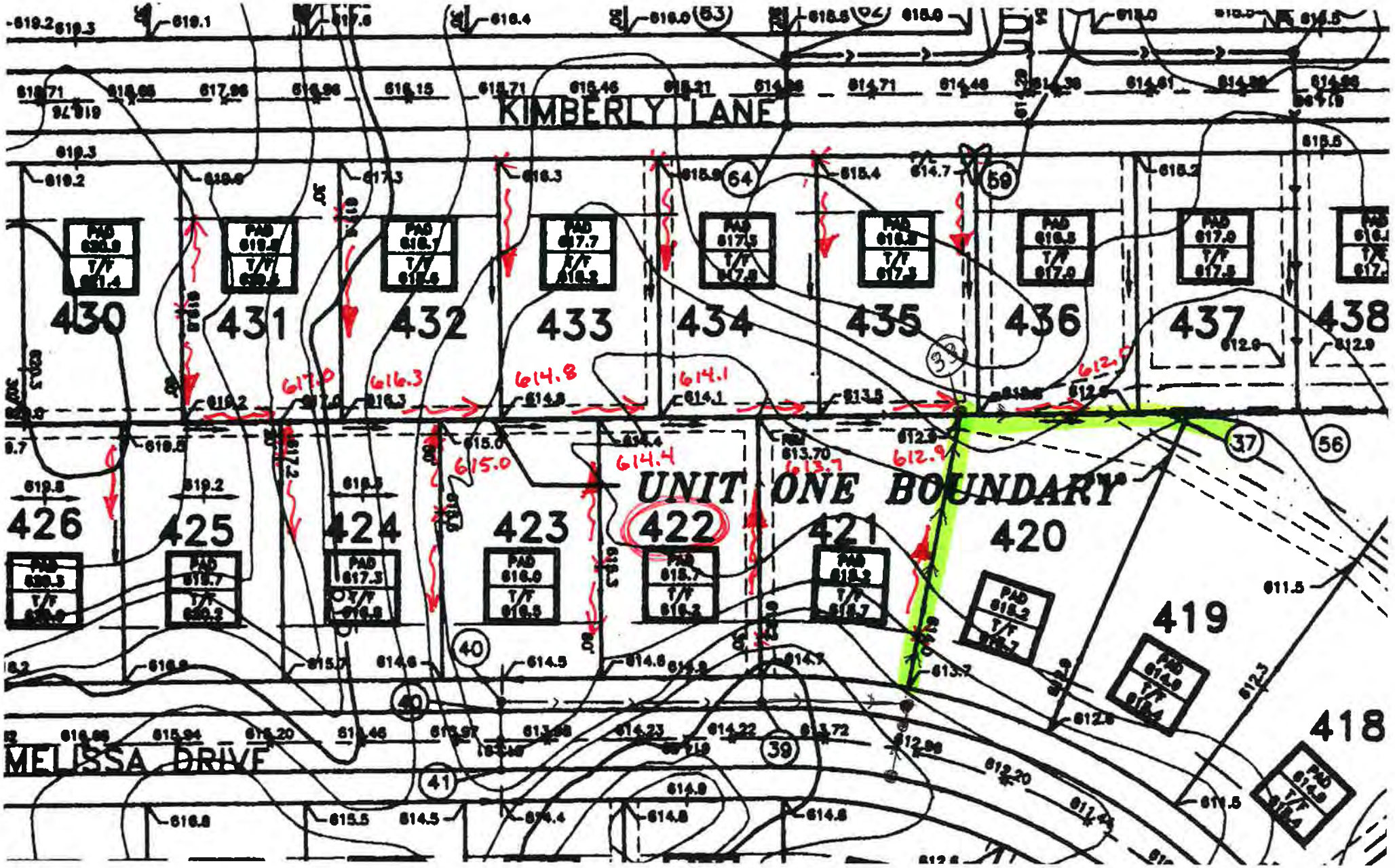
Hi Gordene,

John Cryder of your HOA mentioned your having a drainage problem behind your home. Not sure if the Village can help, but if you can provide your address, I will take a look.

Regards,

Donald R. Kinzler,P.E.,CFM
Engineering Project Manager
Village of Channahon
24555 Navajo Dr.
Channahon, IL 60410
Ph:(815) 467-6644
Fx:(815) 467-8398


D-5
12Z-WM-HY-45
12"
30
12"
26714
432
26716
433
26718
434
26726
435
26722
436
26724
437
424
26532
423
26524
422
26516
421
26508
420
26500
419
8" - 270'
8" - 157'
12" - 237'
12" - 32'
12" - 32'
8" - 88'
8" - 150'
12Z-WM-HY-16
38
8"
W MELIS


KIMBERLY LANE
MELISSA DRIVE
UNIT ONE BOUNDARY
430
431
432
433
434
435
436
437
438
426
425
424
423
422
421
420
419
418
617.0
616.3
614.8
614.1
612.9
615.0
614.4

D-5, F-5

Melanie Arnold

From: Don Kinzler
Sent: Wednesday, July 26, 2017 1:11 PM
To: 'gb.bock915@hotmail.com'
Subject: 26324 Pit Run Dr
Attachments: 26324 Pit Run Dr Ltr_07-26-17.pdf

Hi Gary,

Attached is a scanned copy of my letter and exhibits. Please call with any other questions.

Regards,

Donald R. Kinzler,P.E.,CFM
Engineering Project Manager
Village of Channahon
24555 Navajo Dr.
Channahon, IL 60410
Ph:(815) 467-6644
Fx:(815) 467-8398

D-5, F-5

VILLAGE OF
CHANNAHON
24555 S. NAVAJO DRIVE • CHANNAHON, ILLINOIS 60410
(815) 467-6644 • FAX (815) 467-9774 • www.channahon.org

July 26, 2017

RE: 26324 Pit Run Dr.; Lot 19, Quarry Subdivision

To Whom It May Concern:

This letter is provided as a courtesy to Mr. Bockholdt, the current property owner of 26324 Pit Run Dr. located within municipal boundaries of the Village of Channahon. The Village provides this letter with the understanding that only FEMA can make an official floodplain determination.

The Village believes the residential structure on this property is not located within a FEMA Special Flood Hazard Area (SFHA). This determination is made after evaluating NFIP FIRM Map Panel 17197C0265 (Effective Date September 6, 1995), FEMA Letter of Map Amendment (LOMA) 99-05-7010A, Village approved Grading Plan, Preliminary Digital FIRM (DFIRM) Map Panel 17197C0265, Preliminary Will County Flood Insurance Study (2009), Village of Channahon GIS system with Will County 2 foot contours and Village files for Quarry Subdivision. See attached exhibits from these documents.

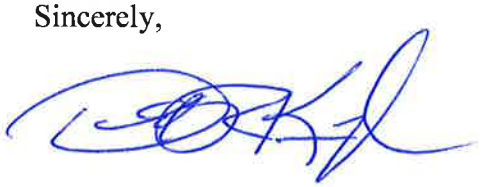
The Village reached this opinion after considering the following points:

- Although the current map panel shows a Zone A floodplain on the property, LOMA 99-05-7010A with an approved Base Flood Elevation (BFE) of 511.3 feet determined that much of Quarry Subdivision was not in a floodplain.
- The preliminary DFIRM map and Preliminary Flood Insurance Study reflects the LOMA determination and provides a BFE between 510.3 and 510.4 near this property.
    - Although the new DFIRM maps for Will County have not received final approval, it is my understanding the preliminary map 17197C0265 and its floodplain boundaries are not in dispute.
- Village GIS shows a 512.0 contour approximately 5 ft, and a 510.0 contour around 20-25 feet, behind the residential structure.
- Correspondence on file indicates the Village required the LOMA determination before approving the Final PUD (Planned Unit Development) and final engineering for Quarry Subdivision.
- Final engineering Grading Plan shows the *LIMITS OF EXISTING 100 YEAR FLOOD* to be located outside the property line of lot 19.

D-5, F-5

If you have any questions, please call 815-467-6644.

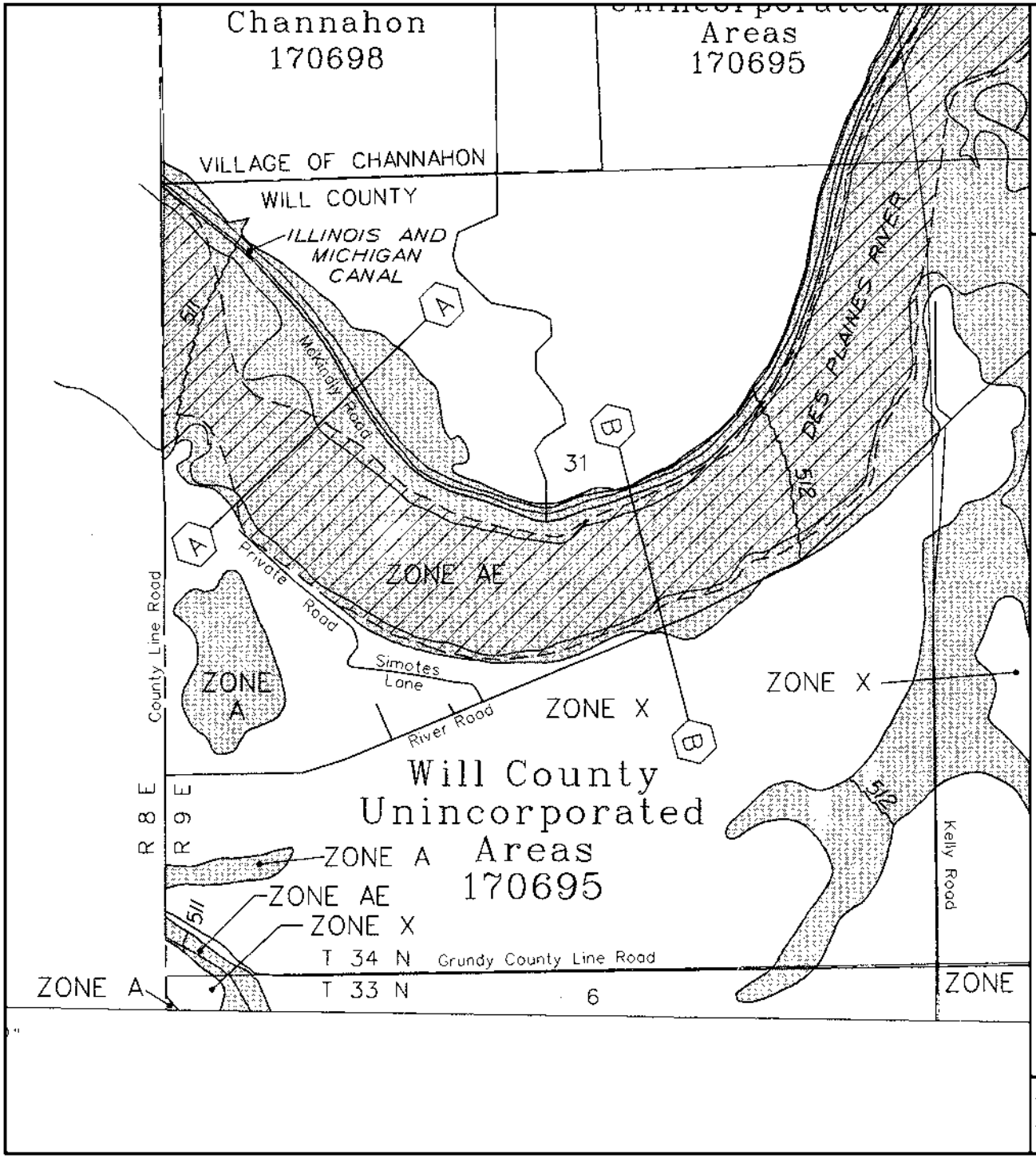
Sincerely,



Donald Kinzler, P.E., CFM
Engineering Project Manager

Cc:

D-5, F-5



APPROXIMATE SCALE

1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

WILL COUNTY,
ILLINOIS
AND INCORPORATED AREAS

PANEL 265 OF 585

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
CHANNAHON, VILLAGE OF	170698	0265	E
MINOOKA, VILLAGE OF	170509	0265	E
UNINCORPORATED AREAS	170695	0265	E

Notice to User: The MAP NUMBER shown below should be used when placing map orders; the COMMUNITY NUMBER shown above should be used on insurance applications for the subject community.

MAP NUMBER
17197C0265 E

EFFECTIVE DATE:
SEPTEMBER 6, 1995

Federal Emergency Management Agency

D-5, F-5

Page 1 of 2		Date: March 16, 2000	Case No.: 99-05-7010A	LOMA

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP AMENDMENT
DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	WILL COUNTY, ILLINOIS (Unincorporated Areas)	Proposed Quarry P.U.D., a portion of a parcel of land, as described and recorded in Deed in Trust Document No. R85-33243, filed by the Will County Recorder on October 7, 1985. The area to be removed from the SFHA is more particularly described by the following metes and bounds: That part of the West half of Section 31, Township 34 North, Range 9 East of the third Principal Meridian, described as commencing at the Northwest corner of the Southwest quarter of said section; thence N89°44'40"E, on the North line of said Southwest quarter, 475.69 feet to the Southeast corner of the parcel of land conveyed by the Instrument Recorded as Document No.
	COMMUNITY NO.: 170695	
AFFECTED MAP PANEL	NUMBER: 17197C0265E	
	NAME: WILL COUNTY, ILLINOIS AND INCORPORATED AREAS	
	DATE: 09/06/1995	
FLOODING SOURCE: DES PLAINES RIVER		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 41.382, -88.248 SOURCE OF LAT & LONG: PRECISION MAPPING STREETS 4.0 DATUM: NAD83

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (NGVD29)	LOWEST ADJACENT GRADE ELEVATION (NGVD29)	LOWEST FLOOR ELEVATION (NGVD29)	LOWEST LOT ELEVATION (NGVD29)
—	—	—	—	Portion of Property	X(shaded)	511.3 feet	—	—	—

Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below.)

LEGAL PROPERTY DESCRIPTION (CONTINUED)
PORTIONS REMAIN IN THE SFHA
ZONE A

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Amendment for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the described portion(s) of the property(ies) is/are not located in the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document amends the effective NFIP map to remove the subject property from the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, P.O. Box 2210, Merrifield, VA 22116-2210.

Matthew B. Miller

Matthew B. Miller, P.E., Chief
Hazards Study Branch
Mitigation Directorate

Version 1.0

MX17202200521001657924788

Page 2 of 2		Date: March 16, 2000	Case No.: 99-05-7010A	LOMA

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP AMENDMENT
DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

LEGAL PROPERTY DESCRIPTION (CONTINUED)

R87-38295; thence N00°05'00"W, on the East line of said parcel, 379.94 feet to the Southerly line of the parcel of land conveyed by the Instrument recorded as Document No. 495293; thence S46°13'29"E, on said Southerly line, 186.04 feet; thence S42°12'59"E, on said Southerly line, 61.34 feet to a line parallel with and 650.60 feet East of the West line of said Section 31; thence S00°00'00"E, on said line, 658.29 feet; thence S18°58'42"E, 18.17 feet to the POINT OF BEGINNING; thence S00°05'31"W, 166.27 feet; thence S02°01'09"E, 79.48 feet; thence S02°09'56"W, 50.64 feet; thence S04°51'23"W, 77.12 feet to a line parallel with and 650.60 feet East of the West line of said Section; thence S00°00'00"E, on said line, 19.82 feet; thence S89°50'31"W, 417.00 feet; thence S00°35'42"E, 170.72 feet; thence S49°01'24"E, 51.74 feet; thence S16°06'38"E, 52.82 feet; thence S38°46'20"E, 48.49 feet; thence S80°34'30"E, 93.41 feet; thence N39°49'06"E, 193.84 feet; thence N62°35'30"E, 82.16 feet; thence N78°09'47"E, 70.02 feet; thence N50°53'49"E, 51.72 feet; thence N24°51'32"E, 66.54 feet; thence N02°58'26"E, 64.88 feet; thence N10°50'41"W, 174.10 feet; thence N18°58'42"W, 182.69 feet to the POINT OF BEGINNING.

PORTIONS OF THE PROPERTY REMAIN IN THE SFHA (This Additional Consideration applies to the preceding 1 Property.)

This Determination Document has removed the subject of the determination from the Special Flood Hazard Area (SFHA). However, portions of the property may remain in the SFHA. Therefore, any future construction or substantial improvement on the property remains subject to Federal, State/Commonwealth, and local regulations for floodplain management.

ZONE A (This Additional Consideration applies to the preceding 1 Property.)

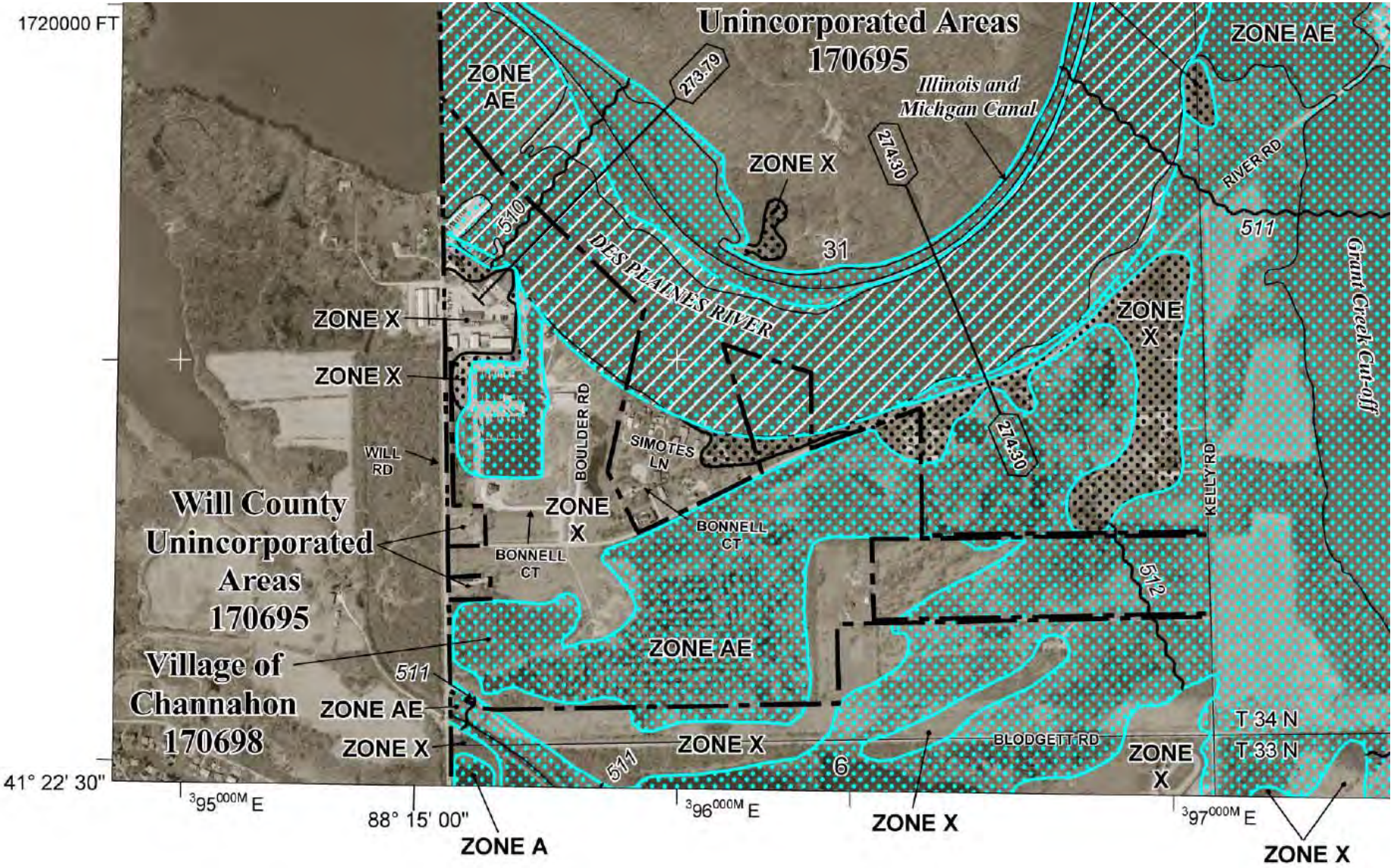
The NFIP map affecting this property depicts an SFHA that was determined using the best flood hazard data available to FEMA, but without performing a detailed engineering analysis. The flood elevation used to make this determination is based on approximate methods and has not been formalized through the standard process for establishing base flood elevations published in the Flood Insurance Study. This flood elevation is subject to change.

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, P.O. Box 2210, Merrifield, VA 22116-2210.

Matthew B. Miller

Matthew B. Miller, P.E., Chief
Hazards Study Branch
Mitigation Directorate

D-5, F-5



Portion of Preliminary DFIRM Map Panel 17197C0265 which was provided to the Village for review in 2008.

Portion of Preliminary Will County Flood Insurance Study which was provided to the Village for review in 2008.

D-5, F-5

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Butterfield Creek East Branch								
A	4.07 [1]	165	108	1.66	743.2	743.2	743.3	0.1
B	4.15 [1]	160	60	1.86	745.4	745.4	745.5	0.1
C	4.29 [1]	370	712	0.16	745.6	745.6	745.7	0.1
D	4.55 [1]	218	179	0.62	748.4	748.4	748.5	0.1
E	4.69 [1]	113	84	1.18	755.4	755.4	755.5	0.1
Deer Creek								
A	61,300 [2]	30	154	2.91	701.5	701.5	701.6	0.1
B	63,270 [2]	70	158	2.67	708.4	708.4	708.5	0.1
C	67,290 [2]	136	211	1.88	726.0	726.0	726.1	0.1
D	70,060 [2]	87	177	2.08	734.2	734.2	734.3	0.1
E	71,935 [2]	115	140	2.46	738.5	738.5	738.6	0.1
F	75,926 [2]	40	132	2.27	743.4	743.4	743.5	0.1
G	80,045 [2]	800	1,490	0.18	743.6	743.6	743.7	0.1
Des Plaines River								
273.79	273.79 [44]	895	*	*	510.3	510.3	*	*
274.30	274.30 [44]	830	*	*	510.7	510.7	*	*
275.00	275.00 [44]	600	*	*	510.8	510.8	*	*
275.50	275.50 [44]	2,110	*	*	511.0	511.0	*	*
276.10	276.10 [44]	2,683	*	*	511.1	511.1	*	*
276.50	276.50 [44]	2,750	*	*	511.1	511.1	*	*
276.85	276.85 [44]	2,576	*	*	511.2	511.2	*	*
277.30	277.30 [44]	3,100	*	*	511.2	511.2	*	*
277.70	277.70 [44]	812	*	*	511.2	511.2	*	*

[1] Miles above confluence with Butterfield Creek
[2] Feet above mouth
[44] Miles above confluence with Mississippi River
* Data Not available

TABLE 17

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILL COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

BUTTERFIELD CREEK EAST BRANCH - DEER CREEK - DES PLAINES RIVER


D-5, F-5
Village of Channahon GIS with Will County GIS 2 foot contours.
N
W
E
S
0 12.5 25 50 75 100
Feet
1 inch = 50 feet
10-31-301-034
20
10-31-301-040
10-31-301-041
Quarry Subdivision
10-31-304-001
PIT RUN

D-5, F-5

SEE SHEET 5 OF 10 FOR CONTINUATION OF GRADING PLAN

PROPOSED MARINA

LIMITS OF EXISTING 100 YEAR FLOOD

PROPOSED RETAINING WALL T/WALL 508.0±

EXISTING POND T/WATER 506.6± COMMON ELEMENT

BONNELL BENDS UNIT TWO

BONNELL CT.

BOULDER ROAD

PIT RUN DRIVE

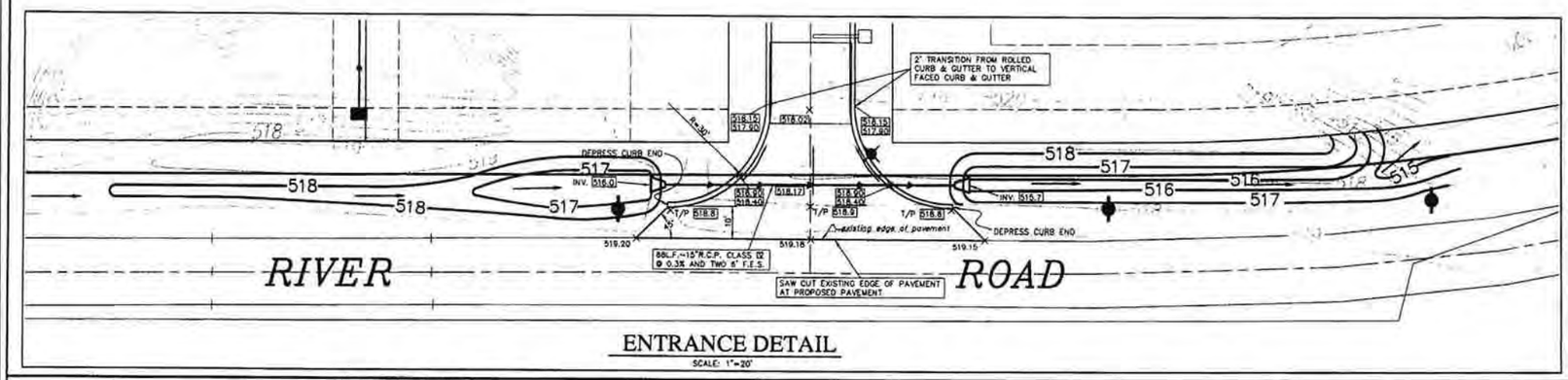
COUNTY LINE ROAD

NOT SUBDIVIDED

DES PLAINES RIVER ROAD

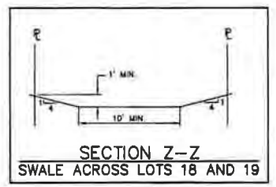
LEGEND

XXX.X	EXISTING ELEVATION
XXX	EXISTING CONTOUR
XXX	PROPOSED CONTOUR
XXX.X	PROPOSED ELEVATION
T/F	TOP OF FOUNDATION
G.F.	GARAGE FLOOR
1/F XXX.X	PROPOSED MINIMUM TOP OF FOUNDATION ELEVATION FOR HOUSE IN LOCATION SHOWN
1/F XXX.X/XXX.X	PROPOSED MINIMUM TOP OF FOUNDATION ELEVATION AT HIGHEST AND LOWEST POINTS ON LOTS WITH PROPOSED STEPPED FOUNDATIONS
	SUGGESTED WELL HEAD LOCATION
SEPTIC XXX.X	SUGGESTED SEPTIC SYSTEM LOCATION
	PROPOSED REINFORCED CONCRETE PIPE W/FLARED END SECTION
	PROPOSED DIRECTION OF OVERLAND FLOW
	PROPOSED STORM OVERFLOW ROUTE
	PROPOSED DITCH OR SWALE
	LIMITS OF 100 YEAR FLOOD



ENTRANCE DETAIL

SCALE: 1"=20'



SECTION Z–Z
SWALE ACROSS LOTS 18 AND 19

APPROVED FOR CONSTRUCTION

GRADING PLAN GENERAL NOTES

1.) ELEVATIONS SHOWN ON THIS DRAWING ARE TO BE FOLLOWED TO DO FINAL GRADING AFTER HOME IS BUILT AND TO SET MINIMUM ALLOWABLE TOP OF FOUNDATION ELEVATIONS FOR HOUSE IN LOCATION SHOWN

2.) FINAL GRADING TO MAINTAIN ILLUSTRATED DRAINAGE PATTERN, SWALES, AND ENGINEERING OVERLAND FLOW ROUTES

3.) GRADE AT HOUSE SHALL BE A MINIMUM OF 0 5' BELOW TOP OF FOUNDATION ELEVATION.

4.) A MINIMUM OF 4" OF TOPSOIL IS REQUIRED ON EACH LOT IN DISTURBED AREAS TO BE SEEDED

5.) PROPOSED ELEVATION ON PAVEMENT ARE TOP OF PAVEMENT ELEVATIONS AT THE CENTERLINE OF ROAD

6.) DRIVEWAY SLOPES NOT TO EXCEED 10 0%

7.) A DETAILED GRADING PLAN, SIGNED AND SEALED BY AN ILLINOIS REGISTERED PROFESSIONAL ENGINEER, SHALL BE PREPARED AND APPROVED BY THE VILLAGE OF CHANNAHON FOR EACH LOT PRIOR TO CONSTRUCTION ON THAT LOT.

8.) APPROXIMATE 100 YEAR FLOOD ELEVATION = 511.4 INTERPOLATED FROM FEMA, FLOOD INSURANCE STUDY FLOOD PROFILES, SEPTEMBER 6, 1995.
APPROXIMATE 10 YEAR FLOOD ELEVATION = 509 0 INTERPOLATED FROM FEMA, FLOOD INSURANCE STUDY FLOOD PROFILES, SEPTEMBER 6, 1995

BENCHMARK:
RM 171
CHISELED "X" IN TOP OF NORTH END OF EAST CONCRETE BRIDGE RAIL ON NE KANKAKEE RIVER BRIDGE LOCATED ON GRUNDY COUNTY LINE ROAD PER FIRM PANEL NUMBER 17197C0405 E, DATED SEPTEMBER 6, 1995.
ELEVATION=518 70 (NGVD)

SITE BENCHMARK:
CUT CROSS IN CONCRETE DRIVE 36.6' NORTH 22 0' WEST OF THE NORTHEAST CORNER OF EXISTING MARINA.
ELEVATION=508 19 (NGVD)

SHEET 1 OF 2

R E V I S I O N S

No.	DATE	DESCRIPTION	BY	No.	DATE	DESCRIPTION	BY
2	4-15-99	REVISED PER VILLAGE OF CHANNAHON	RS				
3	8-26-99	REVISED PER VILLAGE OF CHANNAHON	RS				
4	9-13-99	REVISED PER VILLAGE OF CHANNAHON	DRH				

DOCUMENTATION
PROJECT No. 911236 00
DATE: 1-11-1999
FIELD BOOK:
DRAWN BY: RS
CHECKED BY: MA

ENGINEER/SURVEYOR:
RUETTIGER, TONELLI & ASSOCIATES, INC.
Land Surveyors/Engineers/Planners/Landscape Architects/C.I.S. Consultants
2174 CHEDIA STREET, JOLIET, ILLINOIS 60436, PH. (815) 744-8600 FAX (815) 744-0101
2903 SOUTH WASHINGTON STREET, SUITE 170, NAPERVILLE, ILLINOIS 60565, PH. (630) 420-7740 FAX (815) 420-7741

PROJECT TITLE:
QUARRY
PLANNED UNIT DEVELOPMENT

DRAWING TITLE:
GRADING PLAN

DRAWING No. 391-1236-C
SCALE: 1" = 50'
SHEET 4 OF 10

M:\91236\0gp1.dwg Wed Sep 15 13:37:05 1999 R.S

JACOB & HEFNER ASSOCIATES
1333 Butterfield Road, Suite 300
Downers Grove, IL 60515
P 630-652-4600
F 630-652-4601

NPDES Site Observation Report for ILR10

General Information			
Project Name	**Roadway Improvements for I-55 & Bluff Road**		**Approximate Acreage: 10.2 ac**
Operator	**Village of Channahon**		**JHA Project No.: E209h**
Project Location	**Bluff Road and Frontage Roads at I-55 Interchange**		
Date of Site Visit	**9/7/17**	**NPDES Permit No. ILR10 ILR10W592**	
Observer's Name(s) & Title(s)	**Kevin Huemann – Project Engineer**		
Construction phase at time of visit	☐ **Pre-Construction** ☐ **Land Development** ☐ **Vertical Construction** ☒ **Roadway Construction** ☐ **Post Construction** ☐ **Other:**		
Type of Site Visit: ☒ **Routine** ☐ **Post-Storm Event** ☐ **Other:**			
Weather Information			
Sunny, 67º F	Last measured precipitation event ≥ 0.5": **N/A**		
Site Observations – Describe Location and Recommend Corrective Measures on Back Page			

No.	BMP/ Activity	Implemented & Maintained		
1	Are discharge points and receiving waters free of sediment deposits and other pollutants?	☒ Yes	☐ Action Item	☐ N/A
2	Have BMPs specified in the SWPPP been installed and maintained?	☐ Yes	☒ Action Item	☐ N/A
3	Has the SWPPP been updated to reflect the current conditions on site?	☒ Yes	☐ Action Item	☐ N/A
4	Are outlets protected/stabilized?	☐ Yes	☐ Action Item	☒ N/A
5	Have stormwater management systems been constructed, stabilized, and verified to be functioning appropriately?	☐ Yes	☐ Action Item	☒ N/A
6	Are Special Management Areas (e.g., creeks, wetlands, buffers, etc.) adequately protected?	☐ Yes	☐ Action Item	☒ N/A
7	Are storm drain inlets adequately protected?	☐ Yes	☒ Action Item	☐ N/A
8	Have all idle, disturbed areas been stabilized within 14 days of cessation of construction activities in that area (or more restrictive time period per local ordinance requirements)?	☒ Yes	☐ Action Item	☐ N/A
9	Are erodible stockpiles (e.g., topsoil) properly located and adequately protected?	☐ Yes	☒ Action Item	☐ N/A
10	Are washout facilities (e.g., concrete washouts, etc.) available and maintained?	☐ Yes	☐ Action Item	☒ N/A
11	Is waste, including building materials and construction debris, collected and placed in approved receptacles?	☒ Yes	☐ Action Item	☐ N/A
12	Are non-stormwater discharges (e.g., dewatering) properly controlled?	☒ Yes	☐ Action Item	☐ N/A
13	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other potential pollutants?	☐ Yes	☐ Action Item	☒ N/A
14	Are portable toilets, material storage areas, and materials that are potential stormwater contaminants managed appropriately?	☐ Yes	☒ Action Item	☐ N/A
15	Are stabilized entrances installed and are adjacent roads clear of sediment?	☐ Yes	☐ Action Item	☒ N/A
16	Other, based on site conditions:	☐ Yes	☒ Action Item	☐ N/A

No.	Location and Recommended Corrective Measure	Completed/Initial*
2	Silt fence has marked with paint A-Z every 10 partitions of silt fence to make identifying locations easier. Issues with silt fence exist in the following locations: South between Northbound Exit Ramp and Southeast Frontage Road at K8. Silt fence has not been trenched due to the location of the existing concrete flume. **Recommendation:** Contractor should install floc logs or a rock check dam at this location as most of the runoff will be funneled at this location during a storm event. North between the Northbound Entrance Ramp and the Northeast Frontage Road at B1 & from D-F. Silt fence has been damaged at B1 and the topsoil stockpile was damaging and toppling over the silt fence between D-F. **Recommendation:** Repair broken silt fence at these locations and install double row silt fence around the topsoil stock pile. North between I-55 & Southbound Exit Ramp. A gap of silt fence between B&C for construction equipment access. **Recommendation:** This area will be continuously monitored by the Resident Engineer to ensure runoff doesn't exit the site at this location. If runoff becomes an issue, contractor should install silt fence in this area or other methods as deemed appropriate by the resident engineer. North between the Southbound Exit Ramp and Northwest Frontage Road. A gap of silt fence between N&O for construction equipment access. **Recommendation:** This area will be continuously monitored by the Resident Engineer to ensure runoff doesn't exit the site at this location. If runoff becomes an issue, contractor should install silt fence in this area or other methods as deemed appropriate by the resident engineer.	____
2,9	Contractor is beginning to strip and stock pile topsoil. Double row of silt fence has yet to be constructed around proposed topsoil stockpiles. **Recommendation:** Contractor should install double row silt fence around the proposed stockpiles upon completion of topsoil strip.	____
14	Portable toilet is not property secured. **Recommendation:** Contractor should anchor/secure the portable toilet so it doesn't fall over during a storm.	____
16	Tree protection has yet to be installed on trees to be saved within the silt fence area. **Recommendation:** Contractor should install tree protection prior to embankment operations.	____
		____
		____
		____
		____

*Following completion of corrective measure, check and initial

General Notes and Comments:

Silt fence was installed on Tuesday (9/5/17). Most of the silt fence has been installed properly with a few noted locations. Ground was broken on Wednesday and construction is underway. The contractor is excavating for the temporary pavement and has also begun striping the existing topsoil and stockpiling. Temporary pavement installation is planned to be installed tomorrow (9/8/17).

Certification Statement: (To address NPDES Permit NO. ILR10 requirements)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name & Title: Matthew J. Kramer, P.E.

Signature: _____ Date: 9/7/17

Figure 1: Properly Installed Silt fence

Figure 2: No Tree Protection Installed

Figure 3: South between Northbound Exit Ramp and Southeast Frontage Road at K8. Silt fence has not been trenched due to the location of the existing concrete flume.

Figure 4: South between Northbound Exit Ramp and Southeast Frontage Road at K8. Silt fence has not been trenched due to the location of the existing concrete flume.

Figure 5: North between the Northbound Entrance Ramp and the Northeast Frontage Road the topsoil stockpile was damaging and toppling over the silt fence between D and F.

Figure 6: North between the Northbound Entrance Ramp and the Northeast Frontage Road. Stockpile does not have double row silt fence installed around perimeter

Figure 7: North between the Northbound Entrance Ramp and the Northeast Frontage Road silt fence has been damaged at B1

Figure 8: Portable toilet is not property secured.

Public Works Department Work Order

Work Order No.	**6759**
Date	3/30/2017
Requested by	Kinzler, D
Assigned to	Kratochvil, C
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Check to make sure all out falls are clear and draining for the pond behind Rachel Drive
Work Performed	Outfalls clear and opened clogged restrictor
Date complete	3/30/2017
Completed by	Browning, G
Completed by	Link, R

Public Works Department Work Order

Work Order No.	**6760**
Date	3/30/2017
Requested by	Vaickus, B
Assigned to	Kratochvil, C
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Clear out beaver dam in drainage ditch on south Tabler road across from A & R transport. Block storm water run off.
Work Performed	beaver dam and house den have been removed
Date complete	4/20/2017
Completed by	Link, R
Completed by	Kratochvil, C

Public Works Department Work Order

Work Order No.	**6764**
Date	4/4/2017
Requested by	Reiter, S
Assigned to	Vaickus, B
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Please repair the area (dirt & seed) around the sewer grate between 26741 and 26749 Overland Dr.
Work Performed	Dirt and Seeded
Date complete	4/25/2017
Completed by	Helms, J
Completed by	Malsky, J

Public Works Department Work Order

Work Order No.	**6768**
Date	4/10/2017
Requested by	Dolezal, E
Assigned to	
Assigned to	
To Be Completed By	4/21/2017
Division	Streets
JULIE #	
Request	Check on drainage obstructions along Bridge Street adjacent to Blackberry Apartments and clean if required.
Work Performed	Completed
Date complete	4/25/2017
Completed by	Baranoski, J
Completed by	Browning, G

Public Works Department Work Order

Work Order No.	**6769**
Date	4/11/2017
Requested by	Kinzler, D
Assigned to	bruce
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Check storm sewers from 25362 - 25332 McKInley Woods for blockage.
Work Performed	Checked all sewres in back yards and on Timber Ridge Ct. No blockages found.
Date complete	4/11/2017
Completed by	Vaickus, B
Completed by	

Public Works Department Work Order

Work Order No.	**6770**
Date	4/12/2017
Requested by	Dolezal, E
Assigned to	
Assigned to	
To Be Completed By	4/21/2017
Division	Streets
JULIE #	
Request	Clean up dumping on NW Frontage Road by IDOT facility. Place concrete barriers with reflectors across road to block access to dumping site.
Work Performed	
Date complete	
Completed by	
Completed by	

Public Works Department Work Order

Work Order No.	**6774**
Date	4/18/2017
Requested by	Vaickus, B
Assigned to	Kratochvil, C
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Cleanup broken glass at end of McGowen
Work Performed	swept up and removed broken glass
Date complete	4/18/2017
Completed by	Choate, S
Completed by	

Public Works Department Work Order

Work Order No.	**6785**
Date	5/3/2017
Requested by	Vaickus, B
Assigned to	Kratochvil, C
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	In the back yard of 25933 Sandy Knoll, there is a large hole next to the storm sewer grate. Repair as needed.
Work Performed	inside storm sewer is OK Filled hole with rock, concrete, and dirt and seed
Date complete	5/3/2017
Completed by	Helms, J
Completed by	Malsky, J

Public Works Department Work Order

Work Order No.	**6789**
Date	5/9/2017
Requested by	Vaickus, B
Assigned to	Kratochvil, C
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Grout two manhole on east side of village hall parking lot.
Work Performed	inspected both manholes, rings have deteriorated no need to grout need to rebuild both
Date complete	5/26/2017
Completed by	Helms, J
Completed by	

Public Works Department Work Order

Work Order No.	**6800**
Date	5/12/2017
Requested by	Vaickus, B
Assigned to	Kratochvil, C
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Fill in low spots with dirt and seed on Red Stable marked on attached map.
Work Performed	filled dirt in around manholes and seeded
Date complete	6/8/2017
Completed by	Helms, J
Completed by	Kratochvil, C

Public Works Department Work Order

Work Order No.	**6801**
Date	5/12/2017
Requested by	Vaickus, B
Assigned to	Kratochvil, C
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Fill in low spots with dirt and seed on Cobbelstone marked on attached maps.
Work Performed	filled dirt in around manholes then seeded
Date complete	6/8/2017
Completed by	Helms, J
Completed by	Kratochvil, C

Public Works Department Work Order

Work Order No.	**6817**
Date	5/26/2017
Requested by	Reiter, S
Assigned to	Vaickus, B
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Please inspect the storm drain at the edge of the driveway. 26217 Evergreen it seems to be sinking and needs to be patched. Hosea 708-529-5282
Work Performed	Filled low area with patch. Inlet needs new rings.
Date complete	7/20/2017
Completed by	Browning, G
Completed by	

Public Works Department Work Order

Work Order No.	**6818**
Date	5/26/2017
Requested by	Reiter, S
Assigned to	Vaickus, B
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Inspect the sink hole by the storm drain at 26941 Hemlock . It is a safety issue, Resident indicated its 10" deep.
Work Performed	Repaired sinkhole @ storm sewer.
Date complete	5/26/2017
Completed by	Browning, G
Completed by	

Public Works Department Work Order

Work Order No.	**6819**
Date	5/31/2017
Requested by	Kinzler, D
Assigned to	Vaickus, B
Assigned to	Browning, G
To Be Completed By	5/31/2017
Division	Streets
JULIE #	
Request	Inspect storm sewer manhole on attached map leading to the pond. Note any thing not to be in manholes or if there is eveidence of illegal dumping. The address of the property is 26500 McKinley Woods Road.
Work Performed	Inspected every inlet, entry point and outfall, curb and cutter for evidence of any illegal dumping. No evidence was found at this time. Note: In the afternoon of the same date I notice a lawn service "spraying" product on the lawn two lots north of the above address. BV
Date complete	5/31/2017
Completed by	Browning, G
Completed by	Jake

Public Works Department Work Order

Work Order No.	**6838**
Date	6/15/2017
Requested by	Kratochvil, C
Assigned to	
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	repair storm sewer in and around at 26721 Kimberly lane
Work Performed	Repaired storm sewer and curbing.
Date complete	9/8/2017
Completed by	Browning, G
Completed by	

Public Works Department Work Order

Work Order No.	**6841**
Date	6/15/2017
Requested by	Reiter, S
Assigned to	Vaickus, B
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Please fill in the large hole by the sewer drain at 22733 Johnathon Dr. Also, the parkway trees need to be trimmed.
Work Performed	put cones on hole trees trimmed sewer drain repaired
Date complete	8/16/2017
Completed by	Browning, G
Completed by	Baranoski, J

Public Works Department Work Order

Work Order No.	**6849**
Date	6/21/2017
Requested by	Reiter, S
Assigned to	Vaickus, B
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	the storm sewer in front of 25240 Tall Tree Ct. is sinking. Please repair
Work Performed	Repaired storm sewer.
Date complete	8/16/2017
Completed by	Browning, G
Completed by	

Public Works Department Work Order

Work Order No.	**6853**
Date	6/27/2017
Requested by	Reiter, S
Assigned to	Vaickus, B
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Please repair the large hole next to the storm drain in front of 23927 S Navajo Dr.
Work Performed	Filled with concrete
Date complete	6/29/2017
Completed by	Helms, J
Completed by	

Public Works Department Work Order

Work Order No.	**6860**
Date	7/12/2017
Requested by	Reiter, S
Assigned to	Vaickus, B
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Please inspect and repair the large hole by the storm drain in her parkway 22932 S Patricia Lane.
Work Performed	Repaired storm sewer in parkway.
Date complete	8/17/2017
Completed by	Browning, G
Completed by	

Public Works Department Work Order

Work Order No.	**6863**
Date	7/18/2017
Requested by	Reiter, S
Assigned to	Vaickus, B
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Please unclog the storm drain at the corner of Bell Rd. & Woodrush
Work Performed	Inspected all inlets at the surrounding location and no inlets were found to be clogged.
Date complete	7/20/2017
Completed by	Browning, G
Completed by	

Public Works Department Work Order

Work Order No.	**6864**
Date	7/19/2017
Requested by	Vaickus, B
Assigned to	Kratochvil, C
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	REBUILD TWO MANHOLES ON EAST SIDE OF VILLAGE HALL PARKING LOT.
Work Performed	Installed new adjustment rings on inlets and sealed. Patched parking lot with concrete.
Date complete	7/18/2017
Completed by	Browning, G
Completed by	Helms, J

Public Works Department Work Order

Work Order No.	**6869**
Date	7/24/2017
Requested by	Vaickus, B
Assigned to	Kratochvil, C
Assigned to	
To Be Completed By	
Division	
JULIE #	
Request	Check out fall of pond to ensure it is draining properly at 26147 W Highland. Eugene Egizio 815-474-7860.
Work Performed	Restrictor was clogged at out fall. Cleaned debri out of restrictor.
Date complete	7/26/2017
Completed by	Browning, G
Completed by	Helms, J

Public Works Department Work Order

Work Order No.	**6871**
Date	7/26/2017
Requested by	Vaickus, B
Assigned to	Kratochvil, C
Assigned to	Browning, G
To Be Completed By	
Division	Streets
JULIE #	
Request	Check storm sewer at the southeast corner of Kimberly and Lauren. Hole developing in street.
Work Performed	Put cone near storm sewer on 7-26-17 Gordon Repaired storm sewer and curbing
Date complete	9/8/2017
Completed by	Browning, G
Completed by	Baranoski, J

Public Works Department Work Order

Work Order No.	**6872**
Date	7/26/2017
Requested by	Vaickus, B
Assigned to	Kratochvil, C
Assigned to	Browning, G
To Be Completed By	
Division	Streets
JULIE #	
Request	At 22839 Johnathon grout manhole and pipe as required. When finished patch apron next to storm sewer with cold patch.
Work Performed	Resealed manhole and pipe with mortar cold patched apron.
Date complete	10/3/2017
Completed by	Browning, G
Completed by	Baranoski, J

Public Works Department Work Order

Work Order No.	**6878**
Date	8/8/2017
Requested by	Vaickus, B
Assigned to	Kratochvil, C
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Check sink hole at N/W Corner Pueblo & Towpath. Possible inlet repair.
Work Performed	Barricade put at location. Done
Date complete	10/4/2017
Completed by	Browning, G
Completed by	Baranoski, J

Public Works Department Work Order

Work Order No.	**6904**
Date	9/13/2017
Requested by	Ashley, D
Assigned to	Kratochvil, C
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Storm sewer at 26010 Ravine Woods Dr needs to be repaired. It has been knocked off the concrete. Also drain is plugged at the curb.
Work Performed	Done
Date complete	10/9/2017
Completed by	Helms, J
Completed by	Malsky, J

Public Works Department Work Order

Work Order No.	**6908**
Date	9/13/2017
Requested by	Vaickus, B
Assigned to	Kratochvil, C
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Fill in road around manhole with cold patch on Municipal Drive, just south of Channahon General Rental driveway
Work Performed	Cold patch road around manhole on Municipal Dr.
Date complete	9/26/2017
Completed by	Helms, J
Completed by	Malsky, J

Public Works Department Work Order

Work Order No.	**6912**
Date	9/14/2017
Requested by	Vaickus, B
Assigned to	Kratochvil, C
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Repair storm sewer at the corner of Pueblo @ Tow Path
Work Performed	Duplicate work order. See work order 6878. Done
Date complete	10/4/2017
Completed by	Browning, G
Completed by	Baranoski, J

Public Works Department Work Order

Work Order No.	**6918**
Date	9/27/2017
Requested by	Vaickus, B
Assigned to	Kratochvil, C
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Check storm sewer in front of 25627 Chipwood. Not draining during flushing.
Work Performed	Can not get lid off.
Date complete	10/9/2017
Completed by	Browning, G
Completed by	

Public Works Department Work Order

Work Order No.	**6939**
Date	11/13/2017
Requested by	Vaickus, B
Assigned to	Helms, J
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Complete sump hook up to our storm sewer at 26446 Spur Ct.
Work Performed	Done
Date complete	11/13/2017
Completed by	Helms, J
Completed by	Malsky, J

Public Works Department Work Order

Work Order No.	**6946**
Date	11/29/2017
Requested by	Reiter, S
Assigned to	Vaickus, B
Assigned to	
To Be Completed By	
Division	Water
JULIE #	
Request	Please check for a water leak at 25703 S Ascot Ct. Resident said her sump pump is running constantly and the ground is saturated. Darlene Kolecki 815-290-5035
Work Performed	Inspected Storm/San 6 Bboxes. No leak spoke with homeowner on site.
Date complete	11/29/2017
Completed by	Barrett, J
Completed by	

Public Works Department Work Order

Work Order No.	**6984**
Date	2/20/2018
Requested by	Vaickus, B
Assigned to	Kratochvil, C
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Sewer drain needs to be cleared near 26430 Deer Path. Diana 815-671-3661.
Work Performed	Removed leaves and mud.
Date complete	2/21/2018
Completed by	Vaickus, B
Completed by	

Channahon Development, LLC
12 West Campbell Street, Suite 2 Arlington Heights IL 60005

March 14, 2017

Don Kinzler
Village of Channahon
24555 S Navajo Dr.
Channahon, IL 60447

RE: Violations Notice Received February 1, 2017

Dear Mr. Kinzler:

Pursuant to our recent telephone conversations, and in response to your February 1, 2017 email, please accept this letter as our response to your concerns relating to the approximately 263 - acre property owned by Channahon Development LLC in Channahon IL (the "Property"). We have taken the following steps to address your site concerns:

1. A silt fence has been installed along the section of the East border of the Property that was experiencing erosion and runoff.
2. French drains were installed near the East border of the Property to assist in drainage.
3. Ongoing monitoring of the silt fence is taking place to ensure that erosion and runoff are minimized to the extent possible.
4. Black dirt was replaced in the areas within 25' of the East Property line where it was previously removed (the black dirt will be stabilized in the spring when the weather allows).
5. I spoke with Gordie Stevens (the Village's mining consultant involved in writing the ordinance allowing mining on the Property), and based on the time of year, frozen ground, and large amount of rain experienced in January, he did not feel any additional permitting was necessary at this time.

Channahon Development, LLC
12 West Campbell Street, Suite 2 Arlington Heights IL 60005

Enclosed, as Exhibit A, please find photos of the work that was completed and referenced above.

Sincerely,
Channahon Development, LLC
By: Ketone Partner, Its Manager
By:

Kyle Schuhmacher, Manager

Channahon Development, LLC
12 West Campbell Street, Suite 2 Arlington Heights IL 60005

Exhibit A
Site Photos

Installation of French Drain (March 11, 2017)

Channahon Development, LLC
12 West Campbell Street, Suite 2 Arlington Heights IL 60005

Silt Fence installed along East Property line (March 11, 2017)

Channahon Development, LLC
12 West Campbell Street, Suite 2 Arlington Heights IL 60005

Replacement of black dirt along East Property line (March 11, 2017)

Channahon Development, LLC
12 West Campbell Street, Suite 2 Arlington Heights IL 60005

Photo of Silt Fence along East Property line (March 11, 2017)

Channahon Development, LLC
12 West Campbell Street, Suite 2 Arlington Heights IL 60005

Photo of Silt Fence along East Property line (March 11, 2017)

STEPHEN VANDEVEER 8/31/2017

Channahon Corporate Center / IDI Gazeley

Punchlist for Acceptance - Steps 1-4

July 13, 2017

	#	ITEM	STEP	ID/LOCATION	STREET	DEFICIENCY AND CORRECTION
Done	1	Wet well	1	Lift Station		Complete equipment installation and testing for sanitary lift station wet well. This item must be addressed prior to Village issuance of a Certificate of Occupancy for the office portion of Building A. DONE, BUT I HAVEN'T SEEN REPORT FROM MANUFACTURER
	2	Sanitary Force Main	1	Varies		Complete installation of sanitary force main pipe.
✓	3	Sanitary sewer	1	N of Amoco Rd	Amoco Rd	Complete installation of sanitary sewer gravity pipe and structures.
✓Done	4	Sanitary Sewer	1	S 4	East of Exchange	Steps don't line up from barrel section to barrel section. Remove and reinstall manhole steps so they line up per sanitary manhole detail on sheet 42 of infrastructure improvement plans.
✓Done	5	Water Valve	1	W-1	West of Exchange	Debris build up in structure. Clean debris out of structure and off of valve.
✓Done	6	Water Valve	1	W-4	West of Exchange	Grading issues. Regrade around structure.
✓Done	7	Water Valve	1	W-6	West of Exchange	Debris build up in structure, no corp plug, lifting hooks still in place. Remove steel lifting hooks from cone section, install plastic or copper corp cap, and clean mud and debris out of structure and off of valve.
✓Done	8	Fire Hydrant	1	FH 5	West of Exchange	Paint chipping and valve box not plumb. Excavate and straighten valve box to match fire hydrant detail on sheet 44 of intrastructure improvement plans. Repaint fire hydrant per VOC specifications.
✓Done	9	Fire Hydrant	1	FH 6	West of Exchange	Paint chipping. Repaint fire hydrant per VOC specifications.
✓Done	10	Storm Sewer	1	CB 1	South of Bluff	There are no steps in structure. Install steps per catch basin detail on sheet 42 of infrastructure improvement plans.
✓Done	11	Storm Sewer	1	CB 2	South of Bluff	Some steps are missing, frame is about 15" above grade, 9" frame. Install steps per catch basin detail on sheet 42 of infrastructure improvement plans. Replace 9" frame with a 6" frame. Remove the 6" adjusting ring to adjust frame down to about 6" above grade.
✓Done	12	Storm Sewer	1	CB 3	South of Bluff	No steps in structure, frame is about 12" above grade. Install steps per catch basin detail on sheet 42 of infrastructure plans. Remove the 6" adjusting ring to adjust frame down to about 6" above grade.
✓Done	13	Storm Sewer	1	CB 4	South of Bluff	No steps in structure, frame is about 8" above grade. Install steps per catch basin detail on sheet 42 of infrastructure plans. Remove the 2" adjusting ring to adjust frame down to about 6" above grade.
✓Done	14	Storm Sewer	1	CB 5	South of Bluff	No steps in structure, frame is about 9" above grade. Install steps per catch basin detail on sheet 42 of infrastructure plans. Remove the 6" adjusting ring and replace with a 3" adjusting ring to adjust frame down to about 6" above grade.
✓Done	15	Storm Sewer	1	FES 5	North of Bluff	Full of silt and debris. Clean all debris from structure.
✓Done	16	Storm Sewer	1	FES 6	North of Bluff	Material has eroded away on both sides of structure. Install and compact clay around the structure. Place specified topsoil, seed, and erosion control blanket over repaired areas.
✓Done	17	Storm Sewer	1	MH 18	North of Bluff	Adjusting rings and frame pushed off the MH during earthwork activities. Remove and clean rings and frame. Clean all debris out of the structure. Reinstall adjusting rings and frame with new mastic if not damaged. Install new rings and/or frame if damaged. Regrade and reinstall specified landscaping around the structure.
✓Done	18	Storm Sewer	1	FES 7	North of Bluff	Some silt build up in structure. Clean silt out of structure.
✓Done	19	Storm Sewer	1	FES 1	North of Bluff	Grate not attached. Attach grate.
✓Done	20	Storm Sewer	1	FES 3	West of Exchange	Material has eroded away on south side of structure. Install and compact clay on south side of the structure. Place specified topsoil, seed, and erosion control blanket over repaired area.
✓Done	21	Storm Sewer	1	FES 9	West of Exchange	Material has eroded away on both sides of structure. Install and compact clay around the structure. Place specified topsoil, seed, and erosion control blanket over repaired areas. EROSION OF SOIL STILL PRESENT.
✓Done	22	Storm Sewer	1	MH 27	East of Exchange	No bench. Pour concrete bench per manhole detail on sheet 42 of infrastructure improvement plans.
✓Done	23	Storm Sewer	1	MH 48	East of Exchange	Debris build up in structure. Remove all debris from the manhole.
✓Done	24	Storm Sewer	1	MH 49	East of Exchange	Debris build up in structure. Remove all debris from the manhole.
✓Done	25	Storm Sewer	1	MH 55	East of Exchange	Debris build up in structure, and grading around structure isn't smooth. Clean out MH and regrade.
✓Done	26	Storm Sewer	1	INL 57	West of Exchange	Grading issues. Regrade around structure.
✓Done	27	Storm Sewer	1	INL 60	West of Exchange	Debris build up in structure. Remove all debris from the inlet.
Don	28	Site Work	1	North of Detention Basin A	W Side of Exchange	Remove the gravel driveway with culvert along the north side of Basin A. Regrade, place topsoil, seed and blanket.
✓Done	~~29~~ In Progress	Fence	2	Gate	South of Bluff	Provide fence access gate for future maintenance from Bluff Rd to storm sewer outfall easement on ComEd property.
✓	30	Trees	4	Greenscape plan sheet L3	North of Bluff	Plant 1 more Swamp White Oak per plan sheet L3.
✓	31	Trees	4	Greenscape plan sheet L4	East of Exchange	4 Skyline Honey Locust do not have leaves. Replace these trees if dead.
✓	32	Trees	4	Greenscape plan sheet L6	East of Exchange	5 London Planetrees do not have leaves. Replace these trees if dead.
✓	33	Trees	4	Greenscape plan sheet L8	East of Exchange	4 Kentucky Coffeetrees do not have leaves yet. Replace these trees if dead

E-6

STEPHEN VANDEVEER 8/31/2017

Channahon Corporate Center / IDI Gazeley

Punchlist for Acceptance - Steps 1-4

July 13, 2017

#	ITEM	STEP	ID/LOCATION	STREET	DEFICIENCY AND CORRECTION
34	Trees	4	Greenscape plan sheet L14	North of Bluff	Plant missing Bald Cypress per sheet L14.
35	Trees	4	Greenscape plan sheet L14	North of Bluff	4 London Planetrees and 6 River Birch trees have sparse or no leaves. Replace these trees if dead.
36	Trees	4	Greenscape plan sheet L15	West of Exchange	6 River Birch, 4 Skyline Honey Locust, 2 Prairifire Crabapple, and 1 Red Jewel Crabapple trees have sparse or no leaves. Replace these trees if dead.
37	Trees	4	Greenscape plan sheet L15	West of Exchange	3 Swamp White Oaks do not have leaves. Replace trees if dead. Also, it appears as if the trees on site are Chinkapin Oak, but the plans call for Swamp White Oak. This can be verified if/when leaves emerge.
38	Trees	4	Greenscape plan sheet L16	West of Exchange	3 Royal Raindrops Crabapple trees do not have leaves yet. Replace these trees if dead
39	Landscaping	4	Greenscape plan sheet L16	East of Exchange	There is a significant amount of grass growing in the mulch bed at the NE corner of Bluff and Exchange. Either pick or spray herbicide to remove grass.
40	Landscaping	4	Greenscape plan sheet L16	West of Exchange	Large accent boulder missing from mulch bed. Install accent boulder per sheet L16.
41	Landscaping	4	Utility easement	South of Bluff	Grading in this location is severely rutted and uneven, and germination of native seed mix is sparse. Regrade this area, verify specified topsoil thickness is obtained, plant specified seed mix, and cover with straw blanket.
42	Landscaping	4	Parkways and adjacent; basins	Exchange; around basins	Germination of various seed mixes is sparse in some locations; topsoil appears inadequate. Reseed and/or place additional topsoil and reseed and blanket.
43	Erosion Control	4	North of Detention Basin A	Exchange	Provide permanent seed mix appropriate for hydrology conditions on stockpile and graded areas north of Detention Basin A to provide permanent erosion control.
44	Erosion Control	4	North of Detention Basin A	Exchange	Extend rock to flatten slope on both sides of culvert under the access road north or Detention Basin A.
45	Erosion Control	4	North of Detention Basin A	Exchange	Install ditch checks following Illinois Urban Manual Standards and Practices in ditch at NE corner of Detention Basin A.

done

F-1

Illinois Association for Floodplain and Stormwater Management
Association of State Floodplain Managers

This writing certifies that

Donald R. Kinzler, CFM

Has successfully fulfilled all the prerequisites and requirements for being a

Certified Floodplain Manager

In recognition thereof, this certificate is awarded, 3/11/2008
Certificate Number IL-08-00374. Expires 7/31/2018

E. Stuart Richter
Chair, IAFSM

Chair, Certification Committee

ASFPM CFM® CERTIFIED

F-1

Illinois Association for Floodplain and Stormwater Management

Certificate of Training

DONALD KINZLER

has satisfactorily completed training during the

2017 IAFSM Annual Conference

Conducted by

The Illinois Association for Floodplain and Stormwater Management

Location: Springfield, Illinois
Date: March 8th and 9th, 2017

PDH Credits: 11.5
CEC Credits: 10

Diane Bouckaert, PE, CFM, CPESC
Chair, Education Outreach Committee

IAFSM
Illinois Association for Floodplain and Stormwater Management

VILLAGE OF
CHANNAHON
24555 S. NAVAJO DRIVE • CHANNAHON, ILLINOIS 60410
(815) 467-6644 • FAX (815) 467-9774 • www.channahon.org

December 20, 2017

Erik Wagoner
24756 Meadowlark Dr
Channahon, IL 60410

RE: Adjustment of Public Storm Structure and Placement of Fill in Village Right-of-Way (ROW)

Dear Mr. Wagoner:

It has come to the Village's attention that you, or someone under your direction, made unauthorized changes to Village owned property as follows:

- The inlet frame on a storm catch basin located in Village ROW near the southeast corner of your property was raised approximately 15 inches.
- Fill was placed in the ditch between your leased driveway and your asphalt driveway.
- Fill was placed in the ditch between your asphalt driveway and the catch basin.

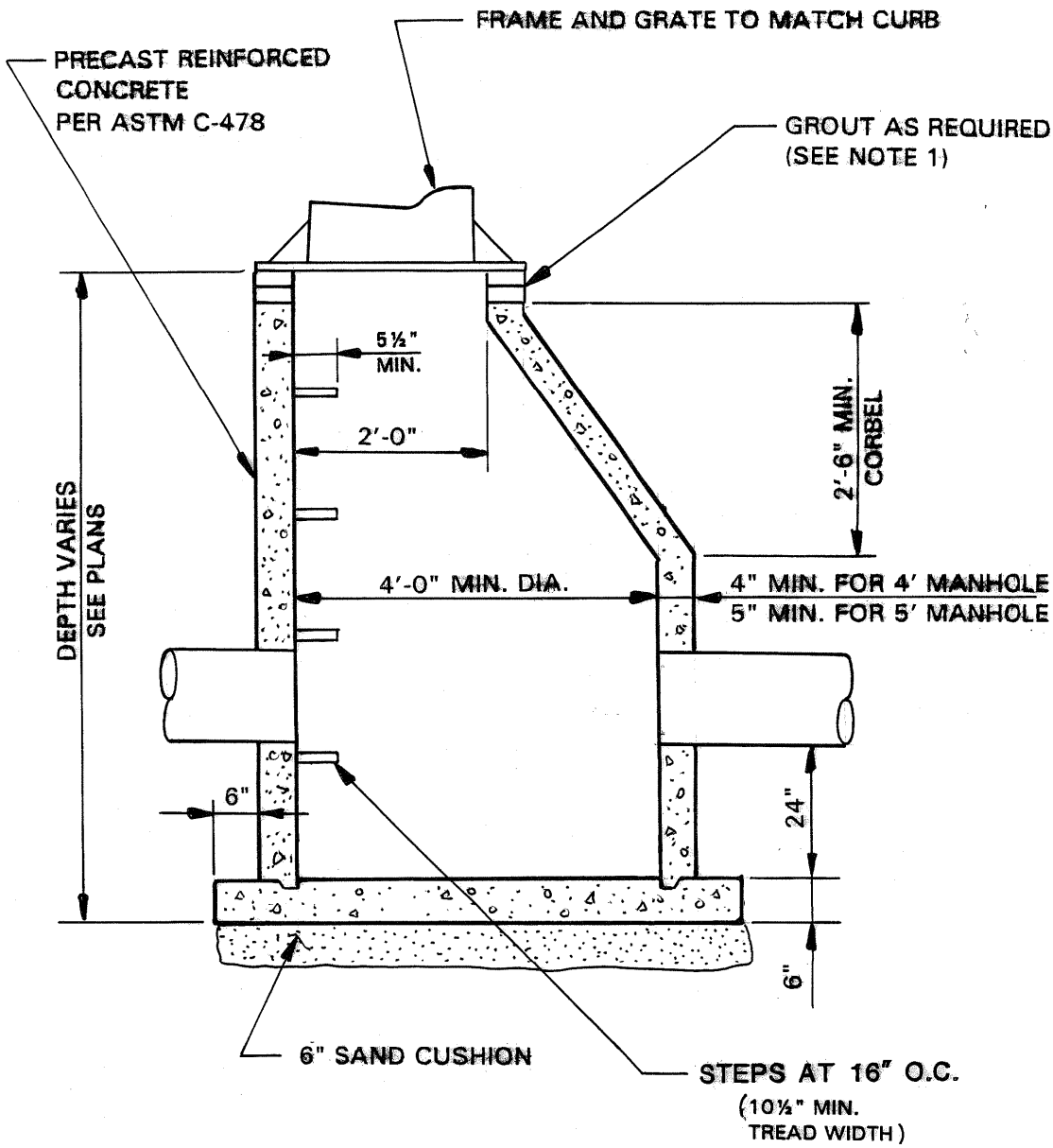
Work within Village ROW is not allowed without a permit. In this case, a permit would not be granted as the work fundamentally changes established and designed drainage patterns causing negative impacts to a Village road and other properties.

The Village hereby requires that the ditches be returned to design grades by removal of fill and lowering the catch basin frame. All work must be done immediately and must comply with Village Ordinances associated with such work. Refer to attached storm catch basin detail for proper structure adjustment requirements. Village personnel must inspect structure adjustments prior to backfilling and ditch grading prior to restoration. Sediment control measures will be required to insure disturbed soil conditions do not allow sediment into the structure. Cleaning of the structure may also be required due to this work.

If you have any questions, please call me at 815-467-6644.

Sincerely,

Donald R. Kinzler, P.E., CFM
Engineering Project Manager



NOTES:

1. MAXIMUM OF TWO (2) ADJUSTING RINGS TOTALING NO MORE THAN 6 INCHES SHALL BE USED.
2. BITUMINOUS MASTIC OR GROUT SHALL BE USED BETWEEN THE CATCH BASIN, FRAME, AND ALL ADJUSTING RINGS.

DRAWING STORM 3	TYPICAL CATCH BASIN TYPE A	CHANNAHON "WHERE THE WATERS MEET" ILLINOIS

Lower DuPage River Watershed Coalition ILR40 Activities
March 2017 – February 2018

PART I. COVERAGE UNDER GENRAL PERMITS ILR40

Not applicable to the work of the LDRWC.

PART II. NOTICE OF INTENT (NOI) REQUIREMENTS

Not applicable to the work of the LDRWC.

PART III. SPECIAL CONDITIONS

Not applicable to the work of the LDRWC.

PART IV. STORM WATER MANAGEMENT PROGRAMS

A. Requirements

Not applicable to the work of the LDRWC.

B. Minimum Control Measure

1. Public Education and Outreach on Stormwater Impacts

LDRWC outreach activities for the year ending 2017 included:

- The LDRWC website was maintained during the reporting period and periodically updated with presentations and material (www.dupagerivers.org).
- A searchable database with information on local aquatic biodiversity (IBIs), habitat (QHEI), and sediment and water column chemistry was maintained and periodically updated.
- A Seasonal Outreach Campaign was implemented throughout year. Media tool kits were developed and distributed to member communities for each season with text for websites, newsletters and social media. Campaign specific materials were also developed – see examples at end of report. Copies of the media toolkits can be made available upon request.
    - Spring – Using native plants
    - Summer – Stormwater Pond Maintenance
    - Fall – Proper leaf collection/disposal
    - Winter - SaltSmart

- Hosted a table representing LDRWC at the Bluestem Earth Festival in Joliet on May 20, 2017
- Public information available on the website includes:
    - Chloride Fact Sheets aimed at mayors and managers, public works staff, commercial operators, and homeowners.
    - Seasonal Outreach Campaign materials

- A brochure on coal tar sealants as a source of Polycyclic Aromatic Hydrocarbons (PAHs) aimed at homeowners (produced by the University of New Hampshire Stormwater Center).
- Detailed reports on the biolocal and chemical conditions Lower DuPage River Watershed.

2. Public Involvement and Participation **–** no activities

3. Illicit Discharge Detection and Elimination – no activities

4. Construction Site Storm Water Runoff Control - no activities

5. Post-Construction Stormwater Management in New Development and Redevelopment - no activities

6. Pollution Prevention/Good Housekeeping for Municipal Operations

Chloride Reduction Workshops
Two chloride reduction workshops were held during the reporting period ending March 2018.

The **public roads deicing workshop** held at Village of New Lenox Public Works Facility on October 11, 2017 with the following agenda:

7:30 – 8:00	Registration and Breakfast
8:00 – 8:05	Welcome/ Housekeeping Sean Vandenbergh, Village of New Lenox
8:05 – 8:30	Watershed Activities/ Outreach/ Environmental Impacts Jennifer Hammer, TCF
8:30 – 8:45	Time Limited Water Quality Standard Jennifer Wasik, MWRD
8:45-9:00	MS4 Requirements and Recordkeeping John Kawka, MEI
9:00 – 9:10	BREAK (Includes Exhibitor Mic Time)
9:10 –-9:55	Maximizing the Efficiency of Your Winter Maintenance Program Wilf Nixon, Salt Institute
9:55 – 10:40	Incorporating Automated Systems Dave Kjederquist, Swenson
10:40-10:50	BREAK (Includes Exhibitor Mic Time)
10:50-11:20	Choosing the Right Blades Gardi Willis, Kueper North America
11:20-11:55	Temperature Sensors Mark DeVries, Vaisala
11:55-12:25	Shared Services Todd Hoppenstedt, Village of Montgomery
12:25-12:30	Closing Remarks/ Thank Yous/ Evaluations

Attendance – 87 registered, 10 presenters/staff, 3 sponsors/exhibitors = 100 total. All participants received a certificate of attendance.

The **parking lots and sidewalks deicing workshop** was held at New Lenox Public Works Facility on October 4, 2017 with the following agenda:

- Ambient conditions and regulatory update: Jennifer Hammer, The Conservation Foundation/LDRWC
- Information on developing efficient and cost-effective snow fighting operations, appropriate product selection, equipment selection, application rates, equipment calibration, ambient conditions monitoring. Presenters: Connie Fortin, Fortin Consulting and Chis Walsh, (former Public Works Director with City of Beloit, WI)
- Test on workshop materials.

Attendance - 21 registrations, 4 presenters/staff, 2 exhibitors/staff = 27 total. All participants received a training certificate.

Qualifying State, Country or Local Program

Not applicable to the work of the LDRWC.

C. Sharing Responsibility

This report outlines the activities conducted by the LDRWC on behalf of its' members related to the implementation of the ILR40 permit. It is the responsibility of the individual ILR40 permit holders to utilize this information to fulfill the reporting requirements outlined in Part V.C. of the permit.

D. Reviewing and Updating Stormwater Management Programs

Not applicable to the work of the LDRWC.

PART V. MONITORING, RECORDKEEPING, AND REPORTING

A. Monitoring

The ILR40 permit states that permit holders "must develop and implement a monitoring and assessment program to evaluate the effectiveness of the BMPs being implemented to reduce pollutant loadings and water quality impacts". The LDRWC monitoring program meets the following monitoring objectives and requirements outlined in the permit:

- Measuring pollutants over time (Part V. A. 2. b. ii)
- Sediment monitoring (Part V. A. 2. b. iii)
- Assessing physical and habitat characteristics such as stream bank erosion caused by storm water discharges ((Part V. A. 2. b. vi)
- Collaborative watershed-scape monitoring (Part V. A. 2. b. x)
- Ambient monitoring of total suspended solids, total nitrogen, total phosphorus, fecal coliform, chlorides, and oil and grease (Part V. A. 2. c.)

The LDRWC water quality monitoring program is made up of two components: 1) Bioassessment and 2) DO monitoring.

BIOASSESSMENT

Overview and Sampling Plan

A biological and water quality survey, or "biosurvey", is an interdisciplinary monitoring effort coordinated on a waterbody specific or watershed scale. This may involve a relatively simple setting focusing on one or two small streams, one or two principal stressors, and a handful of sampling sites or a much more complex effort including entire drainage basins, multiple and overlapping stressors, and tens of sites. The LDRWC bioassessment is the latter. The LDRWC bioassessment program began in 2012 with sampling 26 stations in the Lower DuPage River watershed. In 2015 an additional 15 stations were added for a total of 41 stations monitored. The next round of sampling will occur in the summer of 2018. The bioassessment program functions under a quality assurance plan agreed on with the Illinois Environmental Protection Agency.

The LDRWC bioassessment program utilizes standardized biological, chemical, and physical monitoring and assessment techniques employed to meet three major objectives:

1) determine the extent to which biological assemblages are impaired (using IEPA guidelines);
2) determine the categorical stressors and sources that are associated with those impairments; and,
3) add to the broader databases for the DuPage River watershed to track and understand changes through time in response to abatement actions or other influences.

The data collects as part of the bioassessment is processed, evaluated, and synthesized as a biological and water quality assessment of aquatic life use status. The assessments are directly comparable to previously conducted bioassessments such that trends in status can be examined and causes and sources of impairment can be confirmed, amended, or removed. A final report containing a summary of major findings and recommendations for future monitoring, follow-up investigations, and any immediate actions that are needed to resolve readily diagnosed impairments is prepared following each bioassessment. The bioassessment reports are posted on the LDRWC at http://www.dupagerivers.org/bioassessment-monitoring/ . It is not the role of the bioassessments to identify specific remedial actions on a site specific or watershed basis. However, the baseline data provided by the bioassessments contributes to the Integrated Priority System that was developed by the DuPage River Salt Creek Workgroup to help determine and prioritize remedial projects and is now being updated to incorporate Lower DuPage River watershed data.

Sampling sites for the bioassessment were determined systematically using a geometric design supplemented by the bracketing of features likely to exude an influence over stream resource quality, such as CSOs, dams and wastewater outfalls. The geometric site selection process starts at the downstream terminus or "pour point" of the watershed (Level 1 site), then continues by deriving each subsequent "panel" at descending intervals of one-half the drainage area (D.A.) of the preceding level. Thus, the drainage area of each successive level decreases geometrically. This results in in seven drainage area levels in each of the three watersheds, starting at the largest (150 sq. mi) and continuing through successive panels of 75, 38, 19, 9, 5 and 2 sq. mi. Targeted sites are then added to fill gaps left by the geometric design and assure complete spatial coverage in order to capture all significant pollution gradients including reaches that are impacted by wastewater treatment plants (WWTPs), major stormwater sources, combined sewer overflows (CSOs) and dams. The number of sampling sites by method/protocol and watershed are listed in Table 1 and illustrated in Figure 1.

Representativeness – Reference Sites

Data is collected from selected regional reference sites in northeastern Illinois preferably to include existing Illinois EPA and Illinois DNR reference sites, potentially being supplemented with other sites that meet the Illinois EPA criteria for reference conditions. One purpose of this data will be to index the biological methods used in this study that are different from Illinois EPA and/or DNR to the reference condition and biological index calibration as defined by Illinois EPA. In addition, the current Illinois EPA reference network does not yet include smaller headwater streams, hence reference data is needed to accomplish an assessment of that data. Presently thirteen (13) reference sites have been established.

Figure 1 Lower DuPage River Watershed bioassessment monitoring sites for 2015 and 2018

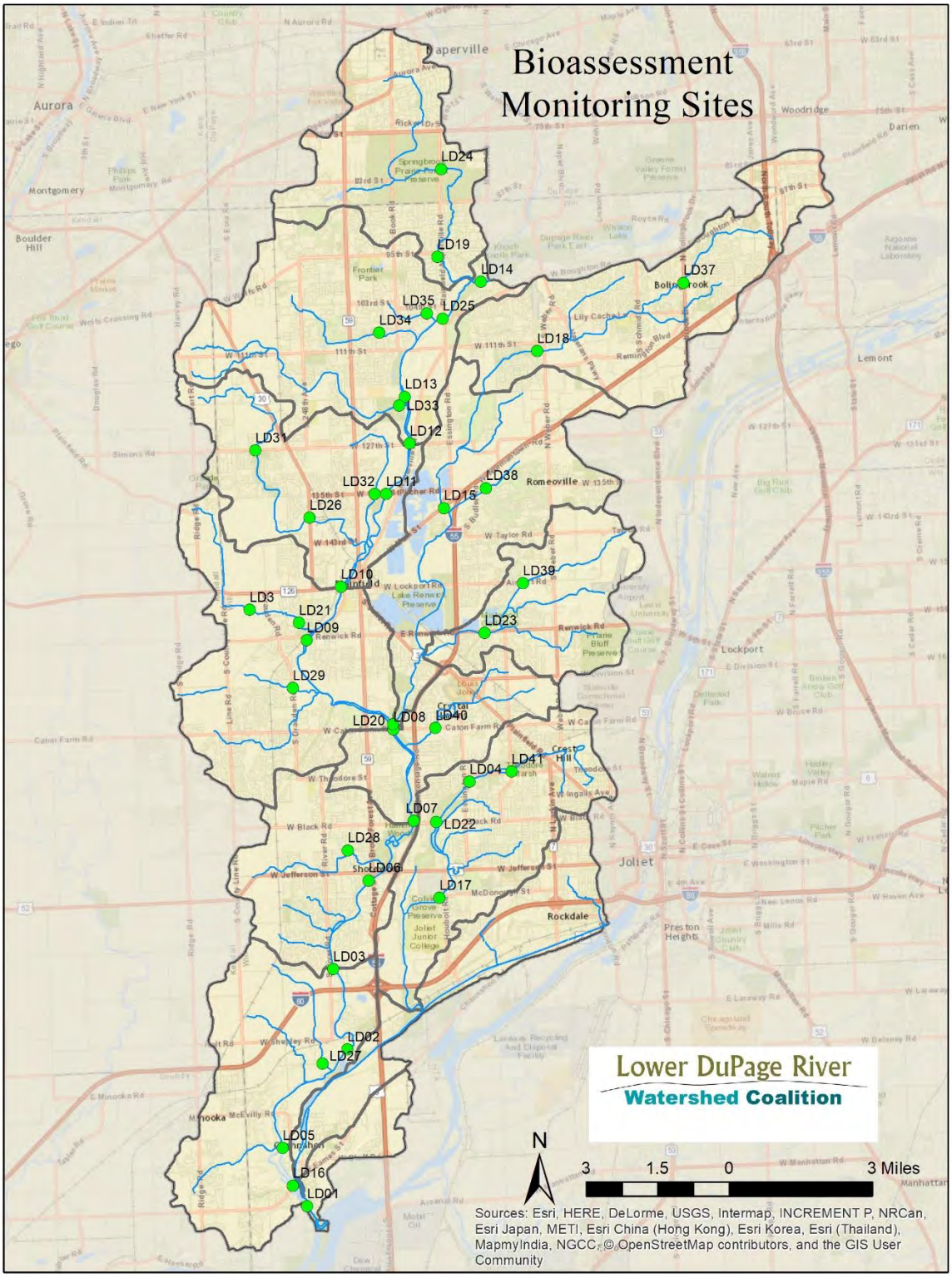


Table 1. Number of sampling sites in the LDRWC project area.

Method/Protocol	Lower DuPage River (2012)	Lower DuPage River (2015)
Biological sampling	26	41
Fish	26	41
Macroinvertebrates	26	41
QHEI	26	41
Water Column Chemical/Physical Sampling		
Nutrients*	26	41
Water Quality Metals	26	41
Water Quality Organics	8	0
Sediment Sampling	7	7

*Also included indicators or organic enrichment and ionic strength, total suspended solids (TSS), DO, pH and temperature

The bioassessment sampling includes four (4) sampling methods/protocols: biological sampling, Qualitative Habitat Evaluation Index (QHEI), water column chemical/physical parameter sampling and sediment chemistry. The biological sampling includes two assemblages: fish and macroinvertebrates.

FISH

Methodology

Methods for the collection of fish at wadeable sites was performed using a tow-barge or longline pulsed D.C. electrofishing apparatus (MBI 2006b). A Wisconsin DNR battery powered backpack electrofishing unit was used as an alternative to the long line in the smallest streams (Ohio EPA 1989). A three-person crew carried out the sampling protocol for each type of wading equipment sampling in an upstream direction. Sampling effort was indexed to lineal distance and ranged from 150-200 meters in length. Non-wadeable sites were sampled with a raft-mounted pulsed D.C. electrofishing device in a downstream direction (MBI 2007). Sampling effort was indexed to lineal distance over 0.5 km. Sampling was conducted during a June 15-October 15 seasonal index period.

Samples from each site were processed by enumerating and recording weights by species and by life stage (y-o-y, juvenile, and adult). All captured fish were immediately placed in a live well, bucket, or live net for processing. Water was replaced and/or aerated regularly to maintain adequate D.O. levels in the water and to minimize mortality. Fish not retained for voucher or other purposes were released back into the water after they had been identified to species, examined for external anomalies, and weighed either individually or in batches. While the majority of captured fish were identified to species in the field, any uncertainty about the field identification required their preservation for later laboratory identification. Identification was made to the species level at a minimum and to the sub-specific level if necessary. Vouchers were deposited and verified at The Ohio State University Museum of Biodiversity (OSUMB) in Columbus, OH.

Results

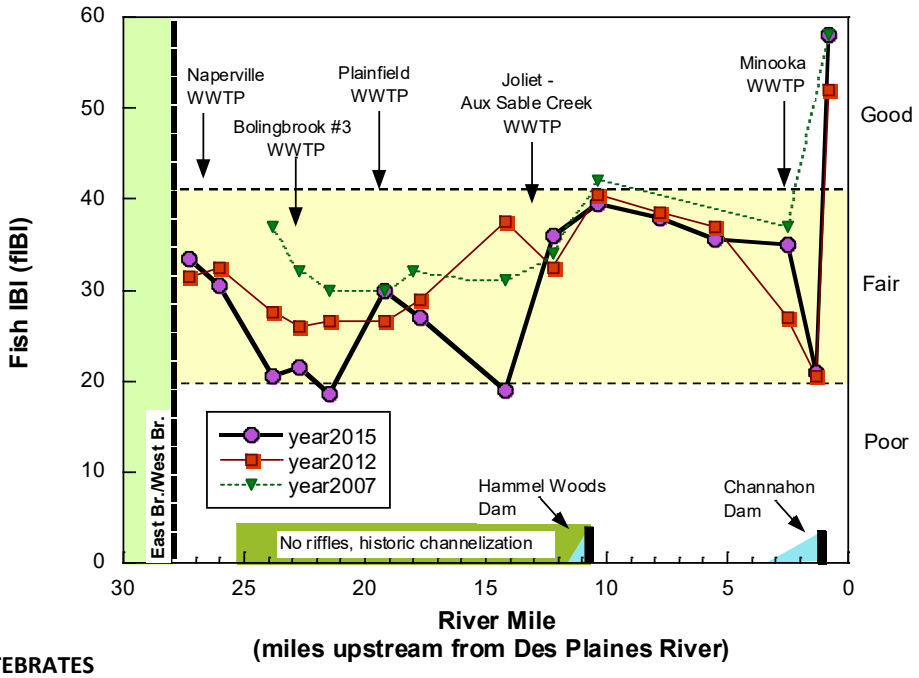
The fish sampling results presented in this report summarize the findings for the mainstem reaches of the DuPage River. Information on the tributaries and detailed analysis of all results can be found at http://www.dupagerivers.org/bioassessment-monitoring/

The fish and macroinvertebrate results are presented as Index of Biotic Integrity (IBI) scores. IBI is an evaluation of a waterbodies biological community in a manner that allows the identification, classification and ranking of water pollution and other stressors. IBIs allow the statistical association of various anthropogenic influences on a water body with the observed biological activity in said water body and in turn the evaluation of management interventions in a process of adaptive management. Chemical testing of water samples produce only a snapshot of chemical concentrations while an IBI allows an evaluation of the net impact of chemical, physical and flow variables on a biological community structure. Dr. James Karr formulated the IBI concept in 1981.

DuPage River

As in previous studies, fish assemblages in the lower DuPage River watershed ranged from poor to good in 2015 (Figure 2). The only site with consistently good quality assemblages during all surveys is found in the Channahon Dam tail waters, a short reach wedged in between the dam and the Des Plains River.

Figure 2. Fish IBI scores in the Mainstem DuPage River, 2012, 2015 and 2007 in relation to municipal POTW dischargers. Bars along the x-axis depict mainstem dams or weirs (only black bars impede fish passage). The shaded area demarcates the "fair" narrative range.



MACROINVERTEBRATES

Methodology

The macroinvertebrate assemblage is sampled using the Illinois EPA (IEPA) multi-habitat method (IEPA 2005). Laboratory procedures followed the IEPA (2005) methodology for processing multi-habitat samples by producing a 300-organism subsample with a scan and pre-pick of large and/or rare taxa from a gridded tray. Taxonomic resolution is performed to the lowest practicable resolution for the common macroinvertebrate assemblage groups such as mayflies, stoneflies, caddisflies, midges, and crustaceans, which goes beyond the genus level requirement of IEPA (2005). However, calculation of the macroinvertebrate IBI followed IEPA methods in using genera as the lowest level of taxonomy for mIBI calculation and scoring.

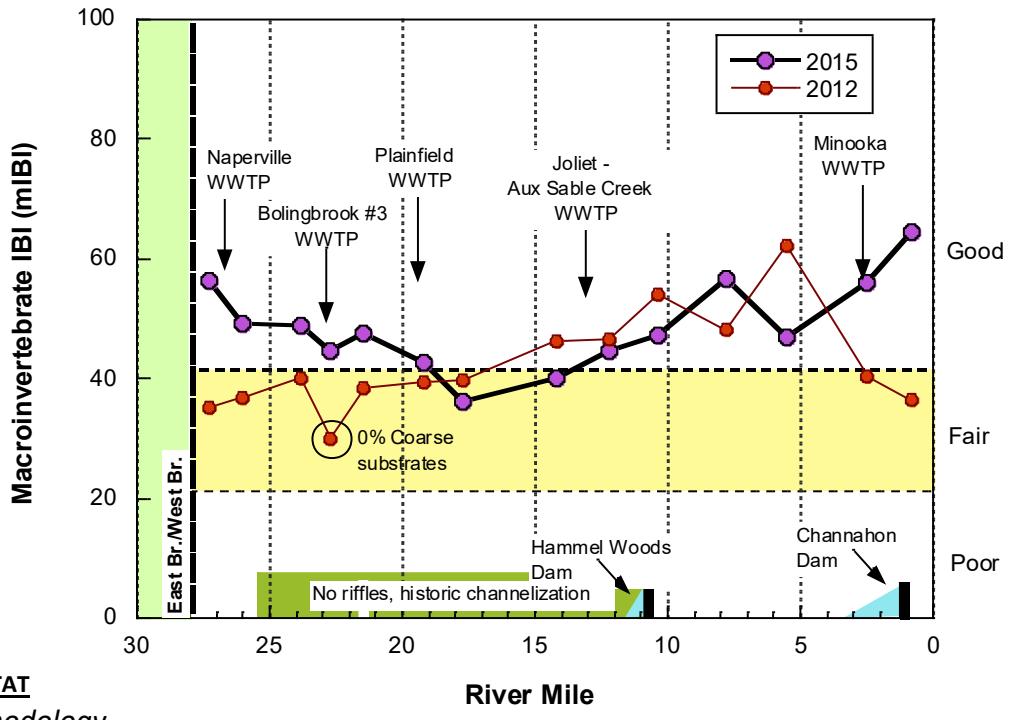
Results

The macroinvertebrate sampling results presented in this report summarize the findings for the mainstem reaches of the DuPage River. Information on the tributaries and detailed analysis of all results can be found at http://www.dupagerivers.org/bioassessment-monitoring/

DuPage River

Macroinvertebrate assemblage performance in the lower DuPage River watershed ranged from poor to good in 2015. Mainstem communities improved at almost all stations compared to 2012.

***Figure 3**. Macroinvertebrate Index of Biotic Integrity (mIBI) scores for the Lower DuPage River in 2012 and 2015 in relation to municipal WWTPs and existing low head dams (noted by bars adjoining the x-axis). The shaded region demarcates the "fair" narrative range.*



HABITAT

Methodology

Physical habitat was evaluated using the Qualitative Habitat Evaluation Index (QHEI) developed by the Ohio EPA for streams and rivers in Ohio (Rankin 1989, 1995; Ohio EPA 2006b) and as modified by MBI for specific attributes. Attributes of habitat are scored based on the overall importance of each to the maintenance of viable, diverse, and functional aquatic faunas. The type(s) and quality of substrates, amount and quality of instream cover, channel morphology, extent and quality of riparian vegetation, pool, run, and riffle development and quality, and gradient used to determine the QHEI score which generally ranges from 20 to less than 100. QHEI scores and physical habitat attribute were recorded in conjunction with fish collections.

Results

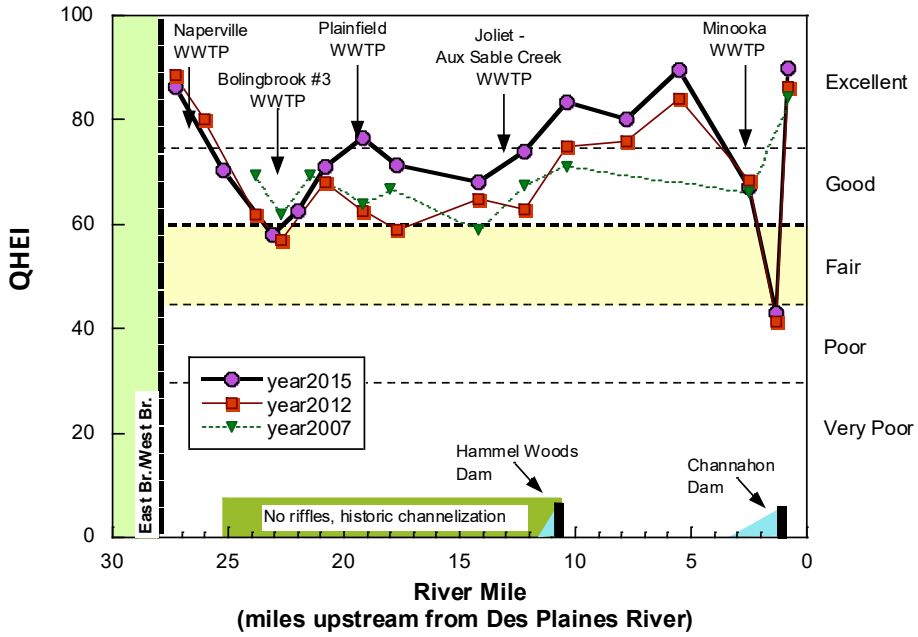
The QHEI data presented in this report summarize the findings for the mainstem reaches of the East Branch DuPage River, the West Branch DuPage River and Salt Creek. Information on the tributaries and detailed analysis of all results can be found at http://www.dupagerivers.org/bioassessment-monitoring/

The physical habitat of a stream is a primary determinant of biological quality. Streams in the glaciated Midwest, left in their natural state, typically possess riffle-pool-run sequences, high sinuosity, and well-developed channels with deep pools, heterogeneous substrates and cover in the form of woody debris, glacial tills, and aquatic macrophytes. The QHEI categorically scores the basic components of stream habitat into ranks according to the degree to which those components are found in a natural state, or conversely, in an altered or modified state.

DuPage River

As in previous surveys, 2015 DuPage River habitat quality varied by location but was more than adequate to support warm water communities throughout most of its 27.8-mile length (see figure 4). Extreme upper mainstem habitats remained clearly exceptional, but continued to decline to the lower good range in the sluggish, historically channelized reach between the Naperville WWTP and the Hammel Woods low-head dam (~ RMs 25-10.6).

Figure 4. *Qualitative Habitat Evaluation Index (QHEI) scores and narrative ranges in the Lower DuPage River in 2017, 2012 and 2015 in relation to municipal WWTPs and existing low head dams (noted by bars adjoining the x-axis). QHEI scores less than 45 are often typical of highly modified channels or dam pools.*



Sediment Chemistry

Detailed analysis and results for sediment chemistry is located at http://www.dupagerivers.org/bioassessment-monitoring/ .

Water Chemistry

Methodology

Water column and sediment samples are collected as part of the LDRWC bioassessment programs. The total number of sites sampled is detailed in Table 1. Total number of collected samples by watershed typical for a full assessment are given in Table 2. The number of samples collected at each site is largely a function of the sites drainage area with the frequency of sampling increasing as drainage size increases (Table 3). Organics sampling is a single sample done at a subset of sites. Sediment sampling is done at a subset of 66 sites using the same procedures as IEPA.

The parameters sampled for are included in Table 4 and can be grouped into demand parameters, nutrients, demand, metals and organics. Locations of organic and sediment sites are shown on Figure 1. All sampling occurs between June and October of the sample year. The Standard Operating Procedure for water quality sampling can be found at http://www.dupagerivers.org/bioassessment-monitoring/

Table 2. Total number of samples typical for a full assessment

Watershed	Approximate # Sites	Demand Samples	Nutrients Samples	Metals Samples
Lower DuPage	41	239	239	138

Table 3. Approximate distribution of sample numbers by drainage area across the monitoring area.

Drainage Area and site numbers	>100 sq mi (n=12)	>75 sq mi (n=25)	>38 sq mi (n=11)	>19 sq mi (n=11)	>8 sq mi (n=15)	>5 sq mi (n=24)	>2 sq mi (n= 46)
Mean # Samples demand /nutrients	12	9	6	6	4	4	2
Mean # Samples metals	6	6	4	4	2	2	0

Table 4. Water Quality and sediment Parameters sampled as part of the LDRWC Bioassessment Program.

Water Quality Parameters	Sediment Parameters
Demand Parameters	**Sediment Metals**
5 Day BOD	Arsenic
Chloride	Barium
Conductivity	Cadmium
Dissolved Oxygen	Chromium
pH	Copper
Temperature	Iron
Total Dissolved Solids	Lead
Total Suspended Solids	Manganese
	Nickel
Nutrients	Potassium
Ammonia	Silver
Nitrogen/Nitrate	Zinc
Nitrogen – Total Kjeldahl	
Phosphorus, Total	
	Sediment Organics
Metals	Organochlorine Pesticides
Cadmium	PCBS
Calcium	Percent Moisture
Copper	Semivolatile Organics
Iron	Volatile Organic Compounds
Lead	
Magnesium	
Zinc	

Results

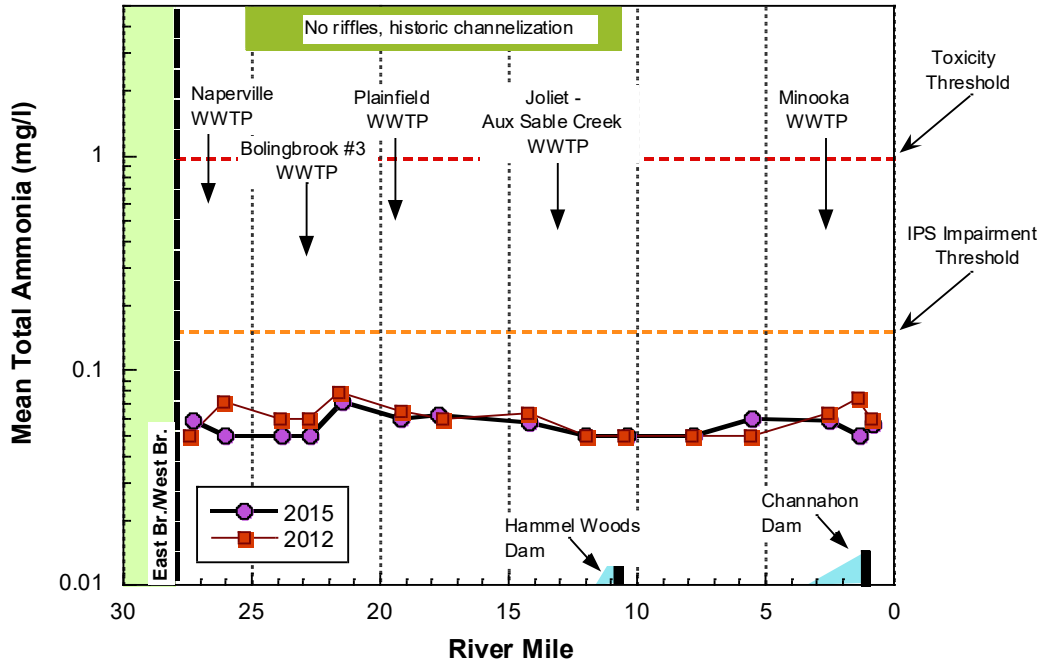
The discussion presented below focuses on the constituents listed in the MS4 permit: total suspended solids, total nitrogen, total phosphorus, and chlorides. Total nitrogen is presented as ammonia, nitrate, and total kjeldahl nitrogen (TKN). Fecal coliform and oil and grease sampling will be added to all future bioassessment sampling ensuring that both parameters will be sampled during the effective period of the ILR40 permit.

Detailed analysis and results for the other water quality constituents is located at http://www.dupagerivers.org/bioassessment-monitoring/

Lower DuPage River - Chemical Water Quality

As noted in the 2012 Lower DuPage report, summer base flows in the DuPage River are largely a product of the effluent dominated flows of the East and West Branches. As such, water quality is highly influenced by the concentrations and composition of chemical constituents in those effluents as well as runoff from the urban and developed land cover in those watersheds. In 2015, Lower DuPage River water quality samples were collected at higher flows than in 2012, and the quality of treated effluent, with respect to regulated parameters (i.e., cBOD5, TSS, NH3-N), remained generally good. Effluents did not result directly in exceedances of water quality standards and rarely exceeded threshold levels considered protective of biological assemblages for these parameters. Mainstem nutrient levels at late summer flows are largely related to wastewater discharges, but were at lower concentrations (particularly for nitrates) in 2015 than in 2012 due largely to higher river flows. See figures 5 – 8.

Figure 5. *Mean concentrations of ammonia nitrogen (top panel) and total Kjeldahl nitrogen (bottom panel) in the Lower DuPage River in 2012 and 2015. The approximate locations of municipal WWTP discharges and dams are noted. For ammonia, the upper dashed line represents a threshold concentration (1.0 mg/l) beyond which toxicity is likely while the lower dashed line (0.15 mg/l) is correlated with impaired biota in the IPS study. For TKN, the dashed line represents the IPS aquatic life target level (1.0 mg/l).*



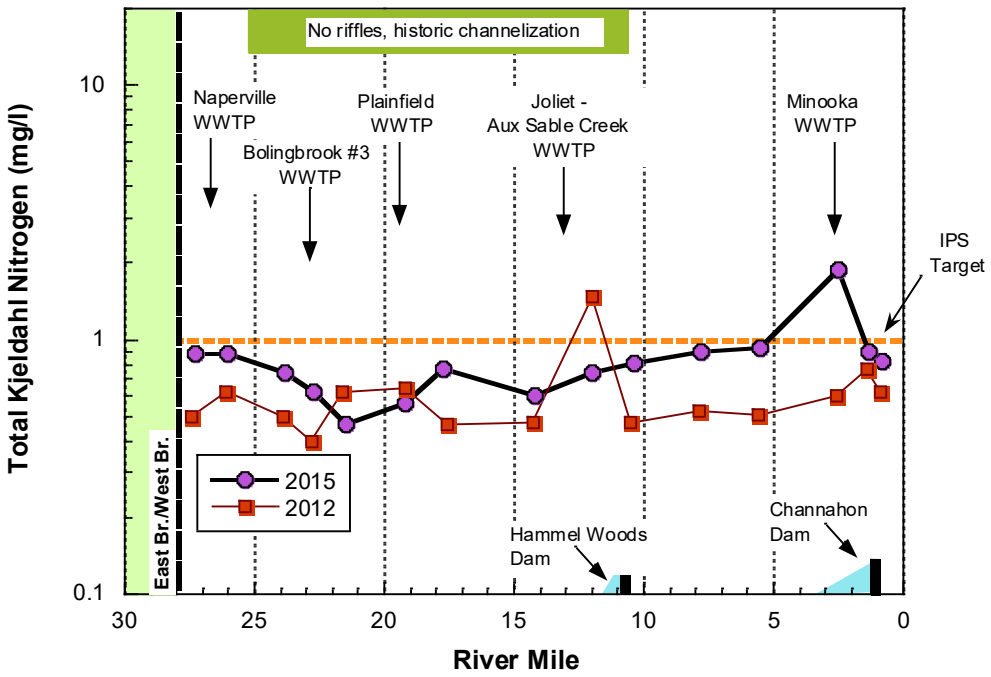


***Figure 6**. Mean concentrations of total phosphorus (top) and total nitrate (bottom) in the Lower DuPage River in 2012 and 2015. The approximate locations of municipal WWTP discharges and dams are noted. For phosphorus, dashed lines represent target concentrations for USEPA Ecoregion 54 (0.072 mg/l), the Illinois EPA non-standard based criteria (0.61 mg/l) and the suggested protective effluent limit (1.0 mg/l). For nitrate, dashed lines represent target concentrations for USEPA Ecoregion 54 (1.798 mg/l), the Illinois EPA non-standard benchmark criterion (7.8 mg/l) and the Illinois water quality criterion (10 mg/l).*

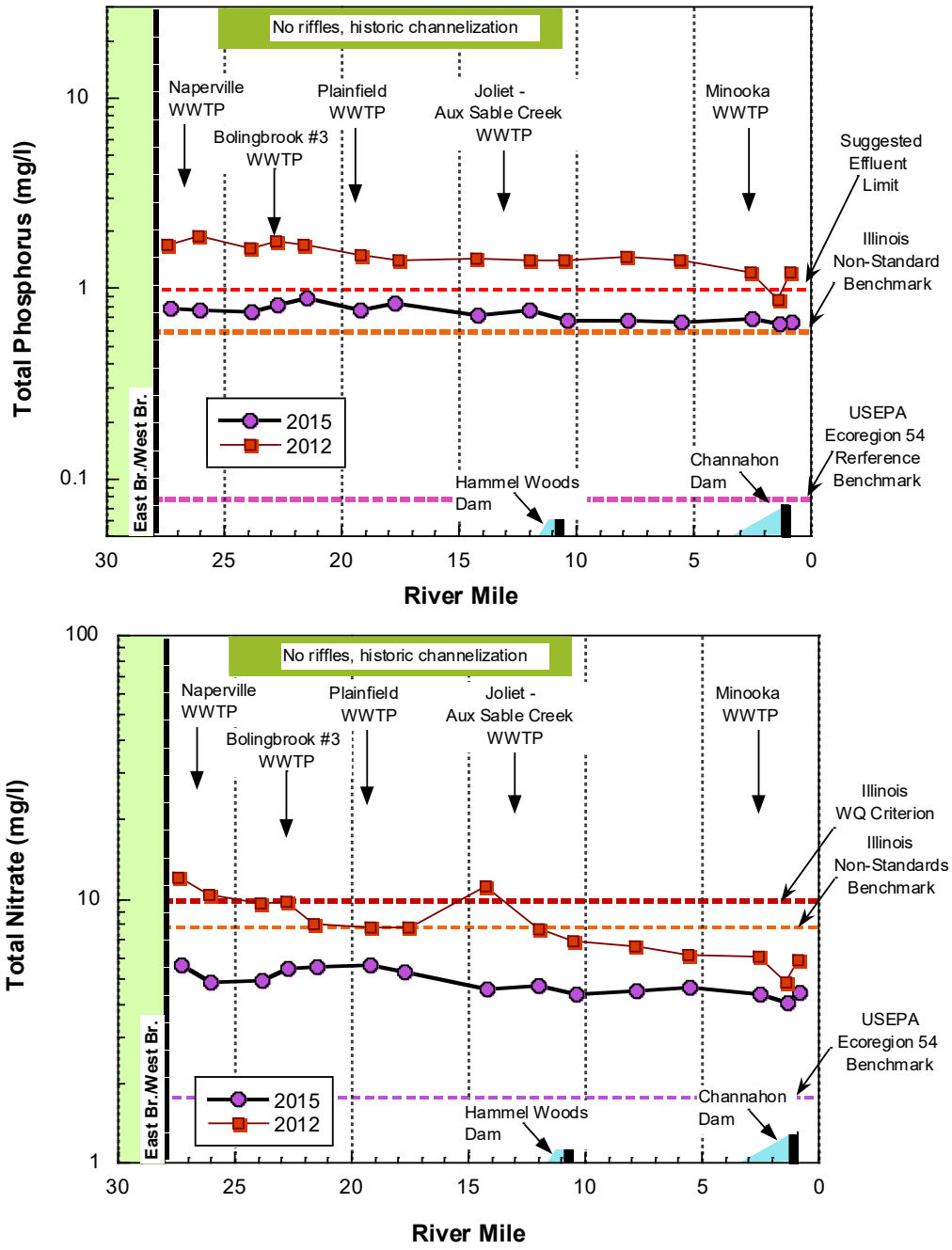


Figure 7. *Mean concentration of 5-day biological oxygen demand (BOD_5; top panel) and total suspended solids (TSS; bottom panel) in the Lower DuPage River in 2012 and 2015. The approximate locations of municipal WWTP discharges and dams are noted. The dashed line in the BOD_5 plot (3mg/l) represents a eutrophication threshold for southern Minnesota streams (Heiskary, et al. 2015). The red dashed line in the TSS plot represents the upper limit of concentrations typical of unpolluted waters in the Midwest and the orange dashed line represents the IPS target.*

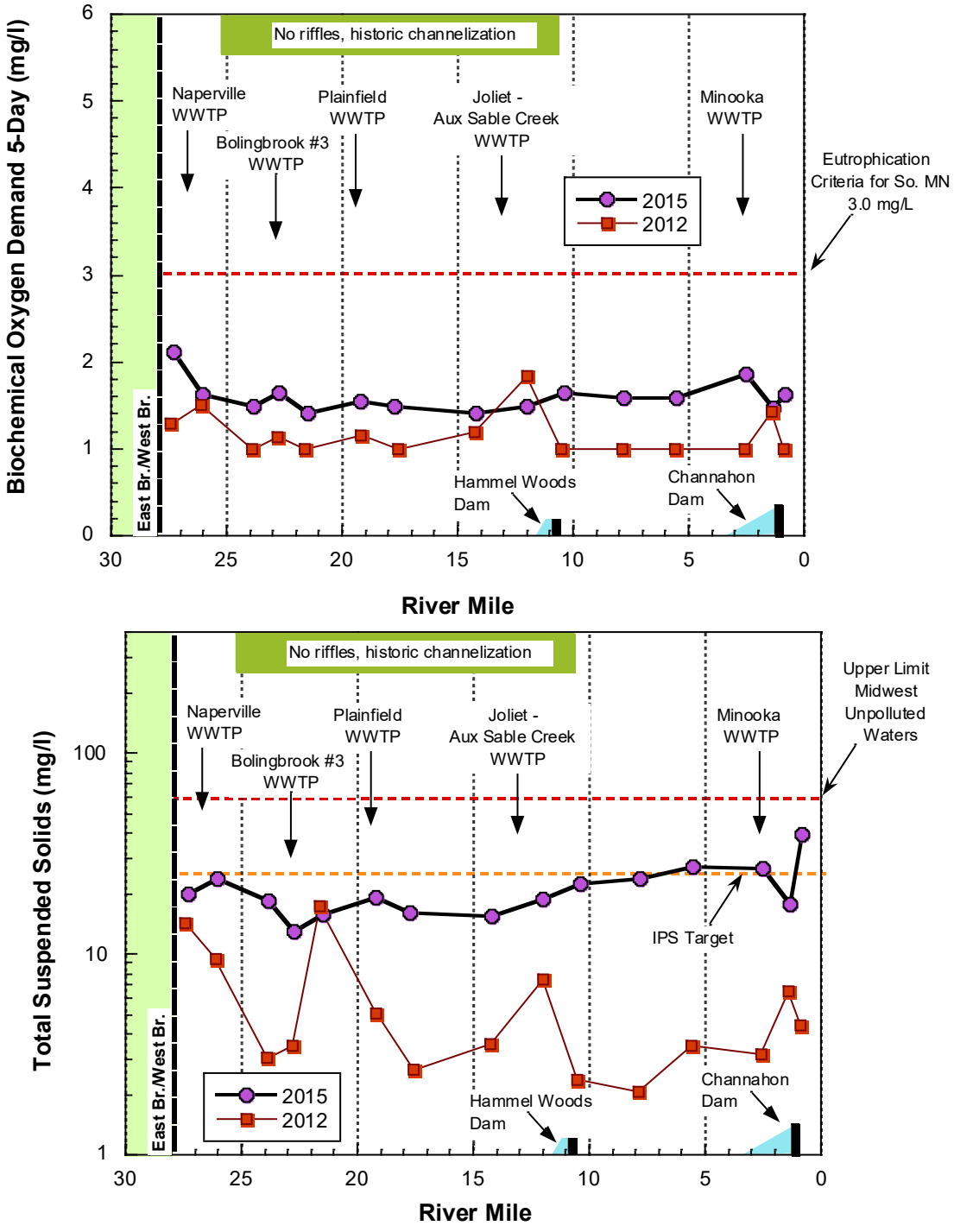
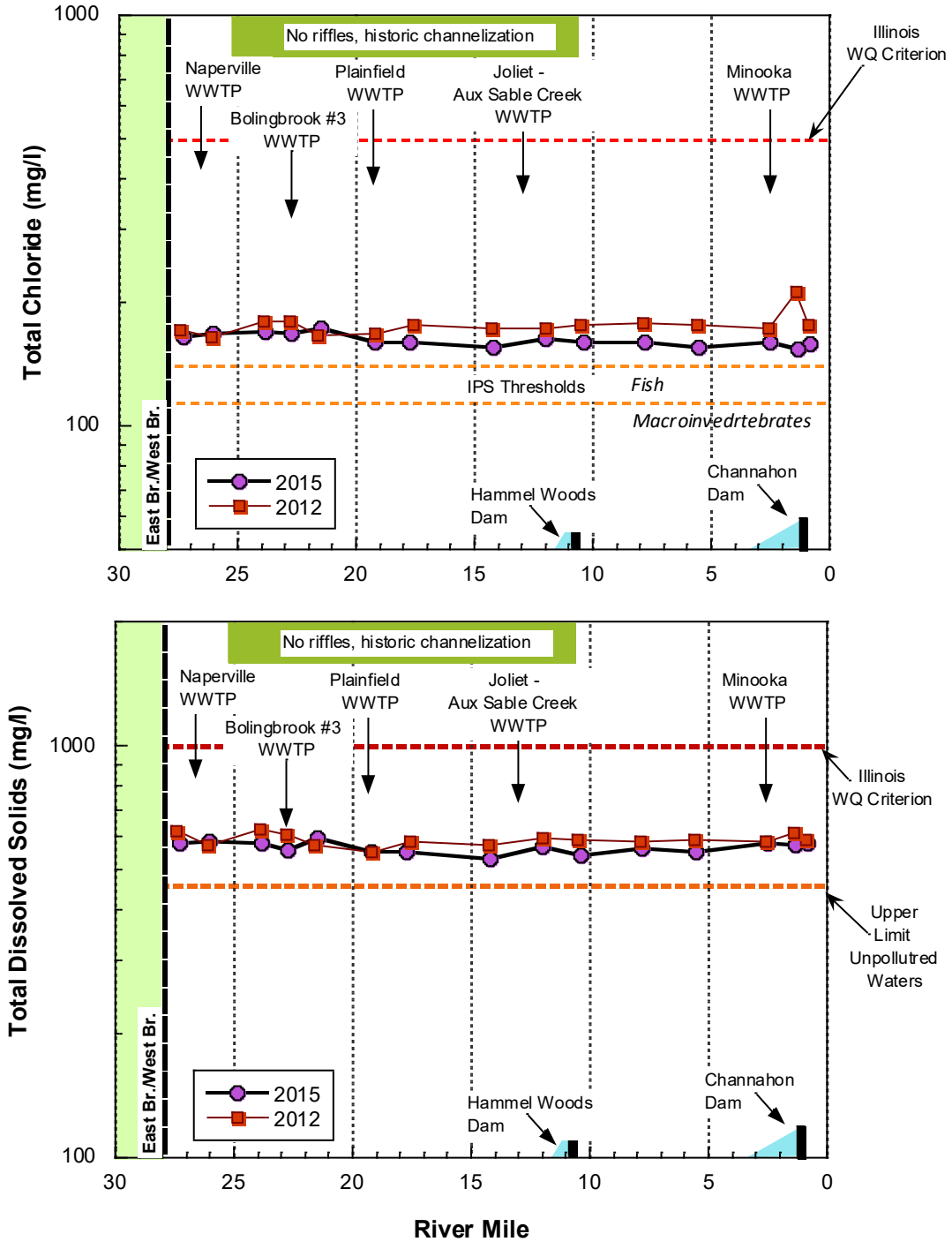


Figure 8. *Mean concentrations of total chloride (top panel) and total dissolved solids (bottom panel) in the Lower DuPage River in 2012 and 2015. The approximate locations of municipal WWTP discharges and dams are noted. For chloride, the upper, red dashed line represents the existing Illinois water quality criterion (500 mg/l); the lower orange dashed lines show IPS quantile regression thresholds for the fIBI (141 mg/l) and mIBI (112 mg/l). For TDS, orange dashed lines represent the 75th percentile TDS level for small rivers in Ohio and the red dashed line is the existing Illinois water quality criterion (1000 mg/l).*



Spring Campaign Infographics

Healthy Yards. Healthy Communities.

The actions we take to maintain our yards can have direct consequences for the health of our community and our rivers. This spring, join the thousands of homeowners who have incorporated native plants into their landscapes to create beautiful outdoor spaces, invite birds and butterflies to their yards, reduce their use of water, fertilizers and pesticides and protect our rivers. Creating a beautiful outdoor landscape with native plants can be easy with a little know-how.

Pagoda Dogwood
Type: Shrub
Sunlight: 4+ hours

Northern Dropseed
Type: Grass
Sunlight: 4+ hours

Bee Balm
Type: Flower
Sunlight: 4+ hours

Wild Geranium
Type: Flower
Sunlight: < 4 hours

Pennsylvania Sedge
Type: Short grass-like groundcover
Sunlight: < 4 hours

Oak-leaved Hydrangea
Type: Shrub
Sunlight: < 4 hours

Native plants are deep-rooted, helping direct rainwater into the soil. This makes them effective at managing stormwater that falls on your property.

Go local.
Visit your local native plant nursery for the best selection of native plants.

Save water.
Once established, native plants do not need to be watered every day like most ornamental plants. Check the soil before you decide to water.

Get established.
Like any other plant, perennial native plants need care. To ensure new native plants thrive, continue to weed and trim your garden.

Cut the fertilizer.
Native plants thrive in our area and don't need fertilizer or pesticides.

Incorporating native plants into our landscapes helps make our rivers and our yards healthy.

Lower DuPage River Watershed Coalition

To learn more about using native plants in your landscaping, visit The Conservation Foundation's *Conservation@Home* webpage.

Summer Campaign 2-Page Stormwater Pond Checklist for Homeowners Associations

Lower DuPage River
Watershed Coalition

Inspection Checklist

Stormwater Pond Inspection

Use this checklist for your monthly inspections. Make sure to inspect vegetation conditions, shoreline erosion and the inlet/outlet structures. Take note of any improvements that need to be made.

Pond Location
(cross street, description, etc.) _____

1. VEGETATION

Shoreline vegetation	In-pond vegetation	"Safe zone" width (ft)	Notes
☐ Turf grass ☐ Invasive plants ☐ Seawall ☐ Native plants ☐ Rip-rap	☐ Turf grass (bottom) ☐ Native/wetland plants ☐ Submerged plants ☐ Floating plants ☐ Invasives ☐ N/A	**Plant height**	

2. SHORELINE **3. INLET/OUTLET STRUCTURES**

Erosion	Notes	Obstruction	Notes
☐ None ☐ Slight ☐ High ☐ Minimal ☐ Moderate		☐ Trash/debris ☐ Sediment ☐ None	

4. **Overall water quality benefits:** ☐ Poor ☐ Fair ☐ Good

Repair opportunities/future maintenance:

Lower DuPage River
Watershed Coalition

Maintenance Checklist

HOA Stormwater Pond Maintenance

Track the work you get done on your stormwater pond with this checklist. This checklist is good for one full year. For additional copies, download this file at [link].

YEAR: _____

	TASK	FREQUENCY	DATE(S)	NOTES
1.	Inspect your stormwater pond monthly. Note areas with shoreline erosion and remove any trash, debris or sediment blocking inlet pipes or outlet structures.	Monthly and after storms that fill up your pond(s)		
2.	Schedule a professional engineer to inspect your pond.	Annually		
3.	Install native plants along the banks and in the pond	Annually		
4.	Enforce a 20' natural "safe zone" around the edge of the pond, where no pesticide or fertilizer use is allowed	Annually		
5.	If vegetation around your stormwater pond is over 4' tall, hire professional services to remove and treat for invasive species	As-needed		
6.	Update residents on maintenance and repair of the detention pond(s)	Annually		

Fall Campaign bill inserts for both curb or back pick-up

Loose Leaves Green Algae

As fall rolls around, many of us will be raking leaves to keep our yards and community looking good. Unfortunately, when these leaves are left in the streets they can become a big problem for our rivers.

Leaves that find their way into our rivers contribute to excessive algae growth, which pollutes our river, makes it smell and look bad, and keeps us from enjoying it when spring rolls around. Loose leaves can also clog our storm drains and contribute to local flooding.

Curb it and we'll snag it

[Town] is reminding all residents to rake their leaves to the curb as part of our leaf pickup program. This program is designed to make it easy for you to dispose of unwanted leaves.

To participate in [town]'s leaf collection program, remember to keep your leaves out of the street. **Leaves raked to the curb will be picked up by [town or waste hauler] [weekly/monthly/on specified dates].**

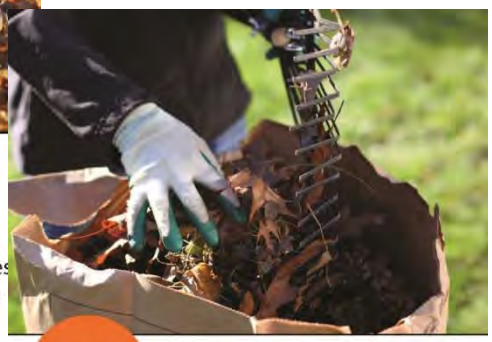
Together, we can keep our community looking good and our rivers healthy.

[City LOGO]

Lower DuPage River Watershed Coalition

[Town] is a part of the Lower DuPage River Watershed Coalition, a collection of communities and local stakeholders working together to improve the health of the DuPage River.

[Town or Coalition info--website]



Bag it and we'll snag it

[Town] is reminding all residents to bag their leaves as part of our leaf pickup program, instead of raking them to the curb or the street. This program is designed to make it easy for you to dispose of unwanted leaves.

Purchase kraft paper bags at a local retailer and put your leaves into the bags and place them at the curb to be picked up. Bagged leaves will be picked up by [town or waste hauler] [weekly/monthly/on specified dates].

Together, we can keep our community looking good and our rivers healthy.

[City LOGO]

Lower DuPage River Watershed Coalition

[Town] is a part of the Lower DuPage River Watershed Coalition, a collection of communities and local stakeholders working together to improve the health of the DuPage River.

[Town or Coalition info--website]

Winter Campaign bill inserts, hand out, cup design and truck magnet

SALT SMART. SAVE MORE.

SALT SMART SAVE MORE

Midwest winters can be tough on our roads and commuters. Road salt is used to keep our roads safe, but the cost of using too much salt goes beyond the pavement.

Excess road salt damages vehicles and infrastructure, harms our pets and plants and degrades our rivers and wetlands. [Town] is using best winter practices to keep you safe while using less salt.

SALT SMART AT HOME

There is such a thing as too much salt!

Using the right amount of salt could make a big difference for our local waterways—and our pocketbooks. Using the right amount of salt keeps you safe, saves money and protects our river. Join [town] and reduce the amount of salt used on your driveways and sidewalks.

OUR COMMITMENT:
We will strive to use the best technology and practices within our means to keep roads and sidewalks safe all winter long. Smart salt use will ensure [Town] uses tax dollars responsibly and keeps our precious water resources healthy for generations to come.

SALT SMART. SAVE MORE.

Here are five tips for salting smart this winter:

1. **Shovel first.** Clear all snow from driveway and sidewalks before it turns to ice. Salt should only be used after the snow is removed and only in areas needed for safety.

2. **Size up.** More salt does not mean more melting. A 12-ounce coffee mug of salt should be enough for a 20-ft driveway or about 10 sidewalk squares.

3. **Spread.** Distribute salt evenly, not in clumps.

4. **Sweep.** If you see leftover salt on the ground after the ice melts, then you've used too much! Sweep up leftover salt to keep it out of our rivers and streams.

5. **Switch.** Rock salt stops working if the temperature is below 15 degrees. When temperatures drop that low, switch to sand for traction or choose a different deicer formulated for colder temperatures.

[City LOGO]

Keeping roads safe, spending responsibly and preserving the health of the DuPage River this winter.

Lower DuPage River
Watershed Coalition

[Town] is a part of the Lower DuPage River Watershed Coalition, a collection of communities and local stakeholders working together to improve the health of the DuPage River.

[Town or Coalition info--website]

[City LOGO]

Keeping roads safe, spending responsibly and preserving the health of the DuPage River this winter.

Lower DuPage River
Watershed Coalition

[Town] is a part of the Lower DuPage River Watershed Coalition, a collection of communities and local stakeholders working together to improve the health of the DuPage River.

[Town or Coalition info--website]

SALT SMART. SAVE MORE.

SALT SMART SAVE MORE

Midwest winters can be tough on our roads and commuters. Road salt is used to keep our roads safe, but the cost of using too much salt goes beyond the pavement.

Excess road salt damages vehicles and infrastructure, harms our pets and plants and degrades our rivers and wetlands. [Town] is using best winter practices to keep you safe while using less salt.

Protecting the DuPage River from Road Salt Pollution

[Town] is working with other communities along the DuPage River to ensure that future generations will be able to enjoy the river as much, if not more, than we currently do. By protecting our natural resources we improve the quality of life in our communities. Healthy Rivers = Healthy Communities.

SALT SMART SAVE MORE

OUR COMMITMENT:
We will strive to use the best technology and practices within our means to keep roads and sidewalks safe all winter long. Smart salt use will ensure [Town] uses tax dollars responsibly and keeps our precious water resources healthy for generations to come.

SALT SMART AT HOME to protect the DuPage River

Using the right amount of salt could make a big difference for our local waterways—and our pocketbooks. Using the right amount of salt keeps you safe, saves money and protects our river. Join [town] and reduce the amount of salt used on your driveways and sidewalks.

There is such a thing as too much salt!

SALT SMART. SAVE MORE. Here are five tips for salting smart this winter:

1. **Shovel first.** Clear all snow from driveway and sidewalks before it turns to ice. Salt should only be used after the snow is removed and only in areas needed for safety.

2. **Size up.** More salt does not mean more melting. A 12-ounce coffee mug of salt should be enough for a 20-ft driveway or about 10 sidewalk squares.

3. **Spread.** Distribute salt evenly, not in clumps.

4. **Sweep.** If you see leftover salt on the ground after the ice melts, then you've used too much! Sweep up leftover salt to keep it out of our rivers and streams.

5. **Switch.** Rock salt stops working if the temperature is below 15 degrees. When temperatures drop that low, switch to sand for traction or choose a different deicer formulated for colder temperatures.

Lower DuPage River Watershed Coalition

dupagerivers.org

SALT SMART SAVE MORE

Lower DesPlaines Watershed Group ILR40 Activities
March 2017 – February 2018

PART I. COVERAGE UNDER GENRAL PERMITS ILR40

Not applicable to the work of the LDWG.

PART II. NOTICE OF INTENT (NOI) REQUIREMENTS

Not applicable to the work of the LDWG.

PART III. SPECIAL CONDITIONS

Not applicable to the work of the LDWG.

PART IV. STORM WATER MANAGEMENT PROGRAMS

A. Requirements

Not applicable to the work of the LDWG.

B. Minimum Control Measure

1. Public Education and Outreach on Stormwater Impacts

LDWG outreach activities for the year ending 2017 included:

- The LDWG website was maintained during the reporting period and periodically updated (http://www.lowerdesplaineswatershed.org).
- Hosted a table representing LDWG at the Bluestem Earth Festival in Joliet on May 20, 2017

2. Public Involvement and Participation – no activities

3. Illicit Discharge Detection and Elimination – no activities

4. Construction Site Storm Water Runoff Control - no activities

5. Post-Construction Stormwater Management in New Development and Redevelopment - no activities

6. Pollution Prevention/Good Housekeeping for Municipal Operations

Chloride Reduction Workshops

Two chloride reduction workshops were held during the reporting period ending March 2018.

The **public roads deicing workshop** held at Village of New Lenox Public Works Facility on October 11, 2017 with the following agenda:

7:30 – 8:00	Registration and Breakfast
8:00 – 8:05	Welcome/ Housekeeping Sean Vandenbergh, Village of New Lenox
8:05 – 8:30	Watershed Activities/ Outreach/ Environmental Impacts Jennifer Hammer, TCF
8:30 – 8:45	Time Limited Water Quality Standard Jennifer Wasik, MWRD
8:45-9:00	MS4 Requirements and Recordkeeping John Kawka, MEI
9:00 – 9:10	BREAK (Includes Exhibitor Mic Time)
9:10 –-9:55	Maximizing the Efficiency of Your Winter Maintenance Program Wilf Nixon, Salt Institute
9:55 – 10:40	Incorporating Automated Systems Dave Kjederquist, Swenson
10:40-10:50	BREAK (Includes Exhibitor Mic Time)
10:50-11:20	Choosing the Right Blades Gardi Willis, Kueper North America
11:20-11:55	Temperature Sensors Mark DeVries, Vaisala
11:55-12:25	Shared Services Todd Hoppenstedt, Village of Montgomery
12:25-12:30	Closing Remarks/ Thank Yous/ Evaluations

Attendance – 87 registered, 10 presenters/staff, 3 sponsors/exhibitors = 100 total. All participants received a certificate of attendance.

The **parking lots and sidewalks deicing workshop** was held at New Lenox Public Works Facility on October 4, 2017 with the following agenda:

- Ambient conditions and regulatory update: Jennifer Hammer, The Conservation Foundation/LDWG/LDRWC
- Information on developing efficient and cost-effective snow fighting operations, appropriate product selection, equipment selection, application rates, equipment calibration, ambient conditions monitoring. Presenters: Connie Fortin, Fortin Consulting and Chis Walsh, (former Public Works Director with City of Beloit, WI)
- Test on workshop materials.

Attendance - 21 registrations, 4 presenters/staff, 2 exhibitors/staff = 27 total. All participants received a training certificate.

Qualifying State, Country or Local Program

Not applicable to the work of the LDWG.

C. Sharing Responsibility

This report outlines the activities conducted by the LDRWC on behalf of its' members related to the implementation of the ILR40 permit. It is the responsibility of the individual ILR40 permit holders to utilize this information to fulfill the reporting requirements outlined in Part V.C. of the permit.

D. Reviewing and Updating Stormwater Management Programs

Not applicable to the work of the LDRWC.

PART V. MONITORING, RECORDKEEPING, AND REPORTING

A. Monitoring

No monitoring was completed during the reporting period, the following lays out the LDWG's future monitoring plans.

The ILR40 permit states that permit holders "must develop and implement a monitoring and assessment program to evaluate the effectiveness of the BMPs being implemented to reduce pollutant loadings and water quality impacts". The LDWG will begin a monitoring program starting in the summer of 2018 that will meet the following monitoring objectives and requirements outlined in the permit:

- Measuring pollutants over time (Part V. A. 2. b. ii)
- Sediment monitoring (Part V. A. 2. b. iii)
- Assessing physical and habitat characteristics such as stream bank erosion caused by storm water discharges ((Part V. A. 2. b. vi)
- Collaborative watershed-scape monitoring (Part V. A. 2. b. x)
- Ambient monitoring of total suspended solids, total nitrogen, total phosphorus, fecal coliform, chlorides, and oil and grease (Part V. A. 2. c.)

BIOASSESSMENT

A biological and water quality survey, or "biosurvey", is an interdisciplinary monitoring effort coordinated on a waterbody specific or watershed scale. This may involve a relatively simple setting focusing on one or two small streams, one or two principal stressors, and a handful of sampling sites or a much more complex effort including entire drainage basins, multiple and overlapping stressors, and tens of sites. The LDRWC bioassessment is the latter. The LDRWC bioassessment program will begin in 2018 with sampling 29 stations in the lower portion of the mainstem Lower DesPlaines River. See table below for complete sampling schedule. The Bioassessment will include fish, macroinvertebrate, QHEI – Habitat and water chemistry at all sites and sediment sampling at a subset of sites.

Watershed	Year Sampled	# of Stations
Lower mainstem Lower DesPlaines	2018	29
Upper mainstem Lower DesPlaines + northern tributaries	2019	33
Hickory Creek subwatershed	2020	50
Remaining Tributaries	2021	56