Robinson ENGINEERING

Municipal Expertise. Community Commitment.

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

June 1, 2020

Project 16-R0770.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 2019-2020
Permit No. ILR40 - 0623

Dear Sir/Madam:

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

- MS4 Annual Facility Inspection Report for 2019-2020
- 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
Al Gonzalez – IEPA-DWPC

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, 2019 To March, 2020

Permit No. ILR40 0623

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

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

Mailing Address 2: County: Will

City: Channahon State: IL Zip: 60410 Telephone: 815-467-6644

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: 05-11-20

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

A-1, B-6

Electronic Waste Ban

Effective January 1, 2012, the State of Illinois has banned electronics from landfill disposal, including televisions, monitors, printers, computers, etc.

Other Restricted Items

Waste Management will not collect the following items:

- Construction/demolition materials
- Automotive parts, antifreeze
- Hazardous wastes (oil-based paint, oil, flammables, hot ash, etc.)
- Dirt, stone, concrete, rock
- Medical Wastes Needles
- Swimming pools
- Tires
- Pesticides/Insecticides
- Antifreeze

The Will County Land Use Department holds several recycling events for hazardous wastes, electronics and tires throughout the year. You can visit the website at www.willcountygreen.com for more information or call (815) 727-8834. Residents can also visit the Illinois EPA website at www.epa.illinois.gov for other recycling options.

Observed Holidays

Waste Management only observes the following holidays. When your pickup falls on or after one of these holidays, your pickup will be delayed by one day that week.

NEW YEAR'S DAY	MEMORIAL DAY	FOURTH OF JULY
LABOR DAY	THANKSGIVING DAY	CHRISTMAS DAY

Waste Management will pick up Christmas trees on the two consecutive regular pickup weeks after Christmas.

Visit our local website
home.wm.com/Channahon

WASTE MANAGEMENT

WASTE MANAGEMENT
Waste Management
700 Butterfield Road
Lombard, IL 60148

VISIT OUR LOCAL WEBSITE
home.wm.com/Channahon
for local service information and more!

Channahon

In new resident packets
398 for 2019

WASTE MANAGEMENT

THINK

ahon Resident:

nnahon provides residents a comprehensive program designed to encourage materials headed to the landfill, and ensure that all waste is disposed of in an esponsible manner. Waste Management looks forward to helping Channahon be as – as possible in the years ahead. We take this opportunity to provide you updated ding your waste, recycling and yard waste services.

nation, questions or concerns, regarding service, please visit our local website n/Channahon or contact the Village of Channahon at (815) 467-6644.

isit our local website
ome.wm.com/Channahon

imes

rdinance #1689, all items placed at the curb for collection, including yard waste, no earlier than 6 p.m. the day before collection and at least by 6 a.m. on the day of s should be placed with the handle facing away from the roadway and about three feet lection, all carts should be removed no later than the evening of your collection day.

you are a member of an active homeowners association (HOA), your covenants dditional hours/locations for refuse services.

zes a modified-volume based refuse collection program. Residents can choose from s; 35-gallon, 64-gallon, or 96-gallon that best fits your weekly refuse needs.

ust contact Village Hall at (815) 467-6644 to establish service.

t can choose 35-gallon, 64-gallon or 96-gallon carts as the primary refuse container.

fuse materials may be placed in bags next to the cart. A pre-paid sticker must be each bag left outside the cart.

uch as a chair, couch or furniture will be collected with the weekly pickup.

wed one bulk item per week. Stickers are not required for these items.

nd padding must be cut and rolled into 4-foot lengths. Each roll must not weigh more . and be securely tied. Improperly prepared carpeting will not be accepted. A maximum of carpeting and padding will be accepted as a bulk item.

Channahon stay clean and green by keeping free liquids to a minimum in your refuse and rts and receptacles. Residents are encouraged to properly contain all materials to prevent leakage.

ds such as refrigerators, washers, dryers, dishwashers and water heaters require a ickup for a $45.00 charge. Arrangements for white good collection can be made by ste Management at (800) 964-8988.

AGEMENT

Recycling

- Each home is provided with a wheeled refuse cart as the primary recycling container.
- Recycling collection will occur every week.
- Please see the adjacent panel to learn about the Recycle Often. Recycle Right.® program and acceptable materials. It's important that only acceptable materials be recycled so the whole load doesn't go to waste If you have questions or want to learn more, visit www.RecycleOftenRecycleRight.com.

Sticker Locations

Stickers for extra refuse and yard waste may be purchased at the following locations:

Village of Channahon: 24555 S. Navajo Dr. (815) 467-6644
CIBC Bank: 23840 Eames St. (815) 467-5321
Casey's General Store: 25258 W. Eames St. (815) 467-9847

Stickers may also be purchased by calling Waste Management Customer Service at (800) 796-9696 and prepaying by credit or debit card.

Yard Waste

Yard waste such as grass clippings, leaves, tree branches and brush is collected weekly on your scheduled pickup day the last week of March through November 30. The Village also utilizes a modified-volume based program for yard waste materials.

- All yard waste must be placed in brown paper bags which can be purchased at local retail stores. A pre-paid sticker must be attached to each bag of yard waste in order to be collected.
- Brush and branches must be cut into 4-foot lengths, bundled with string or twine. Brush and branch bundles do not require a sticker.
- Each bundle must not exceed 50 lbs.
- Whole trees, tree stumps and/or improperly prepared bundles will not be collected.
- Leaves will be collected from October 1 through November 30 at no charge.
- Leaves must be placed in brown bags.
- Two additional leaf collections will take place on Saturday in the fall. Please check with the Village for the dates and set-out requirements.

Yard waste subscription services are available for residents with greater yard waste needs. Residents can call Waste Management to rent a 96-gallon yard waste cart for an annual fee of $181.24 in lieu of purchasing brown bags and stickers. To subscribe for the yard waste cart, please call Waste Management directly at (800) 964-8988.

Residents utilizing this service can place all of their yard waste in the provided 96-gallon cart and include up to 5 additional brown bags without stickers. Stickers are required for any additional bags over the 5-bag limit. This service will also be billed directly to residents from Waste Management and is billed annually with a required one-year commitment.

RECYCLE OFTEN. RECYCLE RIGHT.®

WM WASTE MANAGEMENT

Great things happen when Channahon residents use **Recycle Often. Recycle Right.®** By recycling everyday items like those shown below, tons of raw materials, time, energy and money are saved. Plus the recycled materials become new products - if you recycle an aluminum can today, it could be back on the shelf as a new one in 60 days - and the cycle continues.

- Place only the acceptable recyclables shown below together in your recycling cart - no sorting needed.
- Containers that held food should be rinsed free of food debris and liquid.
- Do not put recyclables in plastic bags - empty recyclables directly into your cart.

Acceptable materials for curbside recycling include:

Always recycle:

Plastic Bottles & Containers

Food & Beverage Cans

Paper

Flattened Cardboard & Paperboard

Food & Beverage Cartons

Glass Bottles & Containers

Do NOT include in your mixed recycling cart:

NO Food Waste
(Compost instead!)

NO Plastic Bags & Film
(Find a recycling site at plasticfilmrecycling.org)

NO Foam Cups & Containers
(Check Earth911.org for options.)

NO Plastic Bags Or Bagged Recycling

NO Needles
(Keep medical waste out of recycling. Place in safe disposal containers like Waste Management's MedWaste Tracker® box.)

To Learn More Visit:
RecycleOftenRecycleRight.com

#Recycling101

A-1, B-6

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.

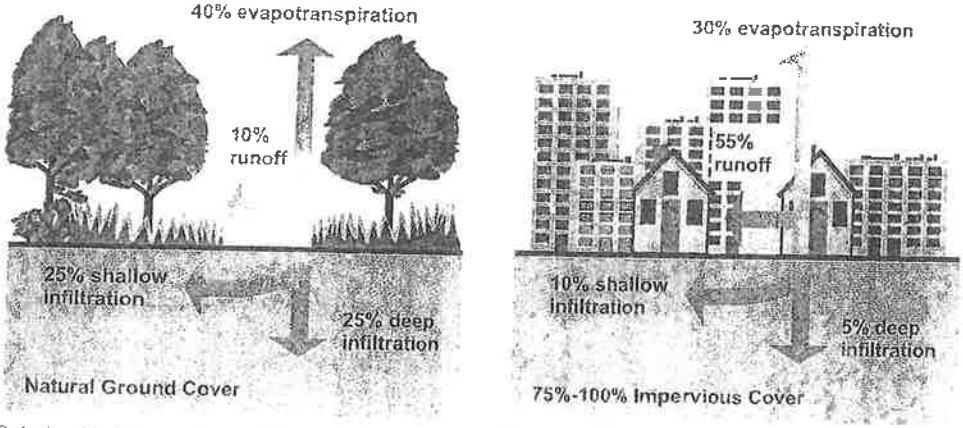
The loss of infiltration from urbanization may also cause profound groundwater changes. Although urbanization leads to great increases in flooding during and immediately after wet weather, in many instances it results in lower stream flows during dry weather. Many native fish and other aquatic life cannot 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 runoff. As little as 10 percent impervious cover in a watershed can result in stream degradation.

A-1, B-6

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.

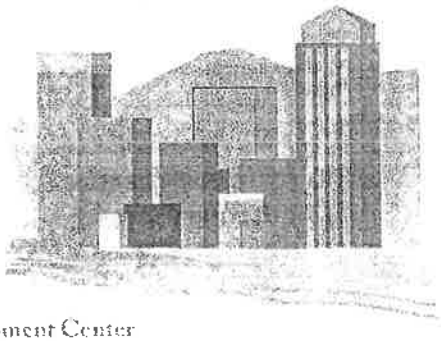
In addition, households can prevent polluted runoff by picking up after pets and using, storing, and disposing of chemicals properly. Drivers should check their cars for leaks and recycle their motor oil and antifreeze when these fluids are changed. Drivers can also avoid impacts from car wash runoff (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

3/1 - 4/30/2019

Channahon Park District Spring Clean Up
On the I&M Canal Trail - April 18-20

Celebrate Earth Day by participating in the I&M Canal Trail spring clean up! We are looking for groups to spend one day to help keep your I&M Canal Trail beautiful. Groups will be assigned a section of the I&M Canal. Garbage bags and gloves will be provided. Planned in cooperation with Illinois Department of Natural Resources.

For more info & to sign up visit:
https://www.channahonpark.org/special-events/

A-6, B-6

4/1/2019 - 5/30/2019

Yard Waste Spring Clean Up Day – May 6, 2019

Clean up your landscaping and get ready for planting for Spring!!

In conjunction with Waste Management, the Village of Channahon announces a Yard Waste Spring Clean-Up Day on May 6, 2019. On this day, residents can place all yard waste for pickup without the need to use yard waste stickers. Just follow the basics below:

A-6, B-6

OCT 1 - NOV 30 2019

FALL LEAF COLLECTION

October 1 thru November 24

- No sticker is needed for *leaves* on regular garbage day.
- Leaves must be in biodegradable bags.
- All other yard waste (plants, grass, trimmings from plants & shrubs) must be placed in kraft bags with a sticker.

UNLIMITED LEAF COLLECTION

Saturday, November 8 & 22

- Leaves must be at curb by 5:30am
- Must be in rigid containers 32 gallons or less.
- May also be in biodegradable bags.
- Plastic bags are not acceptable at any time.

A-6, B-6

DEC 27 2019 - JAN 30 2020

Channahon Lions Club Event

RECYCLE your old & unwanted Christmas lights!

Saturday, January 18
12:00 – 4:00pm
River Hawk Brewing
24735 W. Eames Street

RIVER HAWK BREWING

A-6, B-6

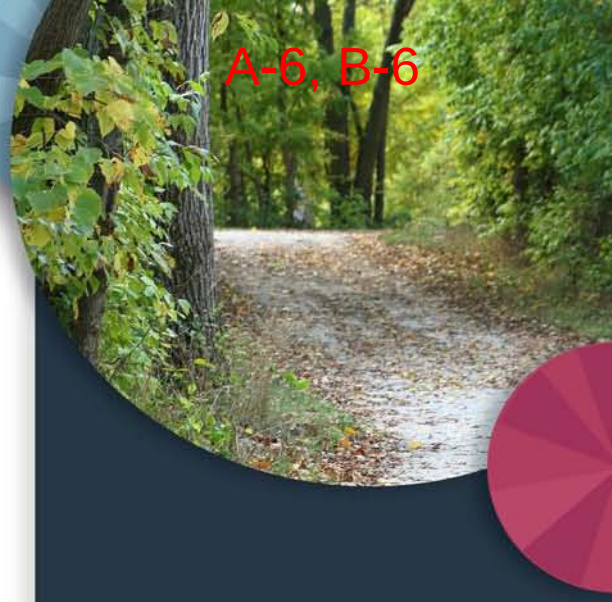
Year round.

These are on the local cable station year round 24 hrs a day 7 days a week to local Comcast customers

2019 Water Quality Reports are available.

These reports are based on samples
taken from the period of
January 1, 2018 to December 31, 2018.
They are available online at www.channahon.org

A-6, B-6



RAIN BARREL PROGRAM

The Village of Channahon is participating with the Channahon Park District to make rain barrels available through the Conservation Foundation. Here's why a rain barrel might be for you.

Top 10 Benefits of Rain Barrels

Did you know rain barrels have community as well as household benefits? Beyond contributing to your beautiful flowers and plants, here are the top 10 benefits of using a rain barrel as part of your eco-friendly gardening:

1. Rainwater is better for your plants and soil.
2. You'll have your own water source in times of drought or watering restrictions. If
3. You'll help to reduce runoff pollution.
4. You'll contribute to erosion prevention efforts.
5. You'll cut down on the amount of water that must undergo expensive and energy-intensive sewage treatments.
6. You'll have a fresh, green way to wash your cars and pets.
7. Rainwater is the eco-friendly option to keep composts moist.
8. You'll help control moisture levels around the foundations of your home.
9. You can reduce your water bill.
10. You'll be an inspiring example of environmental stewardship.

Visit the Park District website for more information and ordering instruction.
www.channahonpark.org/green-initiatives/

VILLAGE WIDE GARAGE SALES FOR 2019

SPRING:
May 2, 3 and 4

FALL:
September 12, 13 and 14

FOLLOW US ON:

UNUSUALLY HIGH UTILITY BILLS?

Could a leaking toilet be running up your utility bill? One of the most common causes of an unusually high utility bill is a leaking toilet. A leaking toilet may be deceptive since you may not see or hear the leak. Below are several situations that can contribute to a costly situation with a toilet leak:

Stuck/Open Flapper: The chain that connects the flush handle to the flapper can get stuck in the down position causing usage up to 4800 gallons per day or roughly **200 gallons per hour**.

Worn/Warped Flapper (or silent leak): Normal wear and/or mineral buildup on the flapper over time can cause accumulated levels of chemicals that will destroy the flappers quickly (typically chemicals that purify the water or in-tank cleaners).

Fill Valve's Float: A cracked/misaligned float will take on water and cause the fill valve to run slowly and continuously causing water usage.

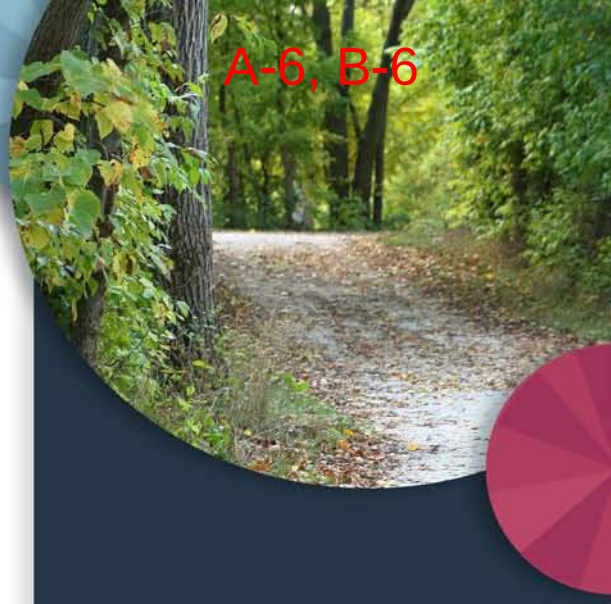
Failed Fill Valve: Normal wear and mineral deposit buildup prevents the valve's ability to shut off completely.

Fractured/Broken Toilet Tank: Caused by stress/impact, will cause the fill valve to continuously replenish the tank, leading to a total collapse and the potential for massive flooding to your residence/ property.

Ruptured/Leaking Supply Line: Rubber lining or fitting joint can break down .

What Should You Do If You Suspect a Toilet is Leaking?

Add 5-10 drops of food coloring to the tank or pickup tablets at the Village Hall. If the color shows up in your bowl after a few minutes, you have a leaking toilet and should take the necessary steps to have the leak repaired.



5 WAYS HOMEOWNERS IMPACT DETENTION BASINS

1. **Trash**—Trash that is not disposed of properly can be picked up by stormwater run-off and washed into the detention basin. Large amounts of trash in the detention pond will accumulate in water inlet and outlet pipes and block water flow. Any trash in the detention pond can also end up in local waterways, which has a broader impact on the health of the watershed and your community.

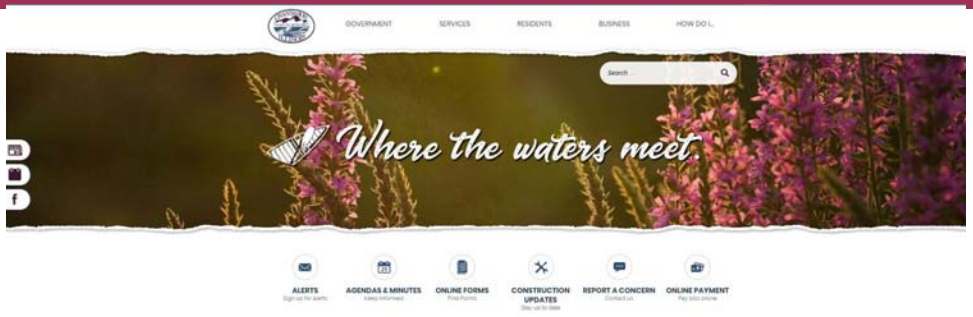
2. **Herbicides, pesticides, and fertilizer**—Stormwater run-off will introduce chemicals used on lawns into the detention basin. Since this source of water is not cleaned by a water treatment plant, chemicals washed into the detention basin will eventually end up in our local waterways. These chemicals harm aquatic life and wildlife that live in and around that body of water.

3. **Yard waste**—Dumping leaves and grass clippings into the water (or storm drains that lead to detention ponds) will also block the water inlet and outlet pipes of the detention pond and decrease the flow of water. These materials will also increase the amount of nutrients in the water. When a large amount of nitrogen or phosphorous are present in the water, algae rapidly multiply (called algae bloom) and turn the water green.

4. **Over-mowing near detention ponds**—Native vegetation near the detention basin deters any pesky wildlife, like geese, limits the amount of chemicals and debris that enter the basin, and prevents shoreline erosion. Mowing too close to the shoreline can facilitate erosion and deterioration of a detention pond.

5. **Pets**—Any pet waste that is left on the ground can be picked up by stormwater run-off and introduced into the detention basin. Animal waste contains bacteria and nutrients that will degrade the water quality and affect aquatic life living in the detention basin.

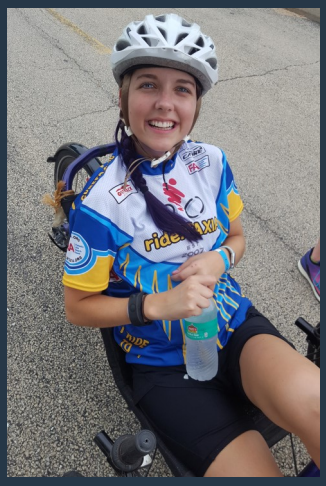
VILLAGE OF CHANNAHON WEBSITE GETS AN UPGRADE!



Residents who log on to www.channahon.org will be treated with a pleasant surprise: a brand new website that is easy to navigate with great new features! The colors, imagery and overall layout structure used to create the new site captures the community's unique qualities by using pieces of the Village logo to focus on the waterways and recreational opportunities. Some of the beautiful photos featured on the site were taken by professional photographer Manuel Diaz. The new site comes with many features such as an Alert Center, Agenda Center, Business Directory, Events Calendar, and much more! The site will also allow residents to obtain, fill out and submit certain forms electronically in the coming months.

COMMITTEE OF THE WHOLE & VILLAGE BOARD MEETINGS

Monday, August 5, 2019
at 6:00 pm
Monday, August 19, 2019
at 6:00 pm
Monday, September 16, 2019
at 6:00 pm



Mayor Missey attended the eighth annual rideATAXIA Chicago held at Channahon Central Park on Sunday, July 22nd.

RideATAXIA is a nation-wide cycling program that welcomes people of all abilities to ride and raise funds for the Friedreich's Ataxia Research Alliance (FARA) - a non-profit organization dedicated to research leading to treatments and a cure for Friedreich's ataxia (FA). FA is a rare, debilitating, life shortening, degenerative neuro-muscular disorder which currently has no approved treatments. More information can be found here: curefa.org.

Forms & Documents

Municipal Separate Storm Sewer System (MS4)

Ongoing Construction & Projects

Municipal Separate Storm Sewer System (MS4)

Documents

- MS4 Stormwater Plan (PDF)
- Village of Channahon MS4 Notice of Intent (PDF)
- Environmental Justice Area Evaluation (PDF)

Annual Facility Inspection Report

- Most recent Inspection Report (PDF)
- 2019 NPDES MS4 Annual Report (PDF)
- View all archived Inspection Reports

A-6, B-6

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

ENVIRONMENTAL JUSTICE AREA

Name of Person filling out form: Donald Kinzler, Village of Channahon
Positon: Engineering Project Manager
Date: 01-16-20

Evaluation: *Municipality vs. State of Illinois*

The following information was taken from U.S. Census Bureau website:
https://www.census.gov/quickfacts/fact/table/IL,channahonvillageillinois/POP010210

Date of Census: April 1, 2010

	Illinois	Channahon
Minority Population		
Black or African American along (%)	14.6	0.8
American Indian and Alaska Native alone (%)	0.6	0.3
Asian alone (%)	5.9	0.3
Native Hawaiian and Other Pacific Islander alone (%)	0.1	0.0
Two or More Races (%)	2.0	1.2
Hispanic or Latino (%)	17.4	9.7
Income & Poverty		
Median Household Income (in 2018 dollars), 2014-2018	$63,575	$91,372
Persons in poverty (%)	12.1	7.5

A-6, B-6

Melanie Arnold

From: Sydney Thompson <sthompson@channahon.org> on behalf of Sydney Thompson
Sent: Friday, March 27, 2020 11:05 AM
To: Don Kinzler
Subject: Re: NPDES MS4 Permit Annual Report Data

Hi Don,

Below is what I was able to find from the website, Facebook and Twitter.

Let me know if I can provide anything additional.

Thanks,
Sydney

Search Term	Website	Facebook (people reached)	Twitter (people reached)
Yard Waste Begins	2,566	7,251	1,692
I&M Canal Cleanup	N/A	3,418	N/A
Electronic Waste Event	215	1,155	499
Household Hazardous Waste Drop Off Event	104	2,506	507
Water Quality Reports	1,047	846	538
Christmas Tree Pickup	74	6,708	1,891
Newsletter (January & February 2019)	332	1,705	1,072
Facility Inspection Report	132	N/A	N/A

On Wed, Feb 26, 2020 at 11:51 AM Don Kinzler <dkinzler@channahon.org> wrote:

> To All,
>
> It's that time of year again. I am putting together data for the Village's NPDES-MS4 Permit (Village-wide stormwater discharges) Annual Report. The IEPA closely regulates this permit with regular inspections and, when warranted, will increase inspection frequency, make surprise visits, issue disciplinary actions and fines, etc. The most recent IEPA inspection was just two years ago, 2018. The program has received generally good feedback from the IEPA due largely to the data all of you are able to provide.
>
> **The reporting period is from March 1, 2019 to February 28, 2020. Please provide requested information by Friday, April 10th.**

Lower DuPage River
Watershed Coalition

AGENCY MEMBERSHIP PROFILE

B1

1. Agency Name: Village of Channahon

Address: 24555 S. Navajo Drive
City, Zip: Channahon, IL 60410
Telephone Number: 815-467-6644
Chief Executive Officer Name:

County: Will
Website: www.channahon.org
Fax Number: 815-467-8398
Title:

2. If your Agency operates a wastewater treatment facility that discharges to the DuPage River Watershed, please provide the following information for each facility:

NPDES Permit Number:
Facility Discharges to:
Design Average Flow:

NPDES Permit Number:
Facility Discharges to:
Design Average Flow:

NPDES Permit Number:
Facility Discharges to:
Design Average Flow:

NPDES Permit Number:
Facility Discharges to:
Design Average Flow:

3. Are there any combined sewer service areas within your Agency?
_X_ No __ Yes (If yes, the LDRWC may request additional information)

4. DESIGNATED REPRESENTATIVE:
Name: Don Kinzler
Title: Engineering Project Manager
Direct Line:
Email Address: dkinzler@channahon.org

ALTERNATE REPRESENTATIVE:
Name: Ed Dolezal
Title: Director of Public Works
Direct Line:
Email Address: Edolezal@channahon.org

The Designated Representative is authorized to vote at Workgroup meetings on the agency's behalf and the Alternate Representative is authorized to vote in the absence of the Designated Representative.

Signature _____ Title _____ Date 03-28-19

Please direct questions to Jennifer Hammer, Watershed Coordinator, at 630-747-8106. Please complete this Agency Membership Profile and return it along with a check made payable to the Lower DuPage River Watershed Coalition.

Lower DuPage River Watershed Coalition
10S404 Knoch Knolls Rd.
Naperville, Illinois 6056

Or Email to jhammer@theconservationfoundation.org

Lower DuPage River Watershed Coalition

B1

LDRWC Dues Schedule FY 2019-2010

Proposed 2019-2022 Agency Members	Acres within Watershed	Acreage Contribution $0.708/acre	Design Average Flow (MGD)	WWTP Contribution $1730.10/mgd	Total Contribution
Bolingbrook	13739	$ 9,727	2.8	$ 4,844	$ 14,571
Channahon	3741	$ 2,648			$ 2,648
Crest Hill	3336	$ 2,362	1.3	$ 2,249	$ 4,611
Joliet	16035	$ 11,352	3.2	$ 5,536	$ 16,889
Minooka	2486	$ 1,760	2.2	$ 3,806	$ 5,566
Naperville	9647	$ 6,830	26.25	$ 45,415	$ 52,245
Plainfield	13303	$ 9,418	7.5	$ 12,976	$ 22,394
Romeoville	6236	$ 4,415			$ 4,415
Shorewood	5093	$ 3,606			$ 3,606
Will County Stormw	32078	$ 22,710			$ 22,710
Totals	105694	$ 74,827	43.25	$ 74,827	$ 149,653

LDRWC Special Condition Payments 2017-2023

Municipality	Projects Multiplier	Naperville Total	Naperville Projects	Naperville Studies	Bolingbrook Total	Bolingbrook Projects	Bolingbrook Studies	Plainfield	Joliet	Crest Hill	Minooka	Annual Total
Plant MGD			**26.25**	**26.25**		**2.8**	**2.8**	**7.5**	**3.2**	**1.3**	**2.2**	
Studies Mulitplier				**$ 4,639.60**			**$ 4,639.60**	**$ 4,639.60**	**$ 4,639.60**	**$ 4,639.60**	**$ 4,639.60**	
Total				**$ 121,789.50**			**$ 12,990.88**	**$ 34,797.00**	**$ 14,846.72**	**$ 6,031.48**	**$ 10,207.12**	
Initial Payment	$ 6,840.22	$ 179,555.85	$ 179,555.85		$ 19,152.62							$ 198,708.47
2017	$ 7,045.43	$ 184,942.41	$ 167,543.90	$ 17,398.51				$ 4,971.00	$ 2,120.96	$ 861.64	$ 1,458.16	$ 194,354.17
2018	$ 11,525.99	$ 302,557.26	$ 285,158.75	$ 17,398.51				$ 4,971.00	$ 2,120.96	$ 861.64	$ 1,458.16	$ 311,969.02
FY 2019-2020	$ 11,871.77	$ 311,634.00	$ 294,235.49	$ 17,398.51	$ 63,155.88	$ 61,300.04	$ 1,855.84	$ 4,971.00	$ 2,120.96	$ 861.64	$ 1,458.16	$ 384,201.64
2020	$ 19,680.41	$ 516,610.68	$ 499,212.17	$ 17,398.51	$ 63,155.88	$ 61,300.04	$ 1,855.84	$ 4,971.00	$ 2,120.96	$ 861.64	$ 1,458.16	$ 589,178.32
2021	$ 20,270.82	$ 532,108.93	$ 514,710.42	$ 17,398.51	$ 63,155.88	$ 61,300.04	$ 1,855.84	$ 4,971.00	$ 2,120.96	$ 861.64	$ 1,458.16	$ 604,676.57
2022	$ 20,878.93	$ 548,072.04	$ 530,673.53	$ 17,398.51	$ 63,155.88	$ 61,300.04	$ 1,855.84	$ 4,971.00	$ 2,120.96	$ 861.64	$ 1,458.16	$ 620,639.68
2023	$ 21,505.30	$ 564,514.11	$ 547,115.60	$ 17,398.51	$ 63,155.88	$ 61,300.04	$ 1,855.84	$ 4,971.00	$ 2,120.96	$ 861.64	$ 1,458.16	$ 637,081.75
			$3,018,205.71	$ 121,789.57		$306,500.20	$ 9,279.20	$ 34,797.00	$ 14,846.72	$ 6,031.48	$ 10,207.12	
Organization Totals		$ 3,139,995.28			$ 334,932.02						Overall Total	$ 3,540,809.62

Notes:

Naperville and Bolingbrook are funding projects and studies; remaining communities are only funding studies. Studies include the Non-Point Source Study, the development of the Nutrient Implementation Plan and the Nutrient Trading Study.

Payments received.

B1

Melanie Arnold

From: Don Kinzler <dkinzler@channahon.org>
Sent: Tuesday, May 12, 2020 11:35 AM
To: Melanie Arnold
Subject: Channahon MS4

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Melonie,

Ed Dolezal, P.E., Director of Public Works, is the District 6 Municipal Representative for the Will County Stormwater Management Planning Committee.

Regards,

Don

B6

From: Daryl Cole
To: Don Kinzler
Subject: RE: NPDES MS4 Permit Annual Report Data
Date: Tuesday, April 21, 2020 11:48:43 AM
Attachments: image001.png
image002.png
image003.png

Don,

I did not forget about this, it just took longer to compile the information.

For the **March 1, 2019 to February 28, 2020** reporting period.

- 200 people participated in the I&M Canal
- Six (6) rain barrels were sold.
- Here's a list of items that have been on the electronic sign (I'm not 100% if they're all considered environmental):
    - CIBC Recycle & Shred Event
    - Three Rivers Garden Club Landscaping for Life
    - Three Rivers Garden Club Gardening & Bugs
    - Adopt A Flower Bed

  Average days they are displayed is 10 days.

- We had a Church Community Service project where approximately 70 junior high kids removed trash and litter along the perimeter of Arroyo Trails, Weeded the entrance island perennial bed at Arroyo Trails, Cut out invasive tree saplings and cleaned up litter along the trail and perimeter of the Prairie Wetland and removed thistle and other weeds from the Central Park Native Planting area.

If you have any questions on this, let me know.

Daryl R. Cole
Project Coordinator

Channahon Park District
24856 W Eames
Channahon, Illinois 60410
Office: 815-521-3103
Cell: 815-592-6409
Main Line: 815-467-7275
www.ChannahonPark.org

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

B6

From: Leti Anselme
To: Missey Schumacher; Thomas J. Durkin; Heather Wagonblott; Stephen Kuczkowski; Mike Petrick; Sydney Thompson; John Grimmenga; Don Kinzler; Ed Dolezal; Shane Casey
Subject: Shadow Day
Date: Tuesday, January 28, 2020 3:19:49 PM
Attachments: Agenda 02.03.20.doc
Student Council Officer Information 2020.docx

Attached is the list of the students and who they will be shadowing.

This will be our 5th Shadow Day Event!

This is a small group of kids compared to what we have had in the past, which is why we have 2 students sharing 2 people.

I have also attached our agenda for Monday for Shadow Day, please let me know of any changes or additions.

Thank you,
Leti

Leticia R. Anselme
Executive Assistant/Deputy Village Clerk

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

VILLAGE OF CHANNAHON
2020 JOB SHADOWING DAY
MONDAY, FEBRUARY 3, 2020

VILLAGE OF CHANNAHON
Village Boardroom
24555 S. Navajo Drive, Channahon
9 a.m. to 2 p.m.

- **9 a.m. to 10 a.m.** Staff Meeting in Boardroom
- **10 a.m. to 11 a.m.** Tour of the Village and Police Department
- **11 a.m. to 11:45 a.m.** One-on-One with Staff and Student
- **11:45 a.m. to 2 p.m.** Lunch and Group Question and Answer
- **2 p.m.** Adjourn

***Please note that time limitation may vary, but lunch will be delivered by noon.

C-1

Village of Channahon

Outfall Location Map

Legend

- Final Outfalls

N

W E

S

1:12,000

MAY 2018

1:100,000

SHOREWOOD

JOLIET

MINOOKA

CHANNAHON

ELWOOD

MORRIS

Illinois & Michigan Canal

DuPage River

DesPlaines River

Illinois River

Kankakee River

Grant Creek Cut-Off

Des Plaines River

MDWLDS

HLK

CHK RDG (1)

CHK RDG (2)

IT-N (1)

IT-N (2)

IT-S (1)

IT-S (2)

TC 2A

TC

JrHS

FBC

OVH

CIP (1)

CIP (2)

SR (1)

SR (2)

SB (1)

SB (2)

RA

FH

CFD

RVS (1)

RVS (2)

RVS (3)

RMWds (1)

RMWds (2)

RMWds (3)

LH (1)

LH (2)

LH (3)

HF-N

HF-E

KTG (1)

KTG(2)/WAS-2

WAS-1

SC

MHS

RWds

RVNS

CL

OKV

HC (1)

HC (2)

HC (3)

MO (1)

MO (2)

MO (3)

WHlds

HLD (1)

HLD (2)

HLD (3)

HLD (4)

HLD (5)

HLD (6)

INST CHEM

QRY (1)

QRY (2)

QRY (3)

QRY (4)

QRY (5)

NBlk

UC

C8

The noted excerpts from the following documents are included as part of MCM 3

Please refer to Lower DuPage River Watershed Coalition ILR40 Activities
March 2019 – February 2020
Part V. Monitoring, Recordkeeping and Reporting (pages 5 – 15)

And

Lower Des Plaines Watershed Group ILR40 Activities
March 2019 – February 2020
Part V. Monitoring, Recordkeeping and Reporting (Pages 5 – 9)

Citizen Request Tracker®

Use Citizen Request Tracker® to report your concerns.

Login to check on existing requests.

Administration	1 Forms
» General Inquiry/Complaint Form	

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Sign up for alerts

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D4

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

TO: **Jeff Raduechel, Venture One; Matthew Kramer, Jacob and Hefner**

FROM: **Karen A. James, Planner**

CC: **Michael C. Petrick, Director of Community Development & Information Systems; Ed Dolezal, Director of Public Works; Donald Kinzler, Engineering Project Manager; Gabe Zavala, Engineering Technician**

DATE: **October 15, 2019**

SUBJECT: **Crossroads 55 Project Tarpon - Final Engineering Review 1**

The Village of Channahon has received the following:

- *Site Improvement Plans* prepared by Jacob & Hefner Associates dated 9/23/2019
- *Stormwater Management Report* prepared by Jacob & Hefner Associates dated 9/23/2019

Please direct the applicant to provide a written response to these comments (including VOC comments) and (2) two copies of full-size site plans as well as all other materials submitted for review with an identical submittal to Tony Spinelli, P.E. at Strand Engineering.

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

General

1.1 Clearly call out the location of the East Basin Overflow Weir on plan sheets with a dimension. Provide ≥ 1 ft between the overflow weir elevation and top-of-berm.

1.2 Provide an Engineer's Opinion of Construction Cost for Site Infrastructure Improvements.

1.3 Provide Municipal Drainage Easements for the Stormwater Detention Basin and flood routes.

1.4 Provide Municipal Utility Easements for the Sanitary Sewer from sanitary structure S1 to MH225, and for the Water Main service to the tee, fire hydrant and 6" service valve near the pump house.

1.5 Provide a photometric and landscape plans.

1.6 Provide AutoTURN exhibits for a fire truck maneuvering through the site in the areas designated for passenger vehicles.

1.7 The effective FEMA FIRM map indicated throughout the plan set is incorrect. Update the FEMA FIRM map data to reflect the current panel number and date.

1.8 Remove the Future Parking shown on multiple plan sheets within the plan set. The design or allowance of these improvements is not being reviewed or approved with these plans.

1.9 Submit drawings for the Pump House, Water Tank, and Retaining Walls identified as DESIGNED BY OTHERS.

Improvement Plans

2. Title Sheet

2.1 Provide Site Benchmarks that are adjacent to the project site. Site Benchmark #1 is approximately 3,200-ft south of the project site and Site Benchmark #2 is approximately 4,700-ft south of the project site. Establish

site benchmarks on items that will not be displaced during construction. The use of fire hydrants, if available, for site benchmarks is recommended.

3. Existing Conditions & Demolition Plan - Sheets C3.0 - C3.8

3.1 Sheet C3.1 - Provide a definition of the easement labeled 5' CESE that is located adjacent to the Bradley Street ROW.

3.2 Sheet C3.1 - An erroneous EXISTING FIRE HYDRANT TO REMAIN label is located adjacent to the Bradley Street ROW.

3.3 Call out how the eastern existing drainage tile will be terminated.

4. Dimension Control Plan – Sheets C4.0 - C4.8

4.1 The use of Standard Pitch Curb and Gutter is not shown or not identifiable with the hatching identified in Geometric Note #3.

4.2 Update the Matchline callouts.

4.3 A proposed gravel access for Kinder Morgan is shown connecting to the center Amoco Rd entrance near the intersection with Amoco Road. Relocate the access drive connection such that it will not impact typical site ingress/egress traffic for the driveway at the road intersection. A paved surface is required.

4.4 Sheet C4.1 - Label the centerline shown south of the building.

4.5 Sheet C4.2 - The Bradley Street pavement striping does not align with the proposed entrance.

4.6 Sheet C4.2 - An erroneous R10' label is located in the parking area east of the Pump House.

4.7 Sheet C4.3 - The Amoco Road pavement striping does not align with the proposed entrance.

4.8 Sheet C4.3 - Label the centerline shown south of the building.

4.9 Sheet C4.5 - The dimension strings provided along the ADA accessible stalls identifies an incorrect parking stall count.

4.10 Sheet C4.5 - A curved pavement striping is shown north and south of the proposed entrance. Remove the curved striping and provide directional arrow pavement markings.

4.11 Sheet C4.5 - All ADA accessible parking stalls shall be van accessible and shall include an 8-ft parking stall with an adjacent 8-ft access aisle. The access aisle width is not identified. Provide a standard detail for the ADA accessible stalls or add a Geometric Note.

4.12 Sheet C4.7 - The Amoco Road pavement striping does not align with the proposed entrance.

4.13 Sheet C4.7 - Provide a Right-Turn directional arrow pavement marking for the East to South vehicle movement.

4.14 Provide the proposed on-site Traffic Signage details referred to in Geometric Note #15 within the Dimension Control Plan. Due to the large size the ARCH plans were not submitted to the engineering consultant.

5. Grading Plan - Sheets C5.0 - C5.12

5.1 Revise the note provided within the Stormwater Detention Basin to include a reference to the 2-ft cohesive materials cap required by the Typical Section provided on Plan Sheet C2.1.

5.2 Proposed grading plan does not support the use of Reverse Pitch Curb in all locations. Identify the locations for use of Standard Pitch Curb and Gutter. See comment 4.3.

5.3 Provide a T/Bank (569.50) designation along the north side of the stormwater detention basin.

5.4 The drainage trench excavation of weathered rock shall include the requirement for a 2-ft cohesive materials cap as shown in the Typical Section provided on Plan Sheet C2.1.

5.5 Sheet C5.1 - Revise the 573 contour in the area west of the building to show depressed curb sections drain into this area.

5.6 Sheets C5.1 & C5.2 - The Overland Flood Route (OFR) in the area west of the building is incorrectly designated to flow south. The proposed grades at the north end of this area permit the OFR to release in a north direction bypassing the Stormwater Detention Basin. The OFR is required to be routed into the Stormwater Detention Basin.

5.7 Sheet C5.4 - Relocate the Drainage Trench label on the north side of the basin to identify the drainage trench.

5.8 Sheet C5.6 - Relocate the Drainage Trench label on the north side of the basin to identify the drainage trench.

5.9 Sheet C5.7 - The proposed grading around the flared end section tributary to MH129 results in 2.4-ft of ponding during OFR conditions. Consider revising to prevent future clogging.

5.10 Sheet C5.8 - Add a B/TRENCH elevation to the east end of the proposed drainage trench.

5.11 Sheet C5.8 - The OFRs shown near storm structures BT202 & INL427 are incorrectly shown in the corners of the parking lot. The proposed grading permits the OFRs to release at the storm structures. Revise the OFR locations.

5.12 The elevation differences between BC and EP provided on the Detailed Grading Plan sheets appear incorrect for B-6:12 curb & gutter. Provide a standard detail for the B-6:12 Curb & Gutter.

5.13 Sheet C5.12 - The BC and EP elevations provided for the Northeast Pump House between the two sidewalks appears incorrect.

5.14 Show invert elevations for FES structures on grading plan sheets.

5.15 Grading Note #9 (C5.0) and Note #11 (other sheets) places responsibility of the Retaining Wall Structural Design on the contractor. Provide the retaining wall design prior to building permit issuance.

6. Utility Plan - Sheets C6.0 - C6.8

6.1 Provide water demand calculations to warrant the 6-in diameter water service.

6.2 A Reduced Pressure Zone (RPZ) valve is required in the Pump House building. Provide Pump House piping details.

6.3 The lowering of water main to cross under the storm water to install fire hydrants will create highpoints in the watermain profile that will not be able to expel air pockets. Consider revising this condition.

6.4 There appears to be insufficient space to install valves and fire hydrants as shown in the curb islands south of the building. Additionally, valves and fire hydrants will need to be installed at bury depths exceeding 7-feet. Consider relocating water main valves and fire hydrants.

6.5 The IEPA required 10-ft horizontal separation is not provided between the sanitary sewer and the water main south of the building.

6.6 A minimum velocity of three feet per second shall be maintained in storm sewer pipes flowing full. There are proposed storm sewer pipe slopes shown which do not comply with this requirement. Though this is private storm sewer, consider revising to prevent settling blockages.

6.7 Show existing force main near east side of site.

6.8 The existing sanitary manhole where existing force main changes to gravity sewer is shown called out in proposed line weight as MH225, has a revised rim elevation and only shows the west invert elevation. Call out this structure as existing, show all existing inverts, call out that the a reconstruction is required to lower the rim elevation, and call out the proposed service pipe’s connection to an existing structure as required by ordinance.

6.9 Add a service valve-in-vault for the 6” domestic line. Locate the valve just east of the tee at the pump house.

6.10 The proposed flushing hydrant will not be adequate for fire suppression. Modify using one of the following options: 1) remove the hydrant and provide another means to flush the line; or 2) paint the hydrant a different color and provide signage that this hydrant is not suitable for fire suppression use.

6.11 Sheet C6.1 - Provide pipe crossing data upstream of sanitary manhole S19.

6.12 Sheet C6.2 - The Pump House intake pipe listed conflicts with the pipe size indicated on sheet C7.10. Revise the 16”x10” pressure connection to 16”x12” if the intake pipe size is 12” diameter.

6.13 Sheet C6.5 - Provide pipe crossing data upstream of sanitary manhole S13.

6.14 The pipe crossing data provided west of the pump house is obscured by other text.

6.15 The water main bend proposed under the storm sewer crossing between CB327 and CB306 is not acceptable. Reconfigure the water main to eliminate this condition.

6.16 Sheet C6.5 - Sanitary manhole S14 is shown in the curb line. Relocate sanitary manhole S14.

6.17 Sheet C6.5 - Sanitary manhole S13 is located in the ADA accessible stall and may be considered a slip hazard. Relocate sanitary manhole S13.

6.18 Sheet C6.6 - Provide pipe crossing data downstream of storm structure CB401, and between the 10” fire service and 6” domestic service. Though not specifically regulated, some separation should be required to prevent friction damage between the pipes.

6.19 Sheet C6.6. Provide proper horizontal separation between 10” fire service and storm sewer pipe between CB409 to CB411.

6.20 Sheet C6.7 - Provide pipe crossing data for the pipe crossing between the 10-in FP line and the guardhouse water service. Though not specifically regulated, some separation should be required to prevent friction damage between the pipes.

7. Sanitary Sewer Plan & Profile - Sheets C7.0 - C7.13

7.1 The sanitary sewer manholes shown in the profile view incorrectly include manhole sumps. Remove the manhole sumps.

7.2 Show pipe ends within manholes in the profile view.

7.3 Call out drop structures where applicable.

7.4 Call out all pipe crossings with data in both plan and profile views.

7.5 Sheet C7.0 - Remove the incorrect label shown in the profile view near Sta. 4+00.

7.6 Sheet C7.1 - Show the water service line crossing in the profile view near Sta. 5+30.

7.7 Sheet C7.3 - Sanitary manhole S16 is missing from the profile view.

7.8 Sheet C7.5 - Show the water main crossing upstream of sanitary manhole S19 in the profile view.

7.9 Sheet C7.6 - Show storm sewer crossings near Sta. 100+55 and Sta. 101+20 in the profile view.

7.10 Sheet C7.6 - Label the pipe between S3 and S2 in the profile view.

7.11 Sheet C7.6 - Show the pipe leaving S2 in the profile view.

7.12 Sheet C7.7 - Show the water main crossing near Sta. 107+70 in the profile view.

7.13 Sheet C7.10 - Show the water main crossings near Sta. 124+70 and Sta. 124+75 in the profile view.

7.14 Sheet C7.10 - The water main pipe size for the pump house shown in the plan view conflicts with the data shown on sheet C6.2 (See comment 6.8).

7.15 Sheet C7.10. – Call the size and length for the pump house sanitary service pipe.

7.16 Sheet C7.11 - Add the manhole data for S16 in the profile view.

7.17 Sheet C7.11 - Show the water main crossing near Sta. 19+90 in the profile view.

7.18 Sheet C7.11 - Show the water main crossing near Sta. 10+40 in the profile view.

7.19 Sheet C7.11 - The labels for the pipe crossing near Sta. 10+90 in the profile view appear incorrect.

7.20 Sheet C7.11 - Add pipe crossing data for the pipe crossing near Sta. 12+08 in the profile view.

7.21 Sheet C7.12 - Remove the manhole near Sta. 15+45 in the profile view.

7.22 Sheet C7.12 - The sanitary sewer T/PIPE labels in the profile view near Sta. 15+00 and Sta. 15+35 incorrectly indicate T/STRM.

7.23 Sheet C7.12 - The water main crossing shown in the profile view near Sta. 17+00 is in the wrong location.

7.24 Sheet C712 - Show the storm sewer crossing near Sta. 16+80 in the profile view.

7.25 Sheet C7.13 - The labels for the pipe crossing near Sta. 23+37 in the profile view appear incorrect.

8. Gas Pipeline Crossing Profile - Sheets C9.0 - C9.4

8.1 Sheet C9.0 - Show the profile connection to Amoco Road.

8.2 Sheet C9.3. Provide documents referenced in the KINDER MORGAN/AUX SABLE, MGT/ONEOK and NORTHER BORDER notes. These construction documents should be either provided as an appendix to engineering plans, or if feasible, added to Sheet C9.4 or an additional section C9 sheet.

9. Erosion Control Plan - Sheets C10.0 - C10.8

9.1 The linetype used to identify the temporary silt fence is also used to identify the temporary orange construction fence. Use a different linetype to identify the temporary silt fence.

9.2 Remove or revise Erosion Control Note #12.

9.3 Sheet C10.2 - Provide Inlet Protection (IP) for all open grate storm structures.

9.4 Sheet C10.2 - A requirement for TRP is shown in the stormwater detention basin. It appears that this should be labeled as TRM.

9.5 Sheet C10.4 - Provide Inlet Protection (IP) for all open grate storm structures.

9.6 Sheet C10.4 - Adjust the Double Row Silt Fence label location shown north of the stormwater detention basin.

9.7 Sheet C10.6 - Provide Inlet Protection (IP) for all open grate storm structures.

10. Stormwater Pollution Prevention Plan - Sheets C11.0 - C11.2

10.1 Sheet C11.0 - Update the NPDES ILR10 permit number wherever it is referenced.

10.2 Sheet C11.0 - Update the information required in Notes 1c, 1d, 1e, and 1f.

10.3 Sheet C11.0 - Update the NPDES ILR10 permit number listed in the NPDES Certificate signature block.

10.4 Sheet C11.0 - Complete the NPDES Permit Inspector Certification signature block.

11. Details - Sheets C12.0 - C12.3

11.1 Sheet C12.0 - Add Village of Channahon standard detail for Barrier Curb & Gutter.

11.2 Sheet C12.1 - Revise the Storm Sewer Trench Detail to specify CA-7. Remove CA-6 from the detail.

11.3 Sheet C12.3 - Revise the Sanitary Sewer Trench Detail to specify CA-7.

11.4 Sheet C12.3 - Revise Watermain Lowering Detail note #2. Replace “SDR 26 PVC” with “WATERMAIN QUALITY PIPE”.

Stormwater Management Report

1. It appears that approximately 20 acres of existing Zone A development will be redirected to the existing wetland to the north of the proposed site. Also, 5.11 acre-feet of existing Zone A and Zone B depressional storage will be filled in for the proposed development. The proposed detention pond appears to meet the peak discharge and detention requirements for the development, but it is critical to understand the impacts of the additional stormwater volume quantity that is being redirected to the existing wetland and what type of

downstream impacts this will have. Has an analysis been done to see what happens to the hydraulics of the northern wetland during large storm events and the impacts it may have to the development to the east?.

2. The Existing and Proposed Conditions Runoff Curve Number (RCN) for A1 is listed as "74" within the stormwater management report. The EDP, PDP, and Hydraflow modeling has the RCN listed as 96.8. Please modify as needed.
3. It appears ISWS Bulletin 70 rainfall depths were used in the Hydrologic modeling, but SCS rainfall distribution was used instead of the Huff rainfall distribution as stated in the Will County Ordinance (55.023(B)(1)(b)).
4. A maintenance program for permanent stormwater facilities describing maintenance tasks, schedule, and identification of responsible entities for maintenance and funding should be provided.
5. As stated on sheet C2.1, the detention basin is a design build pond as the location of the existing bedrock is unknown. Updated stormwater detention calculations should be provided once the final grading is complete for the detention basin to verify detention volume and release rate requirements will be met. This asbuilt information should be provided immediately following detention basin construction of proposed 2-ft cohesive materials cap as shown in the Typical Section provided on Plan Sheet C2.1.
6. The Proposed Drainage Plan (PDP) should show the overland flow routes that will be utilized during major storms when the minor systems are overloaded. Calculations should be provided showing that the overland flow paths are sufficient to carry the major design event flows and these flow paths do not result in property damage. Overland flood routes should be sized by subtracting the 10 yr storm event flow, regardless of storm sewer capacity, from the 100 yr flow. OFRs must convey remaining flow.
7. As stated in the Mass Grading review letter, the typical cross sections for the Detention Basin indicate a permanent wet pool depth of 6 inches. Village of Channahon and Will County ordinances require minimum wet detention permanent pool depths of three feet. If these basins are intended to be constructed wetlands, a planting restoration plan should be submitted.
8. Based on plan sheet C2.1, it appears the detention basin will be built directly on top of existing weathered rock and a portion will have a permanent wet pool. A pond liner should be considered to hold detain water as well as protect any groundwater that may be contaminated through seams within the bedrock.
9. It appears the 3-foot wide drainage trench running to the north will conflict with the outfalls draining into the detention pond.
10. In numerous locations it appears that the storm sewer crosses above the water main. Based on Chapter 154, Appendix F(D)(8), "if the storm sewer must cross a water main, the top of the storm sewer pipe must be laid at least 18 inches below the bottom of the water main pipe." If neither of these conditions can be met, other methods of obtaining separation, as described and illustrated in the Standard Specifications for Water and Sewer Main Construction in Illinois, shall be followed.
11. Plan Sheet C6.1 shows a backflow preventer valve on structure CB126. It does not appear this backflow preventer valve was accounted for in the storm sewer modeling. What effect does this have on the hydraulics of the storm sewer system for minor and major storm events?
12. Please verify that calculations are provided to show compliance with Stormwater Ordinance Section 203.6(f).

D4

MEMO

TO: **Matthew J. Kramer, P.E. Project Manager**

FROM: **Donald Kinzler, Engineering Project Manager**

CC: **Ed Dolezal, Public Works Director; Steve Kuczkowski, Chief Building Inspector, Mike Petrick, Community Development Director, Gabriel Zavala, Engineering Technician.**

DATE: **August 19, 2019**

SUBJECT: **Crossroads 55 Project Tarpon – Mass Grading & Erosion Control Engineering Review 1**

The Village of Channahon has received the following:

- *Mass Grade Plans & Erosion Control Plans* prepared by Jacob & Hefner Associates dated 8/6/2019
- *Wetland Delineation Report* prepared by ENCAP, Inc. dated 9/1/2015
- *Jurisdictional Determination* prepared by USACE dated 12/16/2015

Please direct the applicant to provide a written response to these comments (including VOC comments) and (2) two copies of full size site plans as well as all other materials submitted for review with an identical submittal to Tony Spinelli, P.E. at Strand Engineering.

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

General

1.1

Mass Grade Plans & Erosion Control Plans

2. Cover Sheet – Sheet C1.0

2.1 Submitted plans must provide current existing conditions information for the development. The "Existing Conditions" note indicates the existing conditions were obtained by combining multiple topographic surveys completed between December 2007 and January 2016.

3. General Notes and Typical Sections - Sheet C2.0

3.1 The typical detention basin cross sections and detention basin grading plans indicate side slopes at a 3:1 (horizontal to vertical). Village of Channahon and Will County ordinances permit maximum detention basin side slopes not to exceed 4:1.

3.2 The typical cross sections for both the East and West Detention Basins indicate permanent wet pool depths of 6 inches. Village of Channahon and Will County ordinances require minimum wet detention permanent pool depths of three feet. If these basins are intended to be constructed wetlands, a planting restoration plan should be submitted.

4. Existing Conditions & Demolition Plan Overall - Sheet C3.0

4.1 Based on review of existing topographic contours, there are two depressional areas that are proposed to be filled. In accordance with Village of Channahon and Will County stormwater ordinances, lost depressional storage must be replaced at a 1:1 ratio and must be provided in addition to the detention storage volumes required to meet the 2- and 100-year release rates.

5. Grading Plan Northwest – Sheet C4.2

5.1 Review of parking lot spot grades indicates that the 9-inch maximum depth of ponding for detention storage in parking lots is exceeded at several locations.

6. Pond Outfall Plan Southwest - Sheet C5.1

6.1 The 18-inch diameter outfall storm sewer that drains the West Detention Basin indicates that it ultimately discharges to manhole (MH1) equipped with two (2) 15-foot long duraslot pipes that do not have a positive outlet. The manhole structure and slot rim elevations are set at 567.9. However, in order for the depressional area located around these structures to positively drain, runoff must pond to an elevation of 568.37, which is equal to the upstream invert of the cross road culvert under Amoco Road. This configuration would likely result in standing water within a downstream portion of the 18-inch outfall pipe and the depressional area surrounding MH1, which is not desirable.

7. Pond Outfall Plan North – Sheet C5.4

7.1 Similar to Comment 6.1, this outlet configuration will likely result in standing water within the downstream portion of the 30-inch diameter outlet pipe, which is not desirable.

8. Erosion Control Plan – Sheets C6.0 - C6.8

8.1 Turf reinforcement mat should be indicated at each of the overflow spillways for the East and West Detention Basins.

8.2 Erosion control blanket should be indicated within the north-south drainage ditch that outlets into the West Detention Basin.

8.3 Provide temporary sediment basins and traps at appropriate locations.

8.4 All proposed slopes 4:1 or greater should indicate erosion control blanket.

<u>IEPA Notice of Intent (NOI)</u>

1. Provide a copy of the IEPA NOI when received. Earthwork activities shall not commence until the IEPA NOI is received.

RECEIVED
OCT 07 2019
CK

D4
10-10-19
Waived OK

FEE: $ ~~150.00~~

SITE DEVELOPMENT PERMIT APPLICATION

(Please print)

1. **APPLICANT, ENGINEER, AND ALL CONTRACTOR'S CONTACT NAMES, ADDRESSES AND PHONE NUMBERS (provide additional contact information on a separate sheet as needed):**

OWNER Richard L Robinette II Telephone 815-474-7550

Street No. 26408 S Jacob Dr City, St., Zip Channahon IL 60410

ENGINEER Cook Engineering Group Telephone 815-577-1707

Street No. 203116 Maplewood Dr City, St., Zip Plainfield IL 60585

CONTRACTOR Kautman Excavating Telephone 815-941-0759

Street No. 1383 Bungalow Rd City, St., Zip Morris IL 60450

2. **LOCATION OF PROPOSED CONSTRUCTION:**

This site is: (X) Residential ( ) Commercial ( ) Industrial

PIN (Property Identification No.) 04-10-08-153-021-0000 Size of Parcel in Acres: 2.72

Name of Subdivision: Heritage Lake Estates Lot No. _____

3. **PROPOSED CONSTRUCTION (Complete A thru F)**

A. Are you moving in, (out,) or combined, over 100 cubic yards of soil? (write *yes* or *no*) Yes

B. Are you disturbing over 5,000 square feet of land area? (write *yes* or *no*) yes

C. Are you altering an established waterway or drainage course? (write *yes* or *no*) NO

D. Are you disturbing over 1 acre (43,560 square feet) of land area? (write *yes* or *no*) NO

If yes to D, see item 5.

E. Describe the proposed work including any addition/removal/changes of/to buildings:

Removing spoil pile from property in preparation for construction of single family home

F. Dates of Construction: Start Date 10/15/19 ; End Date 10/15/20

4. **ATTACH THREE COPIES OF THE ENGINEERING PLAN (if applicable); OR PLAT OF SURVEY WITH EXISTING BUILDINGS AND PROPOSED DEVELOPMENT SHOWN.**

NOTE: Engineering plans must be signed and sealed by a licensed professional engineer. Plats of Survey must be signed and sealed by a professional licensed surveyor.

5. **IF DISTURBANCE OF LAND IS GREATER THAN 1 ACRE:**

A. Provide a copy of IEPA NOI (Notice of Intent) application with Stormwater Pollution Prevention Plan and Historic Preservation and Endangered Species compliance letters.

B. Provide a copy of IEPA executed NPDES permit.

NOTE: When an NPDES permit is required, no construction is allowed prior to receipt of the permit.

D4

6. PLEASE READ THE FOLLOWING AND SIGN BELOW:

A. I/We agree that all work performed under said permit will be in accordance with the site engineering plan(s) and/or other exhibits, as required, which accompany this application.

B. I/We agree that all work will conform with all applicable Village ordinances; most notably Ordinance 157 Soil Erosion Regulations.

C. I/We understand that the flood hazard boundary maps and other flood data used by the Village in evaluating flood hazards to proposed developments are considered reasonable and accurate for regulatory purposes and are based on the best available scientific and engineering data. On rare occasions greater floods can and will occur and flood heights may be increased by man-made or natural causes. Issuance of a site development permit does not imply that developments outside the identified areas of special flood hazard will be free from flooding or flood damage. Issuance of a site development permit shall not create liability on the part of the Village of Channahon in the event flooding or flood damage does occur.

D. I/We understand that the Army Corps of Engineers has jurisdiction over wetlands and it is the responsibility of the owner/developer to secure from the Army Corps of Engineers the necessary permits for work affecting any wetland.

E. I/We agree that any existing field tile on the property shall be protected from damage and that existing drainage through the property shall be maintained. If an existing field tile is encountered, the Village of Channahon will be notified immediately for concurrence regarding how it shall be repaired and/or rerouted to its original route and function.

F. I/We agree to be responsible for verifying that all contractors and/or subcontractors are registered with the Village of Channahon.

G. I/We agree to call J.U.L.I.E. 48 hours before work begins at 1-800-892-0123.

H. I/We agree to start work within six months of Start Date, and complete work within the time span specified on the permit.

I. I/We agree to notify the Village of Channahon upon completion of proposed work.

J. I/We agree to provide an Improvement Completion Guarantee as may be required.

K. If I am representing the homeowner, I agree to provide the homeowner copies of all paperwork submitted to, or received from, the Village of Channahon and at the time of submittal/receipt.

PRINT NAME: Richard L Robinette II

SIGNATURE: Richard L Robinette II **DATE** 10/7/19

Village of Channahon:

Engineering/Design Approved (date) NA

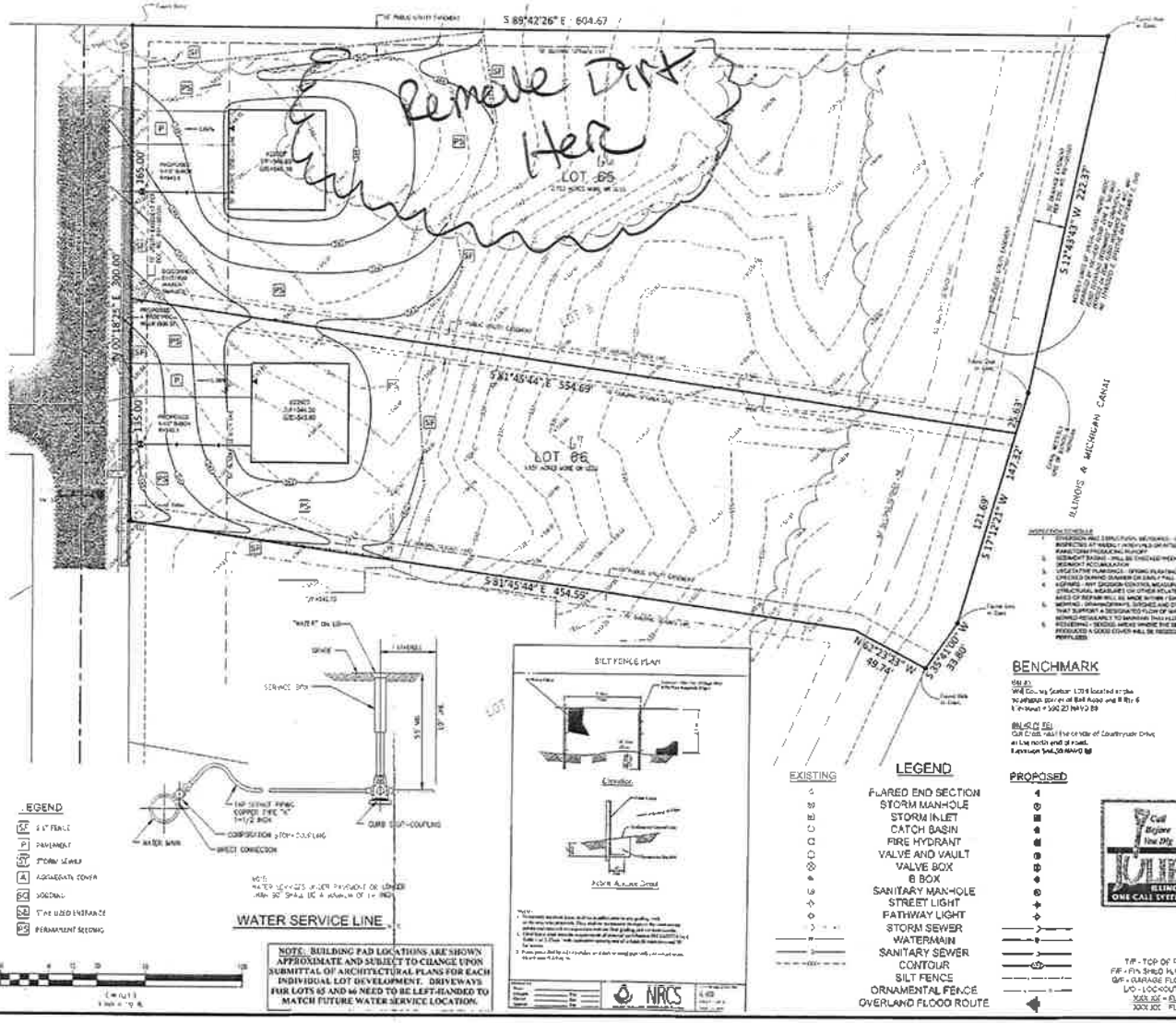
Improvement Completion Guarantee Received (date) NA

APPROVED BY: [signature] DATE 10-10-19

Permit is for removal only; soil is not to be respread outside of spoils pile area.
Permittee is responsible for keeping public roads clean of debris for this work.

SITE ENGINEERING PLAN

HERITAGE LAKE ESTATES RE-SUBDIVISION OF LOT 8



LOCATION MAP

BENCHMARK

LEGEND

EXISTING		PROPOSED
	FLARED END SECTION	
	STORM MANHOLE	
	STORM INLET	
	CATCH BASIN	
	FIRE HYDRANT	
	VALVE AND VAULT	
	VALVE BOX	
	B BOX	
	SANITARY MANHOLE	
	STREET LIGHT	
	FATHWAY LIGHT	
	STORM SEWER	
	WATERMAIN	
	SANITARY SEWER	
	CONTOUR	
	SILT FENCE	
	ORNAMENTAL FENCE	
	OVERLAND FLOOD ROUTE	

TF - TOP OF FOUNDATION
FF - FIN SHED FLOOR ELEVATION
GF - GARAGE FLOOR ELEVATION
LO - LOOKOUT ELEVATION
XXX.XX = FUTURE TF
XXX.XX = FUTURE BF

CERTIFICATION

I, MICHAEL D. COOK, A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF ILLINOIS, CERTIFIES THIS PLAN HAS BEEN PREPARED BY COOK ENGINEERING GROUP UNDER MY PERSONAL DIRECTION

ILLINOIS P.E. CERTIFICATE NO. 062-062101
EXPIRES NOVEMBER 30, 2017

COOK ENGINEERING GROUP
Cox, Fitzgerald & Lahid Development & Consulting
2818 Madison Ave
Plainfield, IL 60586
(815) 577-2565 F
www.cookengineeringgroup.com

REVISION DESCRIPTION	DATE

SITE ENGINEERING PLAN
LOTS 65 & 66 (OLD LOT 8)

HERITAGE LAKE ESTATES
3613-3625 S. MORGAN ST.
CHANNAHON, IL

PREPARED FOR
CR 2 INDUSTRIAL SURVEYING
80 MCDONALD AVE., UNIT D
JOLIET, IL 60437
815-725-9040
815-725-9049
MR. ERIC COX

DESIGN JOB NUMBER	2016-114
SCALE:	1" = 30'
DRAWN BY:	EKH
CHECKED BY:	MDC
DATE:	07/29/2016
SHEET	1 « 1

D4

D4

VILLAGE OF CHANNAHON

24555 S NAVAJO DRIVE CHANNAHON, IL 60410 | PHONE: 815-467-6644 FAX: 815-467-9774

PERMIT NO: ☐ **SCANNED** **MISCELLANEOUS BUILDING PERMIT APPLICATION**

PROJECT ADDRESS: 26656 (NO.) S Jacob (STREET) Dr. SUBDIVISION: _____

Mike Towne	26656 S Jacob Dr.	Channahon	IL, 60410	815-260-5350
OWNER	ADDRESS	CITY	STATE/ZIP	PHONE
David Prange	412 Rockwell Ct.	Burr Ridge	IL 60527	630-241-8869
APPLICANT	ADDRESS	CITY	STATE/ZIP	PHONE
Perma-Seal	412 Rockwell Ct.	Burr Ridge	IL 60527	630-241-8869
CONTRACTOR	ADDRESS	CITY	STATE/ZIP	PHONE

CIRCLE ONE: (RESIDENTIAL) COMMERCIAL AGRICULTURAL INDUSTRIAL **COUNTY:** WILL / (GRUNDY)

BRIEF DESCRIPTION OF PROJECT: ½ HP Sump Pump, 77 FT 4" Solid PVC UGE to Village Storm Sewer

TYPE OF IMPROVEMENT/PROPOSED USE:

☐ ACCESSORY STRUCTURE	☐ GARAGE, ATTACHED	☐ PERGOLA	☐ SIGN, MONUMENT
☐ ADDITION	☐ GARAGE, DETACH	☐ POOL (IS YARD FENCED YES / NO)	☐ SIGN, BALLOON
☐ DECK	☐ GAZEBO		☐ SIGN, TEMPORARY DATES_____
☐ DEMOLITION	☐ GUTTERS	☐ PORCH	☐ WINDOWS
☐ DRIVEWAY	☐ HOT TUB	☐ ROOF	☒ OTHER Sump Pump, Storm Sewer Connection
☐ ELECTRICAL, LOW VOLTAGE	☐ INTERIOR, REMODEL	☐ SHED	
☐ FENCE	☐ LAWN SPRINKLER	☐ SIDEWALK	

* ***IF YOU ARE ON A SEPTIC SYSTEM, YOU ARE REQUIRED TO PROVIDE AN APPROVED COPY OF YOUR SEPTIC LAYOUT. WILL COUNTY HEALTH DEPARTMENT 815-727-8490. GRUNDY COUNTY HEALTH DEPARTMENT 815-941-3404.***

****TO EXPEDITE APPROVAL, PLEASE PROVIDE A COPY OF YOUR PLOT OF SURVEY.***

EXISTING (FOR ADDITIONS, REMODEL ETC.)

FLOOR AREA: _____ SQUARE FEET

GARAGE: _____

OTHER: _____

ADDITIONAL PROPOSED

FLOOR AREA: _____ SQUARE FEET

NO. BEDROOMS: _____ NO. BATHROOMS: _____

TOTAL NUMBER OF FLOORS: _____

OTHER: _____

COST OF IMPROVEMENT

COST	$_____
ELECTRICAL	$ 3034.75
PLUMBING	$_____
HVAC	$_____
OTHER	$_____
TOTAL COST OF IMPROVEMENTS	$ 3034.75

DATE APPROVED: 3-31-20

APPROVED BY: _____

I hereby certify that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and we agree to conform to all applicable laws of this jurisdiction.

SIGNATURE: _____ **DATE:** 3/24/2020

D4

PRECONSTRUCTION CONFERENCE AGENDA – PRIVATE DEVELOPMENT*

*does not include construction of improvements managed by Village Building Department

DATE: June 13, 2019

DEVELOPMENT: _Blackberry Court Apartments_

DEVELOPER CONTACT: _____

DEVELOPER ENGINEER CONTACT: _____

CONTRACTOR 24 HR CONTACT: _____

ONSITE PROJECT MANAGER CONTACT: _____

VILLAGE OF CHANNAHON ENGINEER CONTACT: Donald Kinzler, Of: 815-467-6644; Cell 815-791-0034

VILLAGE OF CHANNAHON INSPECTOR CONTACT: _Steve VanDeveer, Thomas Engineering, 217-273-5396, (Chuck Young 815-370-5444)_

VILLAGE MATERIAL TESTING CONSULTANT: N/A_____

START DATE: _____ COMPLETION DATE: _____

I. Introductions:
   A. Village of Channahon Representative; Developer; Developer Engineer; General Contractor; Onsite Foreman; Subcontractors.

II. Engineering and Permitting:
   A. Final engineering plans and specifications approved by the Village of Channahon dated REV: 05-22-19 will be used for construction compliance inspections, asbuilt engineering review, etc.
   B. General Contractor and all Subcontractors must be registered with the Village of Channahon before they can begin work.
   C. IEPA Permits have been received for watermain and sanitary sewer.
   D. Necessary Shop Drawings. Provide utility structure cut-sheets to Inspector with Engineer copied.
   E. Oversize/Overweight permits are required for all loads in excess of 80,000 lbs. Contact the Village of Channahon to obtain permits.

III. Communication Procedures:
   A. Final Engineering Plans and Specifications take precedence over discussions in meetings and any other communication except as requested in writing by Developer and approved in writing by the Engineer.
   B. Written correspondence to Village should be directed to the Engineer with copies to the Inspector and applicable Subcontractors and Village Consultants. The Engineer and Inspector should also be copied on all correspondence between Developer, General Contractor and Subcontractors which may be relevant to the Village of Channahon.
   C. Proposed field changes, plan changes, substitution requests, etc. shall be brought to attention of the Inspector with a written follow-up. Written approval from the Inspector or Engineer shall be obtained prior to construction of said changes.
   D. The Engineer considers email an acceptable form of written communication, but time of notification occurs the next time the Engineer is present in his Village office, not when the email was sent. An initial phone call is recommended.
   E. Both the Engineer and Inspector shall be notified by 4 p.m., 48 business day hours prior to initial start of site work and after extended periods when work has been idle.
   F. Scheduling Village Testing, Inspections, Observations, etc.:
      a. General Contractor, Onsite Foreman or Subcontractor shall provide requests for observation, inspection and testing work to the Inspector by 4 p.m., 48 business day hours in advance of need.

b. General Contractor, Onsite Foreman or Subcontractor shall provide testing requests to Village Testing Consultant by 4 p.m., 48 business day hours in advance of need.

c. General Contractor, Onsite Foreman or Subcontractor shall notify separately by phone and email the Inspector and Village Consultants of work cancellations for scheduled inspection, observation, or testing. Such notification must be made by 4 p.m. and a full 24 business day hours in advance of scheduled services. The Developer shall be responsible for all fees incurred by the Village or Village Consultants as a result of late or non-notification of cancellation of scheduled services.

d. The Village and Village Consultants are not responsible for costs associated with unauthorized scheduling requests by the General Contractor, Onsite Foreman or Subcontractor.

e. The General Contractor should keep records of all communication/correspondence with Village and Village Consultants regarding scheduling and cancellation notifications.

G. Record keeping of all plan changes, field changes, draintile locations and connections, etc. shall be responsibility of the General Contractor.

IV. Use of Site:

A. Working hours are Monday through Friday, 7 a.m. to 7 p.m. including equipment startup. No work shall be performed on Saturdays, Sundays, or Village observed Holidays without written approval by the Engineer.

B. Property Limits, Easements, ROW.

C. Material and Equipment Storage Areas shall be located within construction site boundaries. Materials may only be stored in ROW with prior Engineer approval and only for the day to be used, materials must be removed by end of work day.

D. Portable toilets required unless workers have access to apartment building facilities.

E. General Contractor is responsible for keeping offsite private and public properties clean of dirt and debris. Cleanup work shall take place daily and as requested by Inspector or other Village Staff.

F. Developer is responsible for repairing or replacing Village, other public, or private utilities and landscaping damaged during construction. Methods of repair/replace shall be approved by the Engineer or Inspector prior to such work taking place.

a. It is the Developers responsibility to seek compensation from others who may be responsible for said damage.

V. Construction Practices:

A. General Contractor is responsible for JULIE notification and utility conflicts/relocations/resolutions. Engineer must be notified immediately when utility conflicts are discovered.

B. Erosion & Sediment Control Inspection and Maintenance per approved engineering plans

a. Work sites; ditches; around utilities; around stockpiles; etc.

C. Sequence of Construction:

b. Erosion & Sediment Controls installed first, maintained frequently.

c. Disruption to existing roads/traffic shall be kept to a minimum:

i. Once started, such work shall not be idle > 48 hours except in cases of adverse weather as determined by the Engineer.

D. Grading and Restoration

a. Maintenance of Seeded Areas in ROW: Class 1A seed; overseed, fertilize, water…MAKE IT GROW!

E. Roadway – NO OPEN CUTTING OF ROADWAY IS ALLOWED

F. Utilities:

a. Materials must be protected from contamination while stored onsite.

b. No open manholes; open excavations must be protected and be of minimum duration.

c. All aggregate bedding and backfill shall be CA-7 at 95% compaction.

d. Aggregate bedding - 6” bedding on all utilities; <u>haunching required.</u>

e. Aggregate cover - 6” cover on DIP; 12” cover on PVC.

f. Trench Backfill (CA-7) to top of subgrade; 2 ft past pavements.
g. Only hydraulic mortar or non-shrink grout/mortar shall be used.
h. Max. two adjusting rings totaling 6".
i. All castings are EJIW.
j. Water
    i. Only VOC can operate water valves.
    ii. All DIP shall be bagged to outside of structures, including FH main and other service piping, taped or tied at joints/ends; service piping shall be bagged up to water service valves (extent of VOC ownership).
    iii. Where watermain or service lines cannot meet separation requirements – pressure class pipe, encasement or rubber booted storm sewer required.
    iv. Curb stop and corp stop shall be compression fittings.
    v. FH paint shall be Channahon approved yellow from the factory;
        1. Prime Coat (Factory Hydrant): Sherwin Williams PRO-CRYL Primer – White.
        2. Paint Coat (Factory Hydrant): Sherwin Williams KEM AQUA 400 with UV Absorbers; FEDERAL STD. COLOR 595B NO. 13591.
        3. Protective Coat: SHER-CLEAR 1K Waterborne Acrylic Clear Coat, Semi-Gloss.
        4. Red hydrants painted over WILL NOT be accepted. If found, Village will require replacement with factory painted hydrants.
    vi. Services must be measured and shown accurately on Record Drawings.
k. Sanitary
    i. One-piece, double banded external chimney seals on all manholes.
    ii. Services must be measured and shown accurately on Record Drawings.

G. Inspections/Observation
a. All Village required inspection/observation shall be paid for by Developer.
b. Inspector shall be notified immediately of all deliveries of water, sanitary, storm and streetlight materials.
c. Village Inspector shall be on site for:
    i. Water
        1. All pressure or other connections to existing water supply.
        2. 100% of pipe and structure placement.
        3. Village required testing.
    ii. Sanitary
        1. All connections to existing structures.
        2. 100% of pipe and structure placement.
        3. Village required testing.
    iii. Utility Crossings
        1. All utility crossings prior to backfill.
d. Village plumbing inspector must be on site at all times during water service tap and installation. Contact Steve Kuczkowski, Village of Channahon to schedule this work.

H. Testing
a. All Village required testing shall be paid for by Developer.
b. Village Inspector shall be on site for all:
    i. Watermain
        1. Pressure testing.

2. Disinfection with Chloride Gas – two consecutive day samples from each sampling point; water services will be individually inspected. Village recommends using Neecorp for chlorination.

I. Traffic Control Practices:
   a. TRAFFIC CONTROL AND PROTECTION – At the preconstruction meeting, the General Contractor shall furnish the name and telephone number of the individual and their company who is to be responsible, 24 hours-a-day, for the installation and maintenance of traffic control for the project.
   b. Two way traffic at all times.
   c. Road closure will be discouraged. Only Engineer can approve road closures. When approved:
      i. Contractor shall provide 48 hour notice of road closure by use of roadway signage.
      ii. Contractor shall provide 48 hour by direct contact notice of road closure to Police and Fire Departments by calling 815-467-2112, and to local School Districts and Post Office.

J. Water Usage:
   a. THE USE OF FIRE HYDRANTS for any reason IS STRICTLY PROHIBITED.
   b. Bulk Water Permits available from Village; metered; paid for by Developer.
      i. Onsite FH meters are available by calling VOC Public Works.
      ii. Protected hook up locations at Jessup Street and Tallgrass Trail.
         1. The General Contractor shall provide the water truck and driver required to obtain and transport this water. The Village reserves the right to restrict or refuse the use of Village water.
         2. General Contractor shall notify the Village prior to each day's use at each hook-up location and again when usage is complete for the day.

D5

From:	Don Kinzler
To:	"drenthe1991@mac.com"
Cc:	Gabriel Zavala
Subject:	Channahon Sump Discharge Connections
Date:	Wednesday, July 17, 2019 9:34:00 AM
Attachments:	GIS Exhibit, 26021 Lauren.pdf Hlds U-3 Grading, 26021 Lauren.pdf

Hi Dwayne,

Here is the information you requested based on our conversation yesterday.

Regarding grading, though there may be low spots that hold water, Will County GIS contours (see attached) appear to show existing drainage patterns generally following approved runoff patterns (see attached). The dashed lines indicate public utility & drainage easement along property lines. Property owners are not allowed to place fill in drainage easements. The park was also designed for much of its runoff to flow north, though they have a low berm which may prevent some of that water from making it to their north property line.

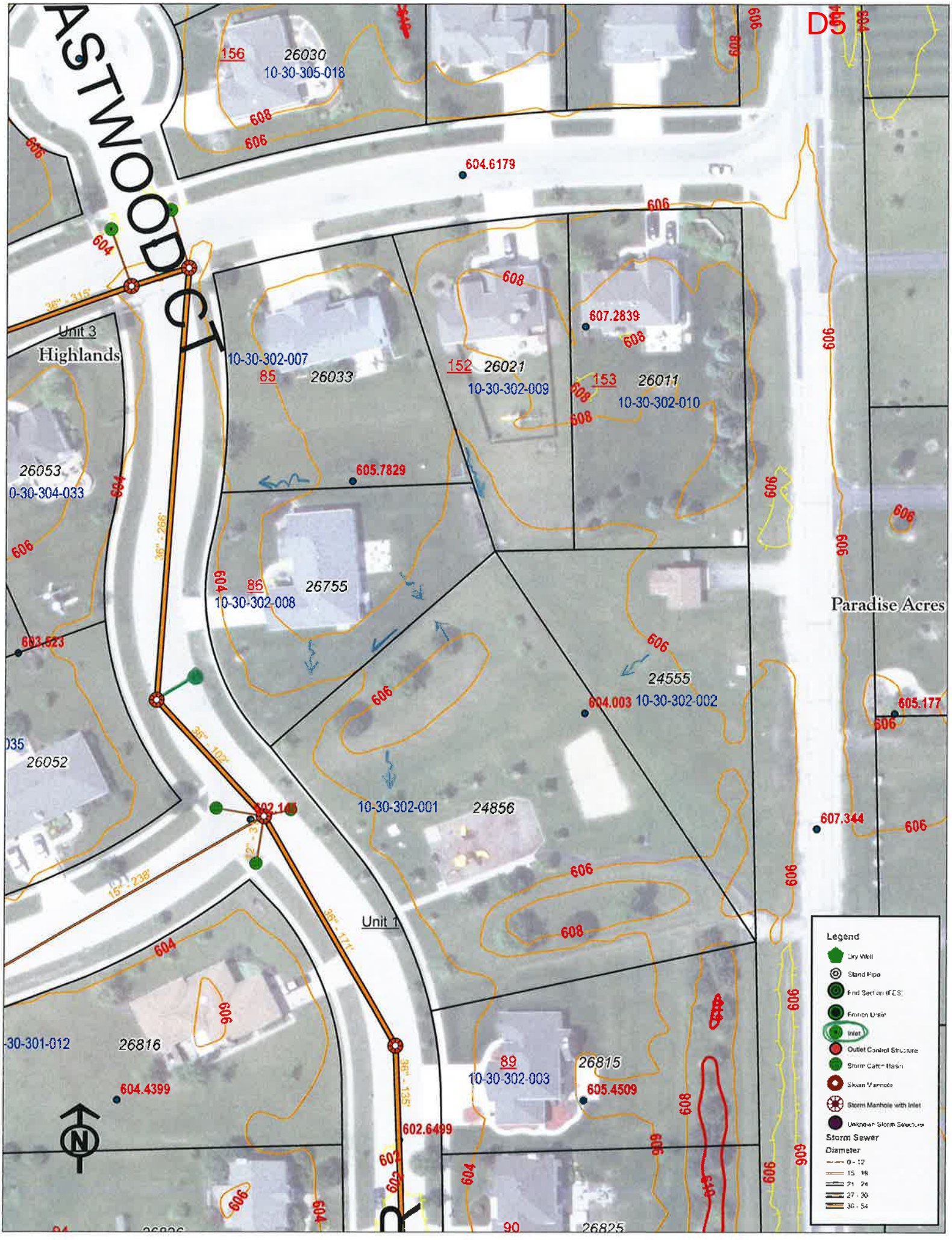
Current Ordinance 154.61(B)(b) requires that engineering plans provide storm sewer inlets at alternating lot corners with sump discharge connection stubs for adjoining lots. However, this ordinance was not in place at the time your subdivision's engineering was approved.

Ch154, Appendix F(B)(7)(b) requires that sump pump discharge connections be made for newly built homes when connection stubs are available. Again, because the homes in your area are already built and did not have connection stubs, this does not apply.

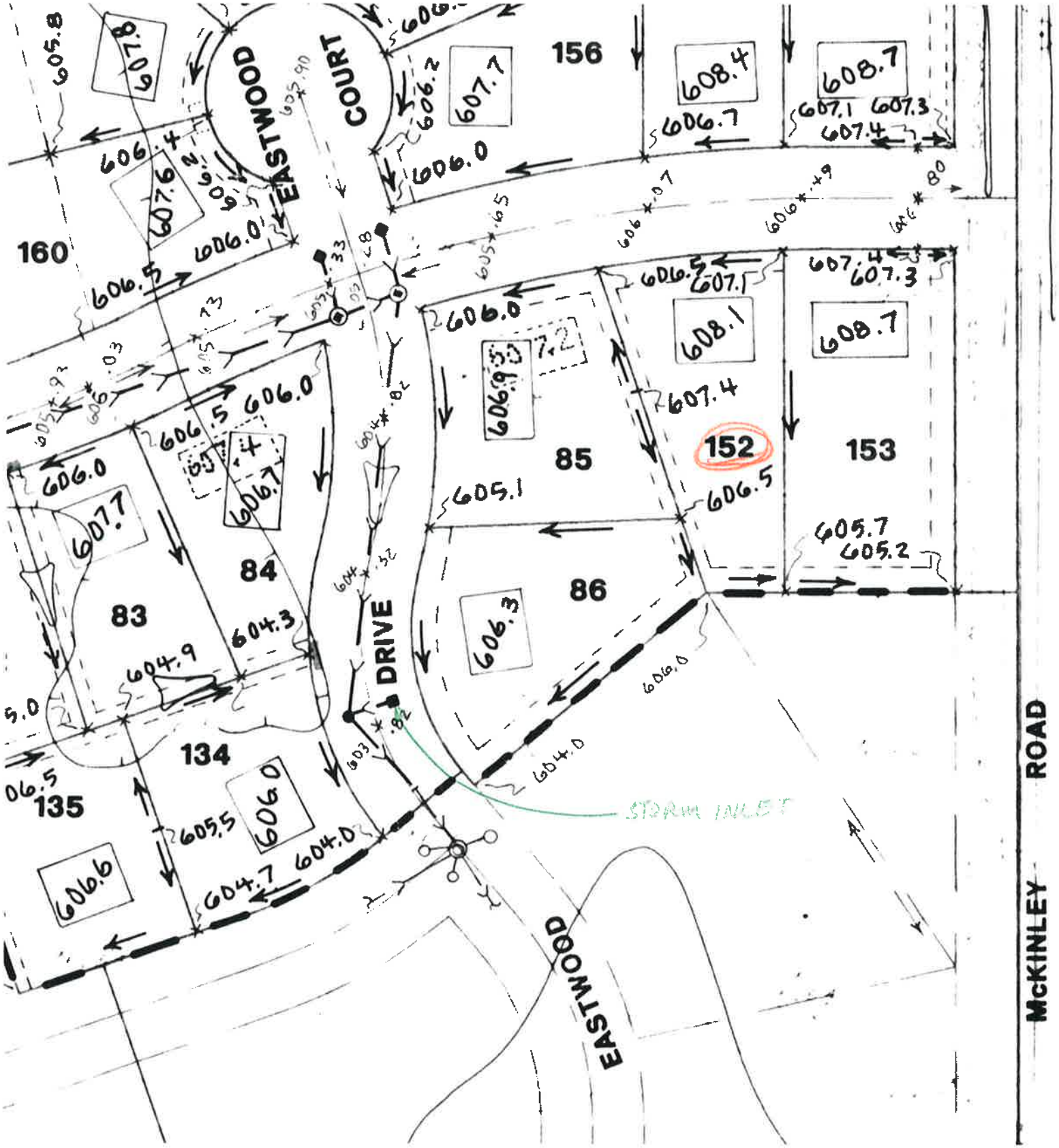
For existing homes the Village allows connection of the home's sump discharge to Village storm sewer system when available. The process for this is:

- Homeowner requests to connect sump discharge to Village storm sewer. These requests are typically routed through me.
- The Village determines if there is a storm sewer structure available. This must be a manhole, catch basin or inlet; connections to underground storm sewer pipe are prohibited.
- Where a structure is available, the Village requires the homeowner to run the discharge piping to within a few feet of the structure, excavate around the structure, leave material near the excavation for use in making the final connection to the structure, and schedule with Village public works personnel to breach the structure and connect the discharge pipe.
- Public works employees connect the sump discharge pipe to the structure and backfill the excavation.
- The homeowner is responsible for finished landscape restoration.
- Although Village approval is required for private sump connection to Village storm sewer, there are no permit or other Village fees to the homeowner.

The resident at 26755 Eastwood was informed that sump discharge connections to the Village storm system are allowed and that there is a storm structure available in the curb south of the driveway. It should be noted that such connections require the homeowner to run the discharge pipe under a sidewalk which may result in additional expense.


D5
ASTWOOD CT
156
26030
10-30-305-018
604.6179
607.2839
152
26021
10-30-302-009
153
26011
10-30-302-010
10-30-302-007
85
26033
605.7829
26053
0-30-304-033
86
26755
10-30-302-008
Unit 3
Highlands
Paradise Acres
24555
604.003
10-30-302-002
605.177
607.344
10-30-302-001
24856
Unit 1
26816
604.4399
89
10-30-302-003
26815
605.4509
602.6499
90
26825
Legend
Dry Well
Stand Pipe
End Section (FES)
Energy Dissip
Inlet
Outlet Control Structure
Storm Catch Basin
Storm Manhole
Storm Manhole with Inlet
Unknown Storm Structure
Storm Sewer
Diameter
0 - 12
15 - 18
21 - 24
27 - 30
36 - 54

D5


EASTWOOD COURT
156
160
85
152
153
84
83
86
134
135
DRIVE
STORM INLET
EASTWOOD
McKINLEY ROAD

D5

From: Don Kinzler
To: Missey Schumacher
Cc: Ed Dolezal (edolezal@channahon.org)
Subject: FW: Channahon State Park - River Erosion
Date: Friday, March 29, 2019 12:00:00 PM

Hi Mayor,

Pat Clower's voicemail to you regarding erosion concerns at the state park was passed on to me to inspect and follow up. Ed and I inspected the shoreline near the dam and on the south side of Bridge St. There is some erosion occurring along the shore opposite the dam. I passed this information on to Dan Bell, the IDNR Site Superintendent who says they are aware of the problem. See this correspondence is below.

I also called Pat Clower today to let her know what we were doing. Pat was very appreciative that you followed up on her call.

Regards,

Don

From: Bell, Dan [mailto:Dan.Bell@Illinois.gov]
Sent: Friday, March 29, 2019 7:44 AM
To: Don Kinzler <dkinzler@channahon.org>
Subject: Re: [External] Channahon State Park - River Erosion

Hi Don,
I'll get you an answer soon. The question has been forwarded to our Engineering Dept. They are aware of the problem. Thanks.

Daniel L. Bell, Site Supt.
Illinois & Michigan Canal State Trail
401 Ottawa Street
Morris, Il 60450
dan.bell@illinois.gov
Work (815) 942-9501
Fax (815) 942-9690

From: Don Kinzler <dkinzler@channahon.org>
Sent: Thursday, March 28, 2019 11:36:23 AM
To: Bell, Dan
Subject: [External] Channahon State Park - River Erosion

Hi Dan,

A resident contacted Mayor Missy Moorman-Schumacher with concerns about erosion along the DuPage River at Channahon State Park. Ed Dolezal and I made a site visit and there is visible erosion

along the east bank across from the dam and extending south.

Does the IDNR have a regular plan for checking and repairing erosion at the Channahon State Park?

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

D5

Melanie Arnold

From: gordology1
Sent: Thursday, August 8, 2019 11:34 AM
To: dkinzler@channahon.org
Subject: 26041 Aaron Ct.
Attachments: 20190805_083910.jpg; 20190808_110016_001.jpg

Hi Don,

I replaced the flared end section at above address and put rock around as shown in the photo for erosion control. I will keep an eye on it for settling.

Thanks,
Gordon

Sent from my Verizon, Samsung Galaxy smartphone

SQ

D5

E3, F2

Public Works Department Work Order

Work Order No.	**7553**
Date	11/15/2019
Requested by	Bette, J
Assigned to	Drummond, D
Assigned to	
To Be Completed By	
Division	Sewer
JULIE #	
Request	Dave Anderson called the sewer is backing up on Winchester Dr behind M&K Truck Centers, they would like us to stop by and take a look to see if it is on our end. Dave Anderson 815-482-2758.
Work Performed	Checked manholes and sewer is not blocked on our end.
Date complete	11/15/2019
Completed by	Ashley, D
Completed by	

E3, F2

Public Works Department Work Order

Work Order No.	**7548**
Date	11/6/2019
Requested by	Kinzler, D
Assigned to	Helms, J
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Please make sump discharge connection at 26152 Tallgrass.
Work Performed	Completed
Date complete	11/13/2019
Completed by	Helms, J
Completed by	Malsky, J

E3, F2

Public Works Department Work Order

Work Order No.	7542
Date	10/28/2019
Requested by	Reiter, S
Assigned to	Barrett, J
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	repair the storm drain in front of 26235 W Look Out Point Ct. There is a large hole near the mailbox. You may need to remove the grass near the area to see the hole. Notify the resident when repairs are complete Nick Rayola 779-279-3106
Work Performed	Mortar in storm inlet was all but deteriorated. Removed remaining mortar and then applied new mortar in inlet and riser ring. Black dirt and seed behind inlet. Done.
Date complete	11/6/2019
Completed by	Browning, G
Completed by	Stobaugh,E

E3, F2

Public Works Department Work Order

Work Order No.	7528
Date	10/14/2019
Requested by	Bette, J
Assigned to	Kenney, J
Assigned to	
To Be Completed By	
Division	Water
JULIE #	
Request	Chuck 815-630-1887 24032 Countryside Dr Heritage Lakes. Resident thinks that he may have a water leak outside. He had his septic checked by Zeiter and his septic is fine but, they did see some water movement on the camera.
Work Performed	Checked bbox with resident, no leak.
Date complete	10/16/2019
Completed by	Kenney, J
Completed by	

E3, F2

Public Works Department Work Order

Work Order No.	**7524**
Date	10/10/2019
Requested by	Kinzler, D
Assigned to	
Assigned to	
To Be Completed By	
Division	Sewer
JULIE #	
Request	Replace flat storm grate with EJIW Type 02 Beehive Grate at SE property corner of 26436 Melissa.
Work Performed	Grate on Order. Grate Installed 10/25/19.
Date complete	10/25/2019
Completed by	Browning, G
Completed by	Stobaugh,E

E3, F2

Public Works Department Work Order

Work Order No.	**7510**
Date	9/30/2019
Requested by	Bette, J
Assigned to	Choate, S
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Sue 815-474-2427 26509 W Old Stage Ln, could someone check the drain in her backyard. Yard floods. She said that she thought there was a screen that was supposed to be removed after the building in the area was done. Yard is fenced in but, gate is not locked.
Work Performed	Removed silt basket from storm drain.
Date complete	10/1/2019
Completed by	Browning, G
Completed by	

E3, F2

Public Works Department Work Order

Work Order No.	**7454**
Date	8/7/2019
Requested by	Kinzler, D
Assigned to	Barrett, J
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Drywell on northwest corner of Roberts and Hawthorne is full of sediment and needs to be cleaned out.
Work Performed	Removed sediment.
Date complete	8/13/2019
Completed by	Browning, G
Completed by	

E3, F2

Public Works Department Work Order

Work Order No.	**7421**
Date	7/3/2019
Requested by	Kinzler, D
Assigned to	Barrett, J
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	clean drywell from debri on west side of 24749 Meadowlark . There is some erosion and seed is needed to be placed.
Work Performed	Drywell cleaned and some seed added also stoned in shoulder of road
Date complete	7/29/2019
Completed by	Malsky, J
Completed by	Helms, J

E3, F2

Public Works Department Work Order

Work Order No.	**7386**
Date	6/3/2019
Requested by	Reiter, S
Assigned to	Reiter, S
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Please inspect the ditch in front of 25620 S Parkside Dr. The ditch in front of her house has been filling up with water. Caitlin 815-735-6738
Work Performed	Spoke to resident and explained the flow line looked good and with all the rain it needs time to dry up that it's the lowest spot in their front yard.
Date complete	6/10/2019
Completed by	Kratochvil, C
Completed by	

E3, F2

Public Works Department Work Order

Work Order No.	7374
Date	5/22/2019
Requested by	Kinzler, D
Assigned to	
Assigned to	
To Be Completed By	
Division	Sewer
JULIE #	
Request	Check Deer Ridge detention pond outfall system for obstructions - the FES where water leaves the pond and the restrictor structure in the rear yard of 26605 Dorothy Ct. Call Don when completed so he can followup with the resident at 26200 Indian Creek Trail.
Work Performed	Removed blockage from restrictor.
Date complete	5/23/2019
Completed by	Browning, G
Completed by	Choate, S

E3, F2

Public Works Department Work Order

Work Order No.	7365
Date	5/10/2019
Requested by	Kinzler, D
Assigned to	
Assigned to	
To Be Completed By	
Division	Sewer
JULIE #	
Request	Remove 2.5" adjusting ring and replace 9" frame with 6" frame on rear yard storm sewer CB at 27348 Red Wing. Althought there is generally no hurry, the area is currently disturbed so no Village restoration should be required if the work is done sooner rather than later.
Work Performed	Marked for locate 6/12/10. Locate northwest corner of rear of property. Paint and flags. Removed existing catch basin frame w/2' ring. Installed 6" catch basin frame.
Date complete	6/17/2019
Completed by	Browning, G
Completed by	

E3, F2

Public Works Department Work Order

Work Order No.	**7400**
Date	6/13/2019
Requested by	Kinzler, D
Assigned to	
Assigned to	
To Be Completed By	
Division	Sewer
JULIE #	
Request	Resident Nancy Junckie, 815-467-7444, 26031 Aaron Ct, says the FES (might be the restrictor) behind her house is rusty and falling apart.
Work Performed	Walking on Corner Storm Sewer has been Bored through Replaced FES — added 3" Rock for Removed old FES erosion prevention
Date complete	6/13/2019
Completed by	Gordon
Completed by	

E3, F2

Public Works Department Work Order

Work Order No.	7638
Date	2/27/2020
Requested by	Bette, J
Assigned to	Choate, S
Assigned to	
To Be Completed By	
Division	Streets
JULIE #	
Request	Please inspect storm drain at 26624 S Jacob Dr. Per resident soil is washing away by the electrical boxes in the back of his property and he is concerned that there is possibly a sink hole or a break in the storm drain. Troy 815-467-0999
Work Performed	(2) LINES from the Storm Basin Runs South and East. SETTLING ISSUE IS North of Basin. INSPECTION of Basin Confirms No INFILTRATION No Signs of CRACKS, DETERIORATION OR SILT. Home owner stated that 3-4 Sump LINES ARE Buried North of Storm Basin that ARE NOT Connected to Basin.
Date complete	2/27/2020
Completed by	Gordon
Completed by	

E3, F2

Invoice

Brieser CONSTRUCTION

24101 S Municipal Drive
Channahon, IL 60410
Phone: (815) 521-0900
Fax: (815) 521-0999

Invoice No.:	24175
Invoice Date:	12/31/2019
Billed From:	1/1/2017
To:	12/31/2019
Contract Amt:	0.00
Change Order Amt:	
Billed to Date:	0.00

(Not including current invoice)

Bill To: Village of Channahon
24555 S Navajo Dr.
Channahon, IL 60410

PO# 19-0788

RE: Vac/Jetter Truck Service
Channahon

Job No	Customer Job No	Customer PO	Terms	Due Date
66104		19-0788	Net 30 Days	1/30/2020

Description	Quantity / Hrs	Rate / Per Unit	Amount
Subcontractor			
BCC VAC J1812			2,749.75
Total Subcontractor		**$**	**2,749.75**

01-53-541-1,374.87 SR
30-71-541-1374.88

RECEIVED
JAN - 9 2020
BY:

Subtotal:	2,749.75
Sales Tax:	0.00
Total Amount Due:	**2,749.75**

E3, F2

B.C.C.Services

24101 S. Municipal Dr. Channahon IL 60410

Phone: 815.521.0900 Fax: 815.521.0999

Invoice: J1812
Date: 12/13/19
Truck #:

VAC TICKET

Job Number:	66104	Customer:	Village of Channahon
Phase #:	1	Phase Name:	
Cost Code:	2325.00	CC Name:	Hydro Excavation
Location:		Julie Dig Number:	
Description:	PO#19-0788 clean out lift stations Jet out storm line.		
Notes:	NO LUNCH		

*prices below valid 06/01/2019-05/31/20120

Operator:	Jim Doyle		Laborer:		
Travel ST:	0.5	$168.00	Laborer ST:		$101.44
Travel OT:	0.5	$200.50	Laborer OT:		$126.61
Travel DT:		$235.00	Laborer DT:		$151.77
Machine ST:	7.5	$263.00			
Machine OT:	2	$296.50	Per Diem:		$140.00
Machine DT:		$330.00	Stand By:		$500.00

Pickup Truck:			Trip Permit:		
Truck Hours:		$13.00	# of Permits:		$150.00

Water Fillup:			Dump Location:		
# of Fillups:		$20.00	# of Dumps:		$150.00

Drain Tile:	From Stock		Water Trailer:		
# of Rolls:		$125.00	Trailer Daily:		$75.00

Daily Total: $2,749.75

I verify that the above hours are correct.

X Scott Chant

ENTERED

BCC Services assumes no responsibility for damages to property when asked to cross curb line.

26-80-510-000 E3, F2

Elgin Sweeping Services, Inc.
1015 West Pershing
Chicago, IL 60609

Invoice

Date	Invoice #
10/31/2019	44466A

Bill To
Village of Channahon Attn: Accounts Payable 24555 South Navajo Drive Channahon, IL 60410-3334

P.O. No.	Terms	Due Date	Project
	Net 30	11/30/2019	

Ticket #	Date Serviced	Description	Rate	Hours	Amount
117700	10/29/2019	Street Sweeping Various locations - Channahon, IL	153.00	4	612.00

RECEIVED
NOV 12 2019
BY:

Any questions, please call Elizabeth 773.254.7100
LSerwinski@elginsweeping.com

Total	$612.00
Payments/Credits	$0.00
Balance Due	$612.00

E6

Venture 1 Phase 1 Punch List

Punchlist for Acceptance - Steps 1-4

July 25, 2019

#	ITEM	STEP	ID/LOCATION	DEFICIENCY AND CORRECTION
1	Storm Sewer	1	FES (73)	Erosion around FES. Add soil to bring to grade, place seed and blanket.
2	Storm Sewer	1	CB 55	Northern pipe penetration isn't fully grouted. Add non shrink grout to seal around pipe.
3	Storm Sewer	1	FES (38)	Erosion around FES. Add soil to bring to grade, place seed and blanket.
4	Storm Sewer	1	MH 15	No bench in bottom of structure. Pour concrete bench per detail on sheet 9.1.
5	Storm Sewer	1	CB 14	Ring & frame shifted to align with C&G. Grout ring and frame joints to seal up any gaps.
6	Storm Sewer	1	Restrictor MH west of Basin A	CA-7 and bricks in bottom of MH. Clean all debris out of MH.
7	Water Main	1	VV 7 (site)	Copper whips in structure. Remove copper whips.
8	Water Main	1	VV 2 (SWM)	No steps in cone section. Install steps in cone section to line up with steps in barrel section.
9	Water Main	1	VV 3 (SWM)	No steps in cone section, whips in structure. Install steps in cone section and remove whips.
10	Water Main	1	12" VV serving Building A	Steps do not line up. Align steps in structure.
11	Water Main	1	VV 11 (NWM)	Copper whip in structure. Remove copper whip.
12	Water Main	1	VV 12 (NWM)	No lid on structure. Install Village of Channahon Water lid.
13	Water Main	1	VV 13 (NWM)	Wrong lid on structure. Replace with specified Village of Channahon Water lid.
14	Water Main	1	FH 10 (site)	FH facing the wrong direction. Spin FH 180 degrees.
15	Water Main	1	FH 11 (site)	Auxilary valve box is high. Lower to grade.
16	Water Main	1	FH 12 (site)	FH facing the wrong direction. Spin 90 degrees so pumper nozzle is facing Building A.
17	Water Main	1	FH 15 (site)	Auxilary valve box is low. Raise to grade.
18	Water Main	1	FH 14 (site)	Clean concrete off of auxilary valve box lid so it can be opened.
19	Water Main	1	FH 3 (SWM)	Auxilary valve box is low. Raise to grade.
20	Water Main	1	FH 12 (SWM)	Auxilary valve box is low. Raise to grade.
21	Water Main	1	FH 19 (NWM)	Auxilary valve box is low. Raise to grade.
22	Water Main	1	FH 20 (NWM)	Auxilary valve box is low. Raise to grade.
23	Water Main	1	FH 21 (NWM)	Auxilary valve box is low. Raise to grade.
24	Water Main	1	FH 23 (NWM)	As-built elevation is 1.46-ft higher than proposed. Raise to grade. Provide updated asbuilt data following punch list completion.
25	Water Main	1	FH 24 (NWM)	As-built elevation is 1.75-ft higher than proposed. Raise to grade. Provide updated asbuilt data following punch list completion.
26	Water Main	1	FH 30a (NWM)	As-built elevation is 2.40-ft lower than proposed. Raise to grade. Provide updated asbuilt data following punch list completion.
27	Water Main	1	VV15 (NWM)	As-built elevation is 1.60-ft lowert than proposed. Raise to grade. Provide updated asbuilt data following punch list completion.
28	Water Main	1	VV14 (NWM)	As-built elevation is 3.45-ft lower than proposed. Raise to grade. Provide updated asbuilt data following punch list completion.
29	Water Main	1	FH30 (NWM)	As-built elevation is 3.75-ft lower than proposed. Raise to grade. Provide updated asbuilt data following punch list completion.
30	Water Main	1	FH1 Site Improvement (GPN)	FH1 as-built elevation is 0.71-ft lower than proposed. Raise to grade. Provide updated asbuilt data following punch list completion.
31	Grading	1	Site Improvement (GPS) Basin B	The as-built Compensatory storage volume provided within Basin B is 1.72 acre feet less than required volume. Provide required Compensatory storage volume data following punch list completion
32	Grading	1	Site Improvements (GPN) Basin A	The as-built Top of Bank elevations provided along the north side of Detention Basin A vary from 1.09-ft to 1.36-ft lower than proposed. Raise the berm to design elevation. Provide updated asbuilt data following punch list completion.
33	Grading	1	Site Improvements (GPN) Overflow Weir	The as-built Top of Bank elevations located north and south of the Overflow Weir are 0.52-ft and 0.94-ft lower than proposed, respectively. Provide updated asbuilt data following punch list completion.
34	Grading	1	Site Improvement (GPN) Detention Basin Spillway	The as-built spot elevation at the detention basin spillway is 0.42-ft higher than proposed. Raise the berm to design elevation.Provide updated asbuilt data following punch list completion
35	Grading	1	Sta 463+50 100' Top Of Bank	Sta. 463+50 100’ RT Top of Bank as-built elevation is 0.80-ft lower than proposed.Raise the berm to design elevation. Provide updated asbuilt data following punch list completion.
36	Grading	1	Sta 464+00 90' Top Of Bank	Sta. 464+00 90’ RT Top of Bank as-built elevation is 1.06-ft lower than proposed. Raise the berm to design elevation.Provide updated asbuilt data following punch list completion.
37	Grading	1	Sta 464+50 90' Pond Emergency Spillway	Sta. 464+50 90’ RT Pond Emergency Spillway as-built elevation is 0.21-ft lower than proposed.Raise the berm to design elevation. Provide updated asbuilt data following punch list completion.
38	Grading	1	Sta 465+00 90' Pond Emergency Spillway	Sta. 465+00 90’ RT Pond Emergency Spillway as-built elevation is 0.21-ft lower than proposed.Raise the berm to design elevation. Provide updated asbuilt data following punch list completion.
39	Grading	1	Sta 465+50 130' Toe of Embankment	Sta. 465+50 130’ RT Toe of Embankment as-built elevation is 0.50-ft higher than proposed.Raise the berm to design elevation. Provide updated asbuilt data following punch list completion.

E6

Venture 1 Phase 1 Punch List

Punchlist for Acceptance - Steps 1-4

July 25, 2019

#	ITEM	STEP	ID/LOCATION	DEFICIENCY AND CORRECTION
40	Grading	1	Sta 487+50 75' Top of Bank	Sta. 487+50 75’ RT Top of Bank as-built elevation is 0.62-ft lower than proposed.Raise the berm to design elevation. Provide updated asbuilt data following punch list completion.
41	Grading	1	Sta 487+50 100 Toe of Embankment	Sta. 487+50 100’ RT Toe of Embankment as-built elevation is 0.66-ft higher than proposed.Raise the berm to design elevation. Provide updated asbuilt data following punch list completion.
42	Grading	1	Sta 488+00 100' Toe of Embankment	Sta. 488+00 100’ RT Toe of Embankment as-built elevation is 0.65-ft higher than proposed.Raise the berm to design elevation. Provide updated asbuilt data following punch list completion
43	Grading	1	Sta 488+50 75' Top of bank	Sta. 488+50 75’ RT Top of Bank as-built elevation is 0.41-ft lower than proposed.Raise the berm to design elevation. Provide updated asbuilt data following punch list completion.
44	Grading	1	Sta 488+50 100' Toe of Embankment	Sta. 488+50 100’ RT Toe of Embankment as-built elevation is 0.66-ft higher than proposed.Raise the berm to design elevation. Provide updated asbuilt data following punch list completion.
45	Storm Sewer	1	FES 7 to MH3 Roadway Improvements East	The as-built pipe slope from FES7 to MH3 is 2.45%.The design pipe slope is 0.29%. Raise the berm to design elevation.Provide updated asbuilt data following punch list completion.
46	Storm Sewer	1	Site Improvement (OUP) Detention Basin B	Detention Basin B Restrictor Catch Basin as-built rim elevation is 0.46-ft lower than proposed.Raise the berm to design elevation.Provide updated asbuilt data following punch list completion.
47	Storm Sewer	1	Site Improvement (OUP) Detention Basin A	Detention Basin A Restrictor Catch Basin as-built rim elevation is 0.80-ft lower than proposed.Raise the berm to design elevation. Provide updated asbuilt data following punch list completion.
48	Pavement	2	Existing Frontage Road HMA near Sta 234+00 (NWM)	NB lane has settled due to water main work that took place in this area. Saw cut to remove failing pavement and patch using the same profile and mix show on approved Frontage Road Improvements plans.
49	Landscaping	4	Total Project, SWM, NWM, Frontage Road, Site Improvements	Landscape restoration, specifically seed and blanket, needs to be at 70% germination before the Village will accept the work. Please do what is necessary to obtain 70% germination in ALL disturbed areas including supplemental watering, cutting down weeds, overseeding, fertilizing, etc.
50	Landscaping	4	Site Improvements	Some tree species planted do not match what is shown on the approved landscape sheets. Remove and replace with specified species. See attached landscape sheets for specifics.

MEMO

TO: **Trevor Ryor, Jacob & Hefner Associates**

FROM: **Donald Kinzler, Engineering Project Manager**

CC: **Ed Dolezal, Public Works Director; Mike Petrick, Community Development Director Steve Kuczkowski, Chief Building Inspector; Gabe Zavala, Engineering Technician**

DATE: **7-25-2019**

SUBJECT: **Crossroads 55 - Record Drawing Review 2**

The Village of Channahon has received the following:

- As-Built drawings for *North Watermain Improvement Plans at Crossroads 55* prepared by DLZ dated 9/20/2018.
- As-Built drawings for *South Watermain Improvement Plans at Crossroads 55* prepared by DLZ dated 9/20/2018.
- As-Built drawings for *Roadway Improvement Plans for East Frontage Road* prepared by DLZ dated 9/21/2018.
- As-Built drawings for *Site Improvement Plans for Crossroads 55* prepared by DLZ dated 9/26/2018.

Please direct the applicant to provide a written response to these comments (including VOC comments) and (2) two copies of full size site plans as well as all other materials submitted for review with an identical submittal to Tony Spinelli, P.E. at Strand Engineering.

Based upon Public Work's review of the submitted materials, we offer the following comments:

General

1. Remove references to Thomas Engineering "verifying" improvements installations. Only the developer and their agents (contractor, engineer, etc.) are responsible for correct installation and surveyed verification of constructed improvements.
2. Align as-built watermain with as-built valve vaults.
3. Show appropriate directional line types for applicable utilities per original engineering plans.
4. Use appropriate line weights per original engineering plans.
5. Proposed data strikeouts are too thick. Reduce strikeout thickness so original proposed data can be discerned.

North Watermain Improvement Plans at Crossroads 55

1. Watermain Plan & Profile - Sheets 8-17

1.1 Incorrect revision date. Date should be 9-14-17 not 5-16-18 (sheet 8).

1.2 Incorrect revision date. Date should be 9-14-17 not 5-16-18 (sheet 9).

1.3 Incorrect revision date. Date should be 9-14-17 not 5-16-18 (sheet 10).

1.4 FH22 as-built elevation is not provided. Provide as-built elevations (sheet 11).

1.5 Incorrect revision date. Date should be 9-14-17 not 5-16-18 (sheet 11).

1.6 Incorrect revision date. Date should be 9-14-17 not 5-16-18 (sheet 12).

1.7 FH27a as-built elevation is not provided. Provide as-built elevations (sheet 15).

1.8 Incorrect revision date. Date should be 11-7-17 not 5-16-18 (sheet 15).

1.9 As-build data for field change 7 is not provided. Provide as-build data for field change 7 on this sheet (sheet 15).

1.10 Incorrect revision date. Date should be 2-15-18 not 5-16-18 (sheet 16)

1.11 Incorrect field change number. Should be field change 7 not 8. (sheet 16)

1.12 FH30a, VV15 and VV14 as-built elevations are all the same 539.35. Might there be a surveying error? (sheet 17)

South Watermain Improvement Plans at Crossroads 55

1. Watermain Plan & Profile - Sheets 8-17

1.1 FH2 as-built elevation is not provided. Provide as-built elevation (sheet 8).

1.2 Incorrect revision date. Date should be 8-25-17 not 11-6-17 (sheet 8).

1.3 Incorrect revision date. Date should be 8-25-17 not 11-6-17

1.4 Incorrect revision date. Date should be 8-25-17 not 11-6-17

1.5 Incorrect revision date. Date should be 8-25-17 not 11-6-17

1.6 Incorrect revision date. Date should be 8-25-17 not 11-6-17

1.7 FH7 as-built elevation is not provided. Provide as-built elevation (sheet 12)

1.8 Remove thick black line underneath WM between Sta 116+50 to Sta 117+70 (sheet 12)

1.9 FH7a proposed and as-built elevations are obscured by the proposed lane striping. Unable to compare proposed and as-built elevations (sheet 13).

1.10 VV4 as-built information is not provided. Provide as-built elevations (sheet 14).

1.11 FH8 as-built information is not provided. Provide as-built elevations (sheet 14).

1.12 Incorrect revision date. Date should be 8-25-17 not 11-6-17(sheet 15)

1.13 Incorrect revision date. Date should be 8-25-17 not 11-6-17 (sheet 16)

1.14 Incorrect revision date. Date should be 8-25-17 not 11-6-17 (sheet 17)

Roadway Improvement Plans for East Frontage Road

1. Plan & Profile and Drainage Plan - Sheets 6-8

1.1 Remove duplicate STA callouts at Sta 462+00 (sheet 6).

1.2 Sta & offset is required for all street lights and control box (sheet 6)

1.3 The as-built spot elevation (568.86) shown for the FES invert at the detention basin outlet near Sta. 463+75 appears to be incorrectly labeled 4.52-ft higher than proposed (sheet 6). Site plan as-built elevation is 564.36

1.4 Call out proposed and as-built high points (sheet 6)

2. Cross Sections - Sheets 9-19

2.1 The as-built ditch elevation at Sta. 463+00 30’ RT is listed as “N/A”. Provide as-built elevation (sheet 9).

2.2 The information on plan sheet 12 is illegible. This plan sheet needs to be resubmitted.

2.3 The back of curb as-built elevation listed at Sta. 474+50 LT appears incorrect (sheet 14). The back of curb as-built back elevation listed is 0.02-ft above the as-built edge of pavement elevation.

2.4 The back of curb as-built elevation listed at Sta. 484+60.79 RT appears incorrect (sheet 17). The back of curb as-built elevation listed is 1.58-ft above the as-built edge of pavement elevation.

Site Improvement Plans for Crossroads 55

1. General Notes

1.1 Changes and field changes Statement missing from Title page.

2. Grading Plan South - Sheet C5.1

2.1 The as-built elevation shown near the middle of south portion of building, approximately 300’ west of the SE building corner, appears to be incorrectly listed as 57.65.

3. Grading Plan North - Sheet C5.2

3.1 Two as-built spot elevations located approximately 250-ft south and 20-ft east of the NE building corner are 1.80-ft and 2.10-ft higher than proposed. Verify these elevations are correct.

4. Overall Utility Plan - Sheet C6.0

4.1 Detention Basin A and B Restrictor Plate as-built invert and T/Wall elevations are not provided. Provide as-built elevations for these items for restrictor structures.

5. Utility Plan South - Sheet C6.1

5.1 The as-built pipe slope between CB72 and CB73 is not provided. Provide as-built pipe slope.

5.2 CB62 as-built elevations are provided on Sheet C6.2. Provide the as-built elevations on Sheet C6.1.

5.3 VV6 as-built elevations are provided on Sheet C6.2. Provide the as-built elevations on Sheet C6.1.

5.4 The as-built pipe information between CB24 and CB25 is provided on Sheet C6.2. Provide the as-built information on Sheet C6.1.

5.5 As-built elevations for the Utility Crossing near CB25 are provided on Sheet C6.2. Provide the as-built elevations on Sheet C6.1.

5.6 As-built elevations for the Water Valve at Sta. 136+96.08 are provided on Sheet C6.2. Provide the as-built elevations on Sheet C6.1.

6. Utility Plan North - Sheet C6.2

6.1 The as-built pipe slopes entering and exiting the Restrictor Catch Basin are not provided. Provide as-built pipe slope.

7. Utility Plan Offsite - Sheet C6.3

7.1 The as-built pipe slope between CB72 and CB73 is not provided. Provide as-built pipe slope.

7.2 As-built information provided for the Storm Sewer and FES w/grate connected to CB49 is incorrectly shown. Provide as-built information.

7.3 The as-built pipe information between structures S4 and S5 is not provided. Provide as-built information.

7.4 The Sanitary Sewer Pipe Crossing as-built information downstream from CB73 is incorrectly shown.

8. Sanitary Plan & Profile Central - Sheet C6.5

8.1 The as-built pipe length between structure S5 and S6 in the plan view conflicts with the as-built pipe length in the profile view.

9. Watermain Plan and Profile - Sheets C6.7-C6.11

9.1 Provide detailed as-built information for all proposed information.

10. Underdrain Plan - Sheet C6.12 and C6.13

10.1 Statement says “Underdrain installed per plan “This is not accurate based on record drawings. Provide detailed as-built information.

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 7/31/2020

Chair, IAFSM

Chair, Certification Committee

ASFPM CFM® CERTIFIED

Illinois Association for Floodplain and Stormwater Management

Certificate of Training

DONALD KINZLER

has satisfactorily completed training during the

2019 IAFSM Annual Conference

Conducted by

The Illinois Association for Floodplain and Stormwater Management

Location: East Peoria, Illinois
Date: March 13th and 14th, 2019

PDH Credits: 11.5
CEC Credits: 10

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

IAFSM
Illinois Association for Floodplain and Stormwater Management

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Member Information
Donald Kinzler 24555 Navajo Drive Channahon, Illinois 60410 United States

American Water Works Association
IllinoisSection

Illinois Section American Water Works Association
545 S. Randall Road
St. Charles, IL 60174

Certificate of Completion				
Activity Code	Description	Credit Type	Location	Credits
13665	05/01/19 Source Water Summit (Joliet) IEPA#13665	CEU	201 W. Jefferson Street Joliet, Illinois 60432 United States	6

Credits Issued: 6

Date Activity Completed: 5/1/2019
Date Statement of Credit Issued:
5/2/2019

NIMS Course completion from 10/01/2019- 02/28/2020

Completed FEMA NIMS online courses IS100 and IS700

	IS100	IS700	IS200	IS800	IS29	IS1300	IS300	IS400
Anselme, Leticia	x	x						
Ashley, John	x	x						
Barrett, Jeffrey	x	x						
Betti, Jodi	x	x						
Bogart, Adam	x	x	x	x			x	x
Bojak, Brian	x	x						
Brooks, Mathew	x	x						
Browning, Gordon	x	x						
Casey, Shane	x	x	x	x				
Cerovac, Steven	x	x						
Choate, Steven	x	x						
Chudy, Steven	x	x						
Churchill, Margaret	x	x						
Drummond,Dan	x	x						
Durkin, Thomas	x	x						
Greco, Sam	x	x						
Grimmenga,John	x	x	x	x		x	x	x
Grosse, Dan	x	x						
Gunty,Craig	x	x						
James, Karen	x	x						
Kenny,James	x	x						
Kinzler,Don	x	x						
Kratchovil, Curtis	x	x						
Link, Raymond	x	x						
Malsky, Jason	x	x						
McClellen, Andrew	x	x						
Murphy, Elizibeth	x	x						
Mutz, Stephanie	x	x						
Neli, Adam	x	x						
Perinar, Patricia	x	x						
Petrick, Michael	x	x						
Schmacher, Missey	x	x						
Shultz, J	x	x						
Steg, Brandon	x	x						
Stobaugh, Eric	x	x						
Thompson, Sydney	x	x						
Vancura, Nicholas	x	x	x	x	x			
Wagonblott, Heather	x	x						

F5

Melanie Arnold

From: Don Kinzler
Sent: Tuesday, April 2, 2019 11:44 AM
To: 'rachel_1976@comcast.net'
Subject: Channahon Floodplain near 22322 Deal Ave.
Attachments: FIRMette.pdf; FIRMette Zoomed.pdf; VOC GIS.PDF

Hi Rachel,

Attached first is a FIRMette from the current FEMA floodplain map which includes your property; next is a zoomed copy.

A Zone AE means that portion of the river has been 'studied' and Base Flood Elevations (BFEs) officially determined. Non-decimal elevations are shown as black wavy lines. There happens to be one of these, 520, adjacent to your property. A Zone A means that portion of the SFHA has not been studied. (SFHA stands for Special Flood Hazard Area and is another name for a flood zone)

The third exhibit is from the Village's GIS system and shows Will County elevation contours near your property. Note the dark red 520 contour appears to wrap around your house. This indicates that perhaps the home structure itself is not located in the floodplain (520 and lower). You can pass this information on to your insurance company (this is mortgage insurance correct?), but I don't know that it will be enough for them to take away flood insurance requirements.

This brings us to what we discussed yesterday. If the mortgage/insurance company requires a formal FEMA determination for you to dispute the need for flood insurance, you will need to hire a professional engineer/surveyor to put that together. You would be asking them to do a Letter Of Map Amendment (LOMA) request through FEMA. This would include surveying the property and home to determine exactly where the BFE crosses the property. Being near a Zone AE (studied) flood zone is good; the engineer will not have to do the more extensive calculations to determine a BFE as they would for a Zone A flood zone.

If the home is not in the SFHA, the best you'll get from FEMA is a determination saying "portions of the property remain in the SFHA," but "…the structure on the property is not located in the SFHA…"

Note that such a determination does not prohibit the mortgage company from requiring flood insurance. However, you could use the LOMA to find a different lender who will accept it and not require the flood insurance.

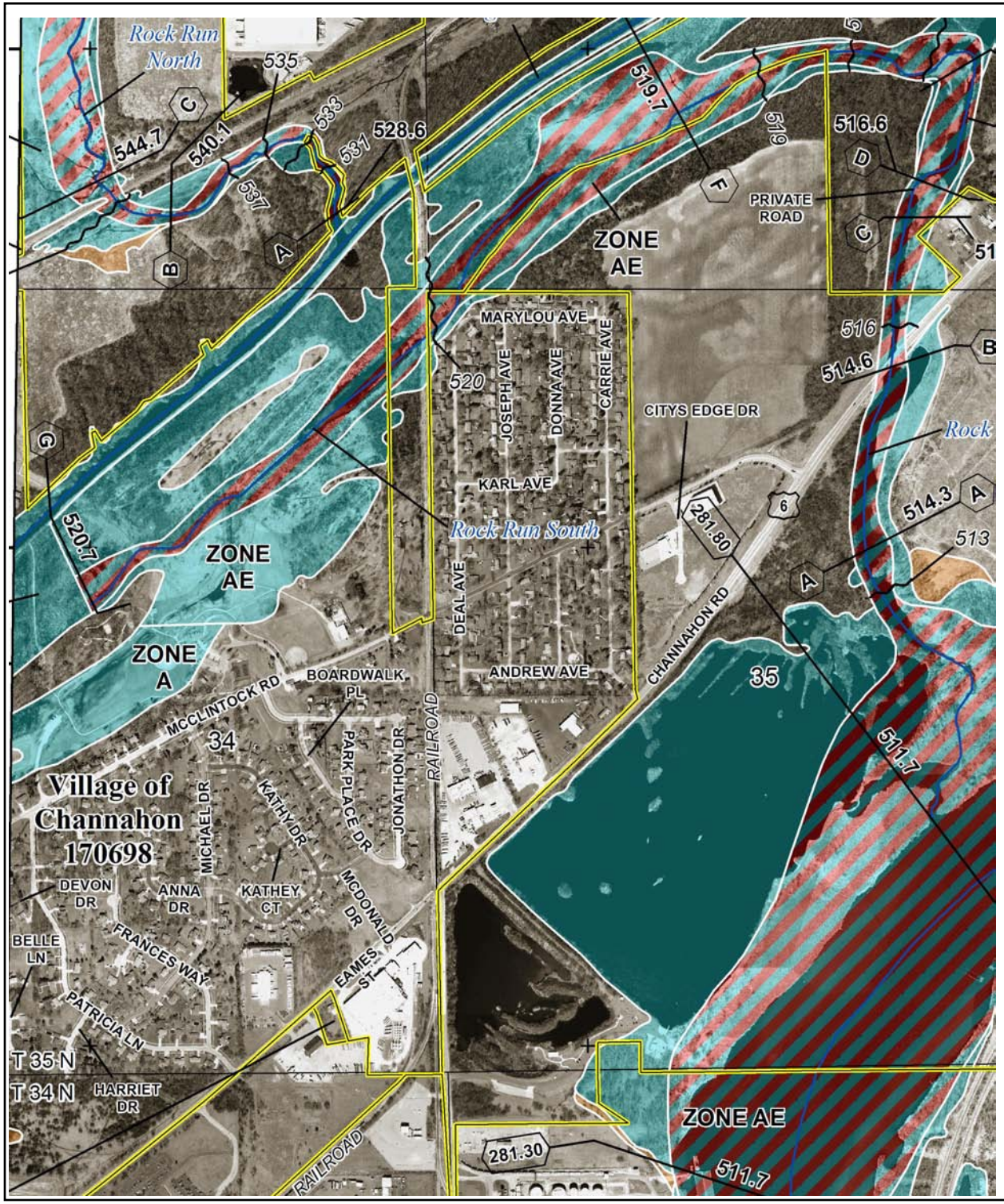
Last, even if flood insurance is not required, you may want to consider having it being so close to a flood zone. If the LOMA determines the home structure is not in the SFHA, the premium should be cheaper.

There are several reputable engineer's in the area who can do this work. Ruettiger Tonelli & Associates (Joliet), Strand Associates (Joliet), Rogina & Associates (Joliet), and Robinson Engineering (Frankfort).

Hope this helps. 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



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

National Flood Insurance Program

WILL COUNTY, ILLINOIS
and Incorporated Areas

PANEL 260 OF 585

FEMA

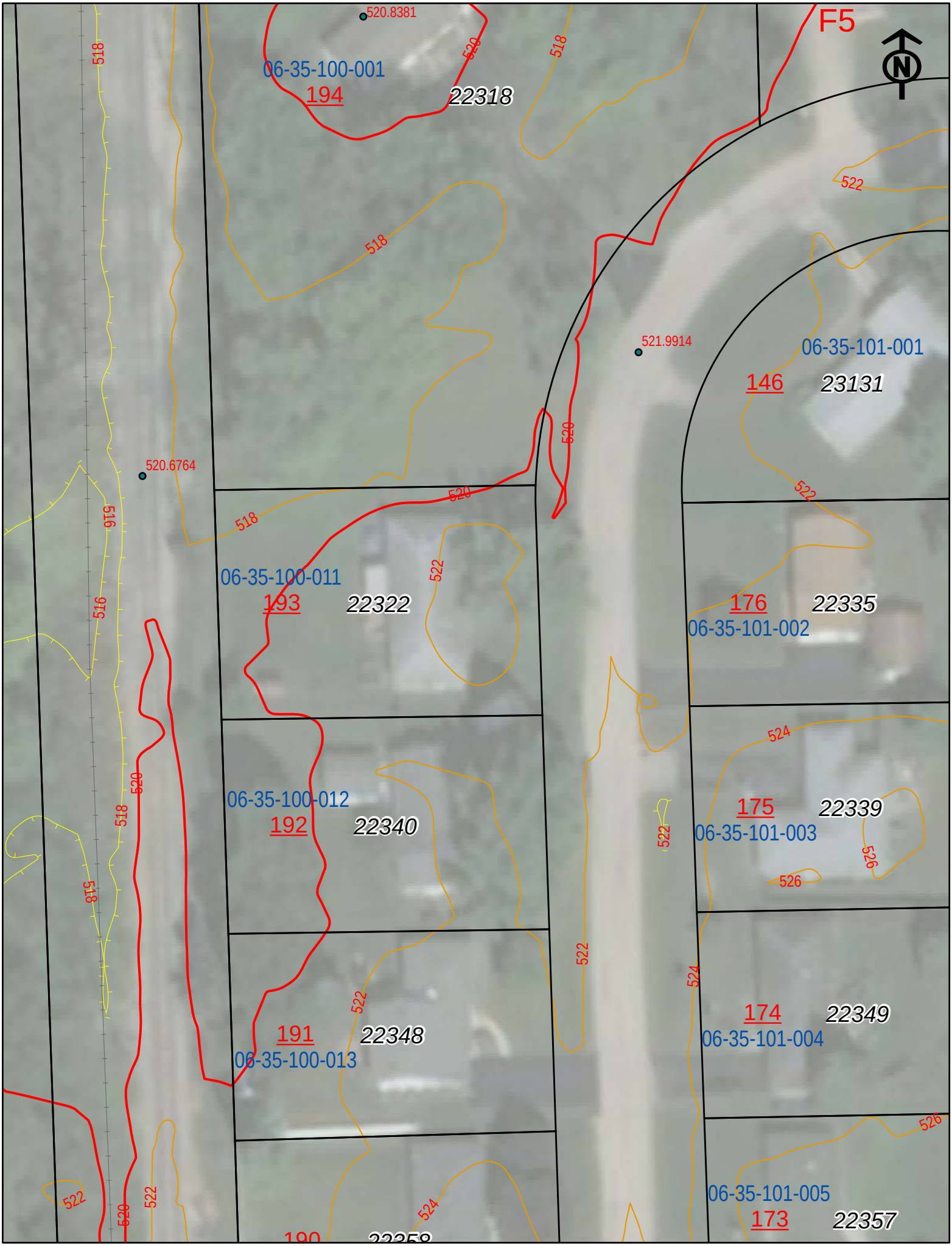
Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHANNAHON, VILLAGE OF	170698	0260	G
ELWOOD, VILLAGE OF	170849	0260	G
JOLIET, CITY OF	170702	0260	G
ROCKDALE, VILLAGE OF	170710	0260	G
WILL COUNTY	170695	0260	G

VERSION NUMBER
2.3.3.3

MAP NUMBER
17197C0260G

MAP REVISED
FEBRUARY 15, 2019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520.8381
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23131
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22340
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191
22348
06-35-100-013
174
22349
06-35-101-004
06-35-101-005
173
22357
190
22358

F5

Melanie Arnold

From: Karen Robbins <mrs_robbins@hotmail.com> on behalf of Karen Robbins
Sent: Tuesday, December 3, 2019 10:19 AM
To: Don Kinzler
Subject: Fw: FEMA Final Determination for 19-05-4025A
Attachments: 19-05-4025A-cover.pdf; 19-05-4025A-170698.pdf

Don,
Just wanted to be sure you received a copy of this. 24746 S River Trail Structure is NOT in SFHA.

Karen Robbins

_____
From: no-reply@riskmapcds.com <no-reply@riskmapcds.com>
Sent: Friday, November 22, 2019 7:26 AM
To: mrs_robbins@hotmail.com
Subject: FEMA Final Determination for 19-05-4025A

The Federal Emergency Management Agency has issued a determination regarding your recent submission to determine if the property located at 24746 S River Trail was within an identified Special Flood Hazard Area on the applicable National Flood Insurance Program map.

Please review the attached determination document or you can return to the Online LOMC home page, by clicking on the following link https://hazards.fema.gov/femaportal/onlinelomc or copying and pasting the link into the address bar of your browser. Once signed in to Online LOMC, access the "Summary of Supporting Documents" page by clicking the appropriate Application ID hyperlink associated with the case number.

This message has been generated automatically. Please do not reply to this message.

F5

Federal Emergency Management Agency

Washington, D.C. 20472

November 21, 2019

THE HONORABLE MISSEY MOORMAN SCHUMACHER
MAYOR, VILLAGE OF CHANNAHON
24555 SOUTH NAVAJO DRIVE
CHANNAHON, IL 60410

CASE NO.: 19-05-4025A
COMMUNITY: VILLAGE OF CHANNAHON, WILL COUNTY, ILLINOIS
COMMUNITY NO.: 170698

DEAR MS. SCHUMACHER:

This is in reference to a request that the Federal Emergency Management Agency (FEMA) determine if the property described in the enclosed document is located within an identified Special Flood Hazard Area, the area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood), on the effective National Flood Insurance Program (NFIP) map. Using the information submitted and the effective NFIP map, our determination is shown on the attached Letter of Map Revision (LOMR) Floodway Determination Document. This determination document provides additional information regarding the effective NFIP map, the legal description of the property and our determination.

Additional documents are enclosed which provide information regarding the subject property and LOMRs. Please see the List of Enclosures below to determine which documents are enclosed. Other attachments specific to this request may be included as referenced in the Determination/Comment document. If you have any questions about this letter or any of the enclosures, please contact the FEMA Map Information eXchange (FMIX) toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, Engineering Library, 3601 Eisenhower Ave Ste 500, Alexandria, VA 22304-6426.

Sincerely,

Luis V. Rodriguez, P.E., Director
Engineering and Modeling Division
Federal Insurance and Mitigation Administration

LIST OF ENCLOSURES:

LOMR-FW DETERMINATION DOCUMENT (REMOVAL)

cc: State/Commonwealth NFIP Coordinator
Community Map Repository
Region
Mrs. Karen Robbins

F5

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION FLOODWAY DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	VILLAGE OF CHANNAHON, WILL COUNTY, ILLINOIS	Lot 27, Indian Trails Unit 1, as described in the Warranty Deed Tenancy by the Entirety Statutory (Illinois) (Individual to Individual) recorded as Document No. R2014059231, in the Office of the Recorder, Will County, Illinois
	COMMUNITY NO.: 170698	
AFFECTED MAP PANEL	NUMBER: 17197C0265G	
	DATE: 2/15/2019	
FLOODING SOURCE: DUPAGE RIVER		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 41.432679, -88.237004 SOURCE OF LAT & LONG: LOMA LOGIC DATUM: NAD 83

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (NAVD 88)	LOWEST ADJACENT GRADE ELEVATION (NAVD 88)	LOWEST LOT ELEVATION (NAVD 88)
27	--	Indian Trails Unit 1	24746 South River Trail	Structure (Residence)	X (unshaded)	--	524.0 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.)

INADVERTENT INCLUSION FLOODWAY 1

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Revision for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the structure(s) on the property(ies) is/are not located in the NFIP regulatory floodway or 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 revises the effective NFIP map to remove the subject property from the NFIP regulatory floodway and 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 Information eXchange (FMIX) toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, Engineering Library, 3601 Eisenhower Ave Ste 500, Alexandria, VA 22304-6426.

Luis V. Rodriguez, P.E., Director
Engineering and Modeling Division
Federal Insurance and Mitigation Administration

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Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION FLOODWAY DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

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

A portion of this property is located within the National Flood Insurance Program (NFIP) regulatory floodway for the flooding source indicated on the Determination Document, while the subject of this determination is not. The NFIP regulatory floodway is the area that must remain unobstructed in order to prevent unacceptable increases in base flood elevations. Therefore, no construction may take place in an NFIP regulatory floodway that may cause an increase in the base flood elevation, and any future construction or substantial improvement on the property remains subject to Federal, State/Commonwealth, and local regulations for floodplain management. The NFIP regulatory floodway is provided to the community as a tool to regulate floodplain development. Therefore, the NFIP regulatory floodway modification described in the Determination Document, while acceptable to the Federal Emergency Management Agency (FEMA), must also be acceptable to the community and adopted by appropriate community action, as specified in Paragraph 60.3(d) of the NFIP regulations. Any proposed revision to the NFIP regulatory floodway must be submitted to FEMA by community officials. The community should contact either the Regional Director (for those communities in Regions I-IV, and VI-X), or the Regional Engineer (for those communities in Region V) for guidance on the data which must be submitted for a revision to the NFIP regulatory floodway. Contact information for each regional office can be obtained by calling the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or from our web site at http://www.fema.gov/about/regoff.htm.

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Information eXchange (FMIX) toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, Engineering Library, 3601 Eisenhower Ave Ste 500, Alexandria, VA 22304-6426.

Luis V. Rodriguez, P.E., Director
Engineering and Modeling Division
Federal Insurance and Mitigation Administration

F5

Melanie Arnold

From: Don Kinzler
Sent: Tuesday, October 22, 2019 11:06 AM
To: 'Karen Robbins'
Subject: RE: 24764 S River Trail, Channahon - LOMA Application forms | MG2A #19-983
Attachments: LOMA, 24764 River Trail_10-22-19.pdf

Hi Karen,

Here you go. Good luck.

Regards,

Don

From: Karen Robbins [mailto:mrs_robbins@hotmail.com]
Sent: Monday, October 21, 2019 3:14 PM
To: Don Kinzler <dkinzler@channahon.org>
Subject: Fw: 24764 S River Trail, Channahon - LOMA Application forms | MG2A #19-983

Don, can you sign a Community Acknowledgement form for me and return via email ASAP? My deadline is this week.

Thanks, Karen Robbins

From: Brian Hertz <bhertz@mg2a.com>
Sent: Friday, October 18, 2019 6:05 PM
To: mrs_robbins@hotmail.com <mrs_robbins@hotmail.com>
Cc: Robert Sluis <rsluis@mg2a.com>
Subject: 24764 S River Trail, Channahon - LOMA Application forms | MG2A #19-983

Karen –

Attached is a copy of the completed Elevation Form and Topographic Survey certifying the lowest adjacent grade to the structure for your resubmittal to FEMA.

I did talk to a FEMA Mapping Specialist. They are requiring the Community Acknowledgement Form to be signed by the community because the property is located partially within the floodway…even though the structure is not.

Please provide this information to Don Kinzler at the Village of Channahon for him to sign off on Section B of the form. The FEMA rep did say you could call and request an extension of time as the deadline of late October gets nearer if needed.

Let me know if you have questions.

Thanks,

F5

DEPARTMENT OF HOMELAND SECURITY - FEDERAL EMERGENCY MANAGEMENT AGENCY

ELEVATION FORM

O.M.B. NO. 1660-0015
Expires February 28, 2014

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this data collection is estimated to average 1.25 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and submitting the form. This collection is required to obtain or retain benefits. You are not required to respond to this collection of information unless a valid OMB control number is displayed on this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 1800 South Bell Street, Arlington, VA 20598-3005, Paperwork Reduction Project (1660-0015). **NOTE: Do not send your completed form to this address.**

This form must be completed for requests and must be completed and signed by a registered professional engineer or licensed land surveyor. **A DHS - FEMA National Flood Insurance Program (NFIP) Elevation Certificate may be submitted in lieu of this form for single structure requests.**

For requests to remove a structure on natural grade OR on engineered fill from the Special Flood Hazard Area (SFHA), submit the lowest adjacent grade (the lowest ground touching the structure), ***including an attached deck or garage***. For requests to remove an entire parcel of land from the SFHA, provide the lowest lot elevation; or, if the request involves an area described by metes and bounds, provide the lowest elevation within the metes and bounds description. All measurements are to be rounded to nearest tenth of a foot. In order to process your request, all information on this form must be completed ***in its entirety***. **Incomplete submissions will result in processing delays.**

1. NFIP Community Number: 170698 Property Name or Address: 24746 S River Trail, Channahon, Illinois 60410

2. Are the elevations listed below based on ☒ ***existing*** or ☐ ***proposed*** conditions? (Check one)

3. For the existing or proposed structures listed below, what are the types of construction? (check all that apply)
☐ crawl space ☐ slab on grade ☒ basement/enclosure ☐ other (explain)

4. Has DHS - FEMA identified this area as subject to land subsidence or uplift? (see instructions) ☐ Yes ☒ No
If yes, what is the date of the current re-leveling? / (month/year)

5. What is the elevation datum? ☐ NGVD 29 ☒ NAVD 88 ☐ Other (explain)
If any of the elevations listed below were computed using a datum different than the datum used for the effective Flood Insurance Rate Map (FIRM) (e.g., NGVD 29 or NAVD 88), what was the conversion factor?
Local Elevation +/- ft. = FIRM Datum

6. Please provide the Latitude and Longitude of the most upstream edge of the ***structure*** (in decimal degrees to the nearest fifth decimal place):
Indicate Datum: ☒ WGS84 ☐ NAD83 ☐ NAD27 Lat. 41.43278 Long. 88.23694
Please provide the Latitude and Longitude of the most upstream edge of the ***property*** (in decimal degrees to the nearest fifth decimal place):
Indicate Datum: ☒ WGS84 ☐ NAD83 ☐ NAD27 Lat. 41.43278 Long. 88.23778

Address	Lot Number	Block Number	Lowest Lot Elevation*	Lowest Adjacent Grade To Structure	Base Flood Elevation	BFE Source
24746 S River Trail				524.04	523.6	FIS Profile

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name: Brian P. Hertz	License No.: 062-054935	Expiration Date: 11/30/2019
Company Name: M. Gingerich, Gereaux & Associates	Telephone No.: 815-478-9680	
Email: bhertz@mg2a.com	Fax No. 815-478-9685	
Signature:	Date: 10/18/2019	

BRIAN P. HERTZ 062-054935 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

Seal (optional)

* For requests involving a portion of property, include the lowest ground elevation within the metes and bounds description.
Please note: If the Lowest Adjacent Grade to Structure is the only elevation provided, a determination will be issued for the structure only.

F5

DEPARTMENT OF HOMELAND SECURITY - FEDERAL EMERGENCY MANAGEMENT AGENCY

COMMUNITY ACKNOWLEDGMENT FORM

O.M.B. NO. 1660-0015
Expires February 28, 2014

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this data collection is estimated to average 1.38 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and submitting the form. This collection is required to obtain or retain benefits. You are not required to respond to this collection of information unless a valid OMB control number is displayed on this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 1800 South Bell Street, Arlington, VA 20598-3005, Paperwork Reduction Project (1660-0015). NOTE: Do not send your completed form to this address.

This form must be completed for requests involving the existing or proposed placement of fill (complete Section A) ***OR*** to provide acknowledgment of this request to remove a property from the SFHA which was previously located within the regulatory floodway (complete Section B).

This form must be completed and signed by the official responsible for floodplain management in the community. **The six digit NFIP community number and the subject property address must appear in the spaces provided below. Incomplete submissions will result in processing delays.** Please refer to the MT-1 instructions for additional information about this form.

Community Number: 170698 Property Name or Address: 24746 S River Trail, Channahon, Illinois 60410

A. REQUESTS INVOLVING THE PLACEMENT OF FILL

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this Letter of Map Revision Based on Fill (LOMR-F) or Conditional LOMR-F request. Based upon the community's review, we find the completed or proposed project meets or is designed to meet all of the community floodplain management requirements, including the requirement that no fill be placed in the regulatory floodway, and that all necessary Federal, State, and local permits have been, or in the case of a Conditional LOMR-F, will be obtained. For Conditional LOMR-F requests, the applicant has or will document Endangered Species Act (ESA) compliance to FEMA prior to issuance of the Conditional LOMR-F determination. For LOMR-F requests, I acknowledge that compliance with Sections 9 and 10 of the ESA has been achieved independently of FEMA's process. Section 9 of the ESA prohibits anyone from "taking" or harming an endangered species. If an action might harm an endangered species, a permit is required from U.S. Fish and Wildlife Service or National Marine Fisheries Service under Section 10 of the ESA. For actions authorized, funded, or being carried out by Federal or State agencies, documentation from the agency showing its compliance with Section 7(a)(2) of the ESA will be submitted. In addition, we have determined that the land and any existing or proposed structures to be removed from the SFHA are or will be reasonably safe from flooding as defined in 44CFR 65.2(c), and that we have available upon request by DHS-FEMA, all analyses and documentation used to make this determination. For LOMR-F requests, we understand that this request is being forwarded to DHS-FEMA for a possible map revision.

Community Comments:

n/a

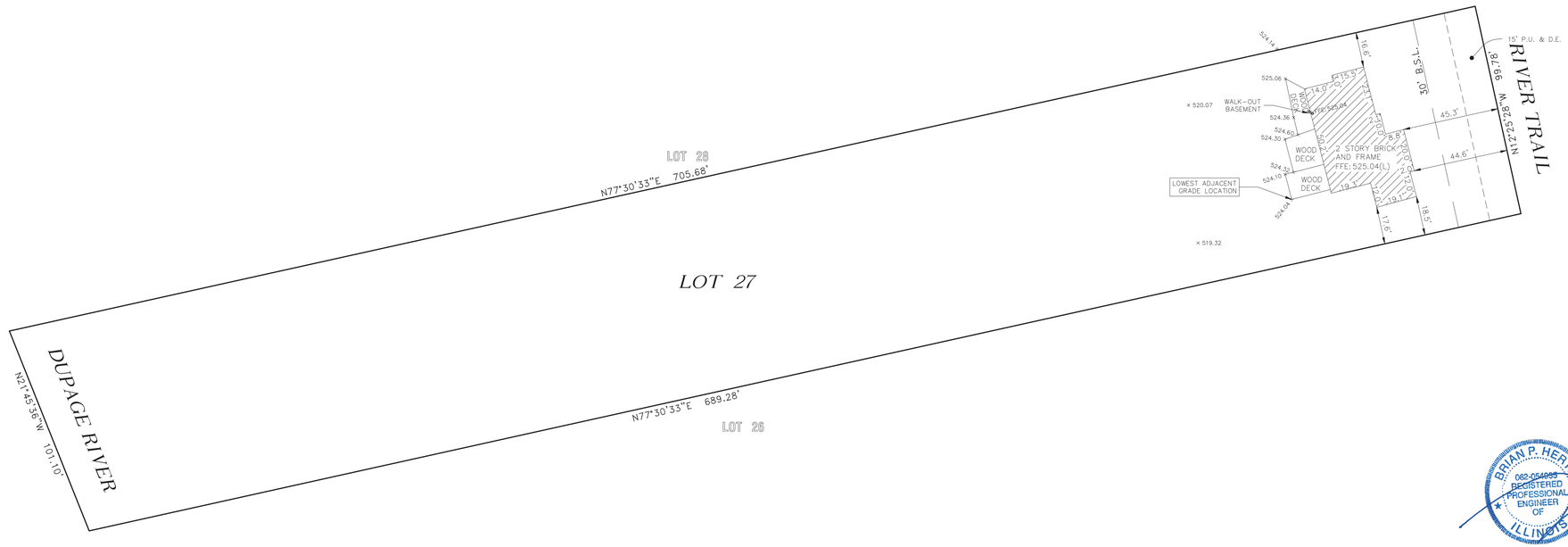
Community Official's Name and Title: (*Please Print or Type*)		Telephone No.:
Community Name:	Community Official's Signature: (required)	Date:

B. PROPERTY LOCATED WITHIN THE REGULATORY FLOODWAY

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this request for a LOMA. We understand that this request is being forwarded to DHS-FEMA to determine if this property has been inadvertently included in the regulatory floodway. We acknowledge that no fill on this property has been or will be placed within the designated regulatory floodway. We find that the completed or proposed project meets or is designed to meet all of the community floodplain management requirements.

Community Comments:

Community Official's Name and Title: (*Please Print or Type*)		Telephone No.:
DONALD R. KINZLER, ENGINEERING PROJECT MGR		815-467-6644
Community Name: Village of Channahon	Community Official's Signature (required):	Date: 10/22/19



BRIAN P. HERTZ
062-054283
REGISTERED PROFESSIONAL ENGINEER
OF
ILLINOIS
Date: 10/18/19
Exp: 11/30/19

LEGEND

EXISTING	DESCRIPTION
× ###	GRADE POINT

LEGAL DESCRIPTION:

LOT 27 IN INDIAN TRAILS UNIT 1, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 34 NORTH, RANGE 9, EAST OF THE THIRD PRINCIPAL MERIDIAN, CHANNAHON TOWNSHIP, ACCORDING TO THE PLAT THEREOF RECORDED NOVEMBER 13, 1990 AS DOCUMENT NO. R90-63264, IN WILL COUNTY, ILLINOIS.

BENCHMARK: PER SURVEY REGIONAL VRSNOW RTK
GNSS NETWORK
FINISH FLOOR ELEVATION OF HOUSE
ELEV.=525.04 (NAVD 88)

0 30' 60'

PLAN EDITION MILESTONES

DATE	BY	DESCRIPTION
10/18/19	BPH	ISSUE FOR LOMA

CIVIL ENGINEERING
SURVEYING
M GINGERICH GEREAUX & ASSOCIATES
Professional Design Firm License # 184.005003
P. 815-478-9680 www.mg2a.com F. 815-478-9685
25620 S. GOUGAR RD. | MANHATTAN, IL. 60442

DESIGN: ###
DRAWING: ###
CHECKED: ###
APPROVED: ###

24746 S RIVER TRAIL CHANNAHON
INDIAN TRAILS UNIT 1
CHANNAHON, ILLINOIS

TOPOGRAPHIC SURVEY FOR LOMA

SHEET NO.
1 OF 1

JOB NO. 19-983

F5

Melanie Arnold

From: Don Kinzler
Sent: Friday, June 21, 2019 8:27 AM
To: 'Karen Robbins'; Ed Dolezal; Sharon Reiter
Subject: RE: Elevation Certificate Request
Attachments: 24746 FIRMette.pdf

Hi Karen,

The attached is a FIRMette for your use.

Regards,

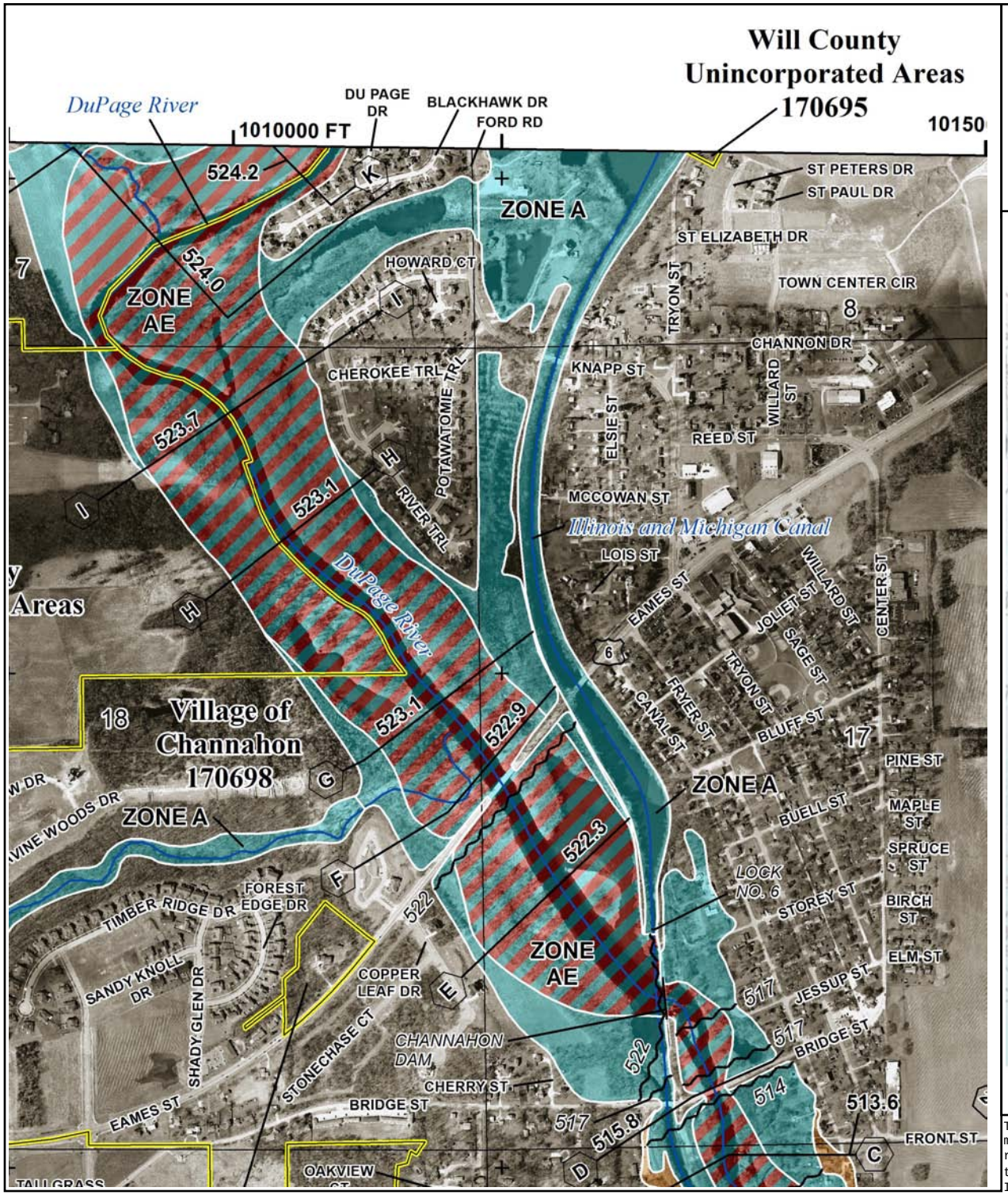
Donald R. Kinzler,P.E.,CFM
Engineering Project Manager
Village of Channahon
24555 Navajo Dr.
Channahon, IL 60410
Ph:(815) 467-6644
Fx:(815) 467-8398

From: Karen Robbins [mailto:mrs_robbins@hotmail.com]
Sent: Thursday, June 20, 2019 3:32 PM
To: edolezal@channahon.org; dkinzler@channahon.org; sreiter@channahon.org
Subject: Elevation Certificate Request

Do you have either an elevation certificate or topographic maps for Indian Trails Subdivision? Specifically, I am looking for 24746 S River Trail. I received a letter from my insurance agency that indicates my house is now in the flood plain, but I believe the BFE is below the level of my house by about 2 feet. I was told that the Village might have the information I need to support that belief.

Please let me know.
Sincerely,
Karen Robbins
24746 S River Trail
864-630-8261

F5



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

National Flood Insurance Program

WILL COUNTY, ILLINOIS
and Incorporated Areas

PANEL 265 OF 585

FEMA

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHANNAHON, VILLAGE OF	170698	0265	G
ELWOOD, VILLAGE OF	170849	0265	G
MINOOKA, VILLAGE OF	171019	0265	G
WILL COUNTY	170695	0265	G
WILMINGTON, CITY OF	170715	0265	G

VERSION NUMBER
2.3.3.3

MAP NUMBER
17197C0265G

MAP REVISED
FEBRUARY 15, 2019

Lower DuPage River Watershed Coalition ILR40 Activities
March 2019 – February 2020

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

- The LDRWC website was maintained during the reporting period and periodically updated (http://www.dupagerivers.org).
- A Seasonal Outreach Campaign was implemented throughout year. Media tool kits have been replaced with a "Members" tab on the website that includes all past and present seasonal outreach materials for download. Materials for each season include text for websites, newsletters, posters, blogs and social media posts. The website has also been expanded to utilize this information to enhance the experience for visitors to the LDRWC website. Campaign specific materials were also developed – see examples attached at end of report. For the winter season www.SaltSmart.org website is also used as a clearinghouse of winter BMPs for residents, public agencies and private deicing companies. This website has provided a wider reach beyond the Lower DuPage River watershed and has organically grown into a regional Salt Smart Collaborative. All materials described in this report are available on the LDRWC website.
    - Spring – Using native plants
    - Summer – Stormwater Pond Maintenance
    - Fall – Proper leaf collection/disposal
    - Winter – SaltSmart – Winter Snow & Ice Management BMPs

- Hosted a table representing LDRWC at the Bluestem Earth Festival in Joliet on May 18, 2019

2. Public Involvement and Participation **–** The Lower DuPage River Watershed Coalition participated in a Restoration Event in Romeoville on October 12, 2019 with information and activities for families on water quality.

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

Illinois Parks and Recreation Association Annual Conference January 22, 2019
LDRWC staff presented a session titled: How to Be a Salt Smart Park District – Chloride Reduction Through Improved Deicing Strategies. The presentation focused on ways that Park Districts could reduce chloride use at their facilities and work with their local communities to meet reduction goals.

APWA Expo May 23, 2019
LDRWC staff presented a session titled: How to Be a Salt Smart Community – Chloride Reduction Through Improved Deicing Strategies at the APWA Expo. Attendees included public works directors and public works staff from communities across the region.

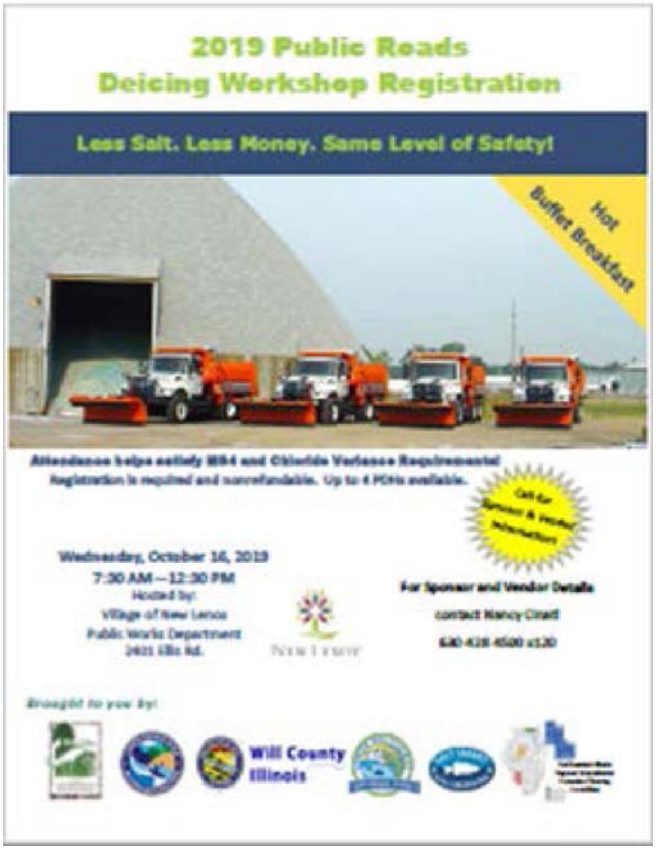
Chloride Reduction Workshops

Two chloride reduction workshops were held during the reporting period ending March 2020 in partnership with the Lower DuPage River Watershed Coalition.

The **public roads deicing workshop** held at Village of New Lenox Public Works Facility on October 16, 2019. Fortin Consulting was hired to present the Public Roads course with exam with the following agenda:

7:30 am Registration and Breakfast
8:00 am Welcome/ Housekeeping, Shawn Vandenberg, Village of New Lenox
9:00 am Information on developing efficient and cost-effective snow fighting operations, appropriate product selection, equipment selection, application rates, equipment calibration, ambient conditions monitoring. Presenters: Carolyn Dindorf, Fortin Consulting and Chris Walsh, (former Public Works Director, City of Beloit, WI)
11:30 am Test on Workshop Materials
12:15pm: Closing Remarks and Evaluations

Attendance – 66 registered, 2 presenters, 7 sponsors/exhibitors = 77 total. All participants received a certificate of attendance. We received 60 feedback forms from participants.

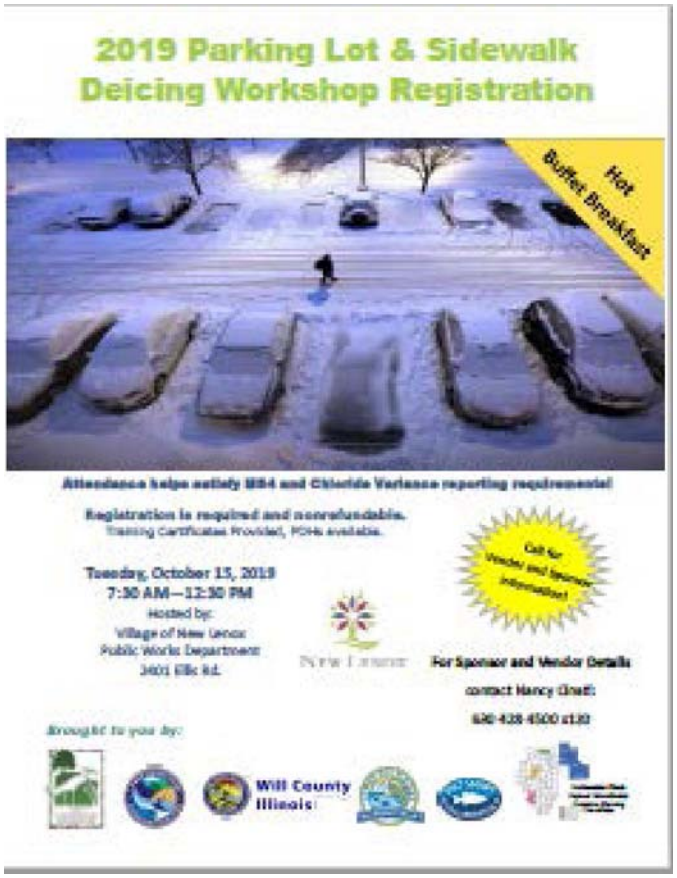


Photographs from the Will County Public Roads Deicing Workshop, 2019.

The **parking lots and sidewalks deicing workshop** was held at the Village of New Lenox's Public Works Facility on October 15, 2019 with the following agenda:

7:30 am Registration and Breakfast
8:00 am Introduction of topic and the relevance to Will County, *Jennifer Hammer, The Conservation Foundation*

8:15 am Ambient conditions and regulatory update and information on developing efficient and cost-effective snow fighting operations, appropriate product selection, equipment selection, application rates, equipment calibration, ambient conditions monitoring. Presenters: *Carolyn Dindorf, Fortin Consulting and Chris Walsh*, (former Public Works Director, City of Beloit, WI)
11:30 am Test on workshop materials.
12:15 pm Closing Remarks and Evaluations



Attendance - 22 registrations, 2 presenters, 2 staff, 5 exhibitors = 31 total. All participants received a training certificate. We received 21 feedback forms from participants.

Photographs from the Will County Parking Lots and Sidewalks Workshop, 2019.

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 "bio-survey", 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. Forty-one stations were sampled 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. The IPS model update will be completed in mid-2020.

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

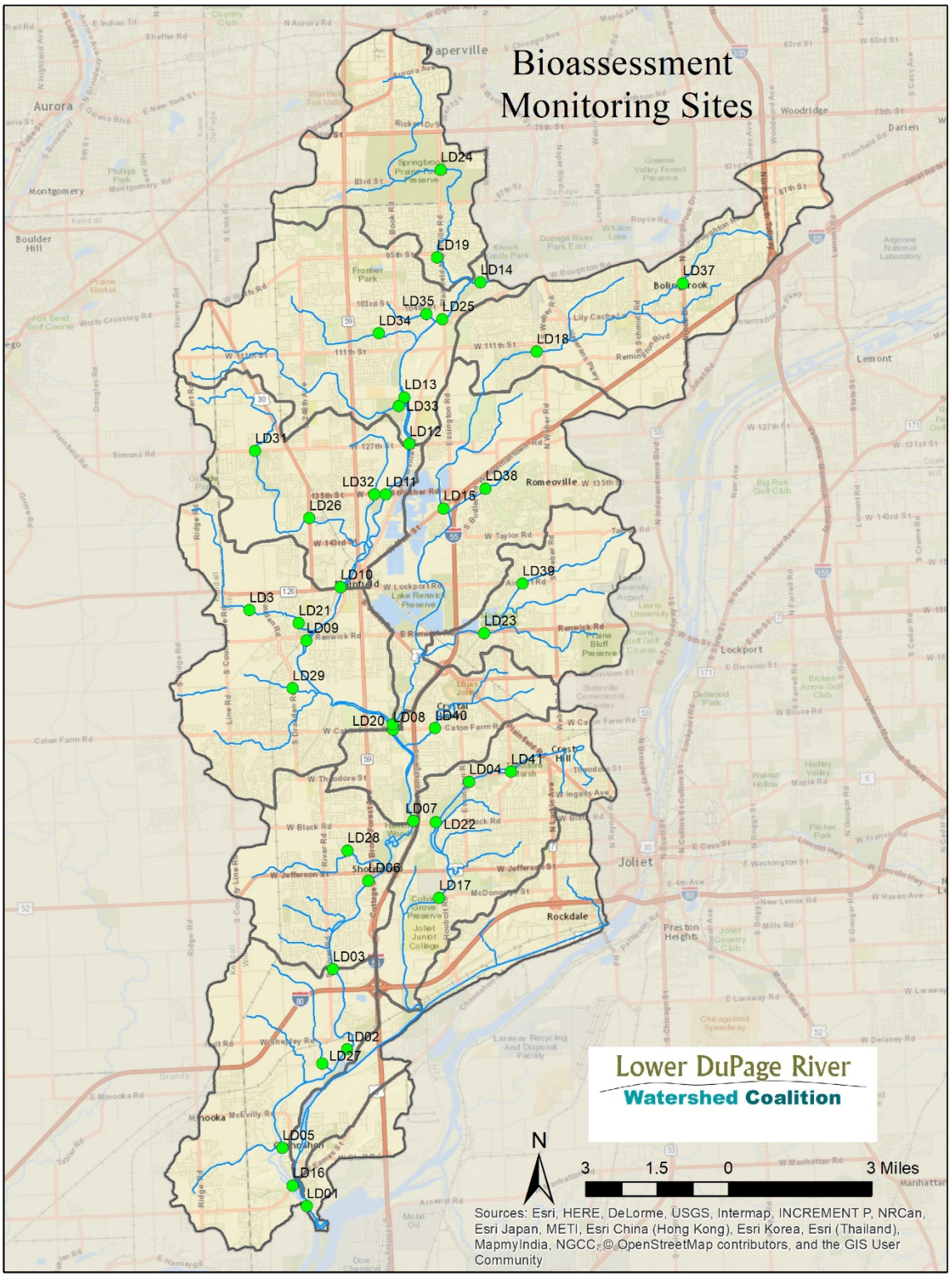


Table 1. Number of sampling sites in the LDRWC project area.

Method/Protocol	Lower DuPage River (2012)	Lower DuPage River (2015 & 18)
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

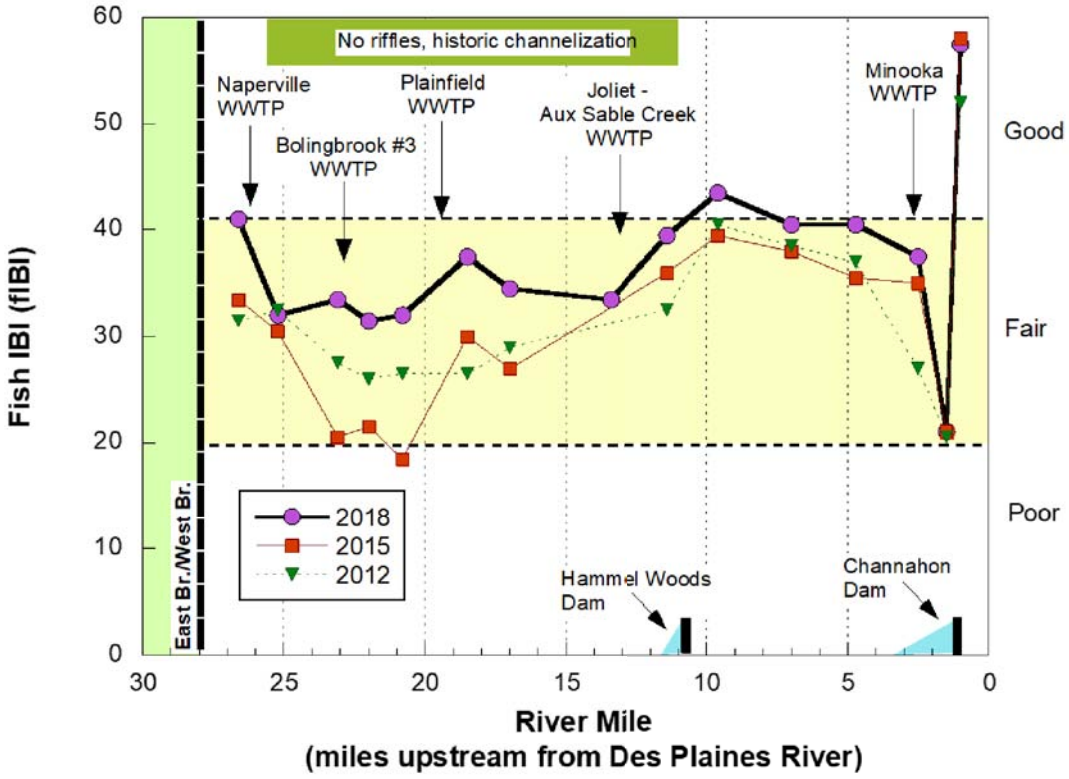
The fish sampling results presented in this report summarize the findings for the mainstem reaches of the DuPage River. Information on the tributaries and detailed analysis of all results can be found at http://www.dupagerivers.org/bioassessment-monitoring/ Results from the 2018 bioassessment will be available in late 2020.

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. In 2018, the segment below the Hammel Woods Dam also made it up into the good range.

Figure 2. Fish IBI scores in the Mainstem DuPage River, 2012, 2015 and 2018 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.

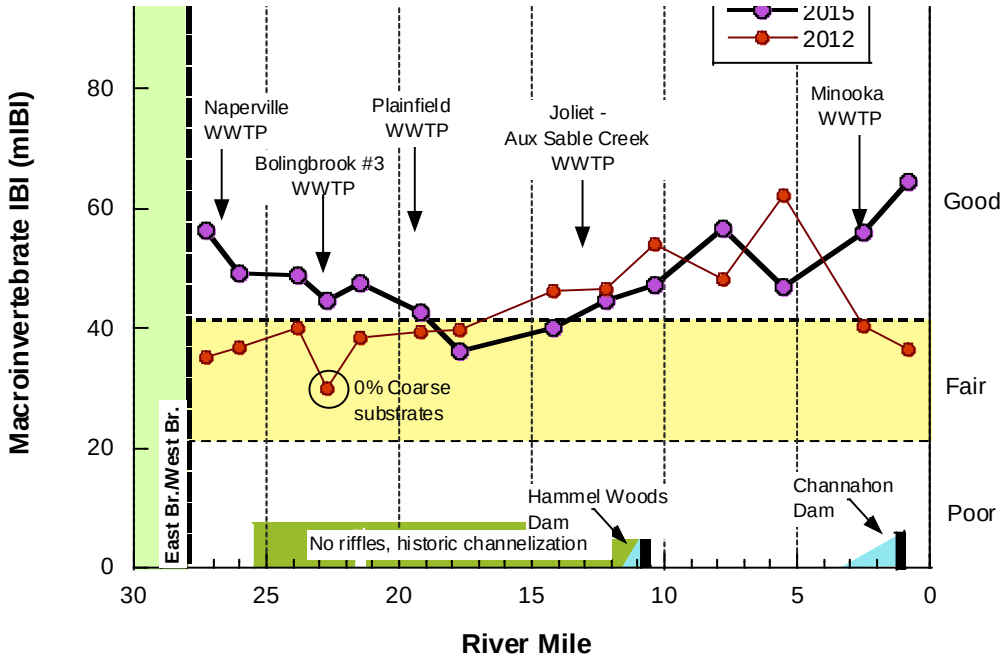
Results

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/ Results from the 2018 bioassessment will be available in late 2019.

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. Macroinvertebrate data from 2018 is not yet available.

***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

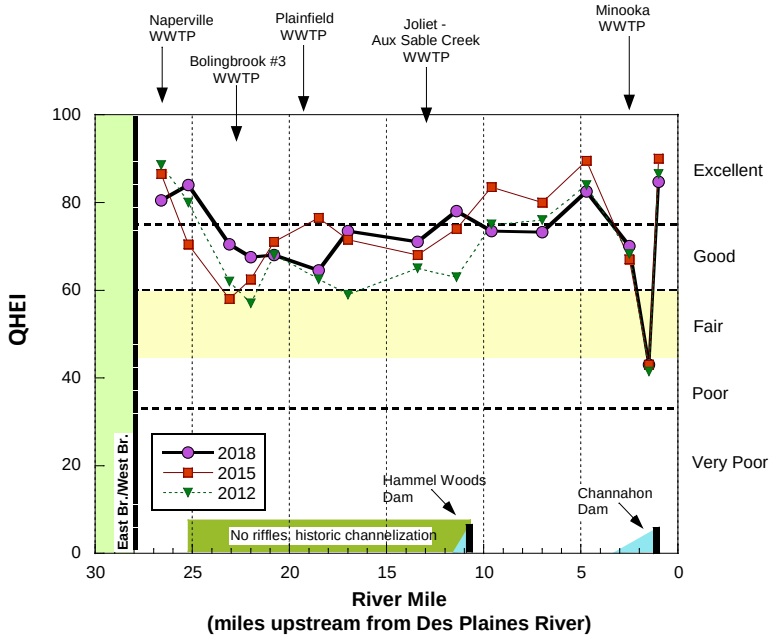
The QHEI data presented in this report summarize the findings for the mainstem reaches of the East Branch DuPage River, the West Branch DuPage River and Salt Creek. Information on the tributaries and detailed analysis of all results can be found at http://www.dupagerivers.org/bioassessment-monitoring/ Results from the 2018 bioassessment will be available in late 2020.

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). Three projects are being developed to improve habitat and dissolved oxygen levels within this reach. The first project is to removed the Hammel Woods dam. This project is designed and is awaiting permits. Construction is anticipated to take place during low flows in 2020.

Figure 4. *Qualitative Habitat Evaluation Index (QHEI) scores and narrative ranges in the Lower DuPage River in 2012, 2015 and 2018 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/ Results from the 2018 bioassessment will be available in late 2020.

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 41 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/ Results from the 2018 bioassessment will be available in late 2020.

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. Results from the 2018 bioassessment will be available in late 2020.

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. Results from the 2018 bioassessment will be available in late 2020.

See attached 2019 Outreach Summary for materials produced.

Lower Des Plaines Watershed Group ILR40 Activities
March 2019 – February 2020

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 2019 included:

- The LDWG website was maintained during the reporting period and periodically updated (http://www.lowerdesplaineswatershed.org).
- A Seasonal Outreach Campaign was implemented throughout year. Media tool kits have been replaced with a "Members" tab on the website that includes all past and present seasonal outreach materials for download. Materials for each season include text for websites, newsletters, posters, blogs and social media posts. The website has also been expanded to utilize this information to enhance the experience for visitors to the LDWG website. Campaign specific materials were also developed – see examples attached at end of report. For the winter season www.SaltSmart.org website is also used as a clearinghouse of winter BMPs for residents, public agencies and private deicing companies. This website has provided a wider reach beyond the Lower Des Plaines River watershed and has organically grown into a regional Salt Smart Collaborative. All materials described in this report are available on the LDWG website.
    - Spring – Using native plants
    - Summer – Stormwater Pond Maintenance
    - Fall – Proper leaf collection/disposal
    - Winter – SaltSmart – Winter Snow & Ice Management BMPs

- Hosted a table representing LDWG at the Bluestem Earth Festival in Joliet on May 18, 2019

2. Public Involvement and Participation **–** The Lower Des Plaines Watershed Group participated in a Restoration Event in Romeoville on October 12, 2019 with information and activities for families on water quality.

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

Illinois Parks and Recreation Association Annual Conference January 22, 2019
LDWG staff presented a session titled: How to Be a Salt Smart Park District – Chloride Reduction Through Improved Deicing Strategies. The presentation focused on ways that Park Districts could reduce chloride use at their facilities and work with their local communities to meet reduction goals.

APWA Expo May 23, 2019
LDWG staff presented a session titled: How to Be a Salt Smart Community – Chloride Reduction Through Improved Deicing Strategies at the APWA Expo. Attendees included public works directors and public works staff from communities across the region.

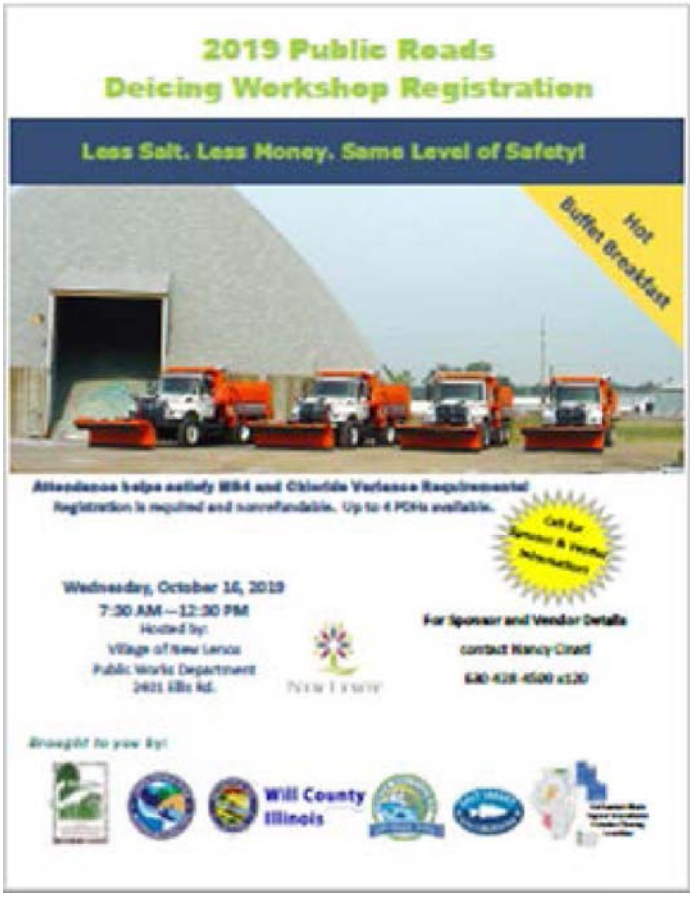
Chloride Reduction Workshops

Two chloride reduction workshops were held during the reporting period ending March 2020 in partnership with the Lower DuPage River Watershed Coalition.

The **public roads deicing workshop** held at Village of New Lenox Public Works Facility on October 16, 2019. Fortin Consulting was hired to present the Public Roads course with exam with the following agenda:

7:30 am Registration and Breakfast
8:00 am Welcome/ Housekeeping, Shawn Vandenberg, Village of New Lenox
9:00 am Information on developing efficient and cost-effective snow fighting operations, appropriate product selection, equipment selection, application rates, equipment calibration, ambient conditions monitoring. Presenters: Carolyn Dindorf, Fortin Consulting and Chris Walsh, (former Public Works Director, City of Beloit, WI)
11:30 am Test on Workshop Materials
12:15pm: Closing Remarks and Evaluations

Attendance – 66 registered, 2 presenters, 7 sponsors/exhibitors = 77 total. All participants received a certificate of attendance. We received 60 feedback forms from participants.

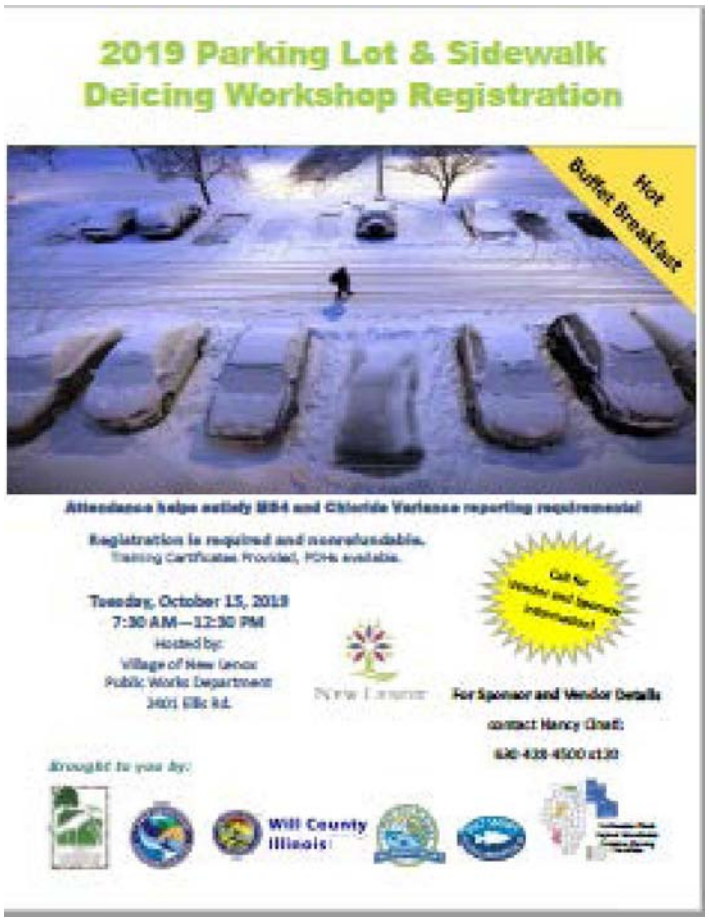


Photographs from the Will County Public Roads Deicing Workshop, 2019.

The **parking lots and sidewalks deicing workshop** was held at the Village of New Lenox's Public Works Facility on October 15, 2019 with the following agenda:

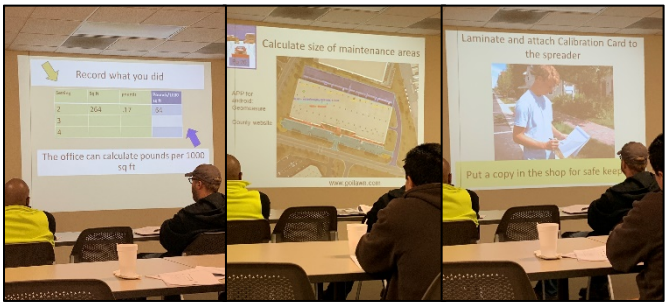
7:30 am Registration and Breakfast
8:00 am Introduction of topic and the relevance to Will County, *Jennifer Hammer, The Conservation Foundation*

8:15 am Ambient conditions and regulatory update and information on developing efficient and cost-effective snow fighting operations, appropriate product selection, equipment selection, application rates, equipment calibration, ambient conditions monitoring. Presenters: *Carolyn Dindorf, Fortin Consulting and Chris Walsh*, (former Public Works Director, City of Beloit, WI)
11:30 am Test on workshop materials.
12:15 pm Closing Remarks and Evaluations



Attendance - 22 registrations, 2 presenters, 2 staff, 5 exhibitors = 31 total. All participants received a training certificate. We received 21 feedback forms from participants.

Photographs from the Will County Parking Lots and Sidewalks Workshop, 2019.



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 LDWG 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 first round of bioassessment monitoring was completed in 2018 at half of the identified sites on the mainstem Des Plaines River. The second half of mainstem sites were scheduled for sampling in 2019. As outlined below, sampling was not completed in 2019 due to unsafe, high water conditions. A subset of stations will be resampled in 2020, all data collected on the mainstem will be compiled in a report that will be available in 2021. Details of the bioassessment program are below.

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
- Sediment monitoring
- Assessing physical and habitat characteristics such as stream bank erosion caused by storm water discharges
- Collaborative watershed-scale monitoring
- Ambient monitoring of total suspended solids, total nitrogen, total phosphorus, fecal coliform, and chlorides

BIOASSESSMENT

A biological and water quality survey, or "bio-survey", 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 LDWG bioassessment is the latter. The LDWG bioassessment program continued in 2019 with sampling 33 stations in the upper portion of the mainstem Lower Des Plaines River and several tributaries to this section. See table below for complete sampling schedule. The Bioassessment includes fish, macroinvertebrate, QHEI – Habitat and water chemistry at all sites and sediment sampling at a subset of sites. **Due to continued rain events across the watershed during the traditionally "dry period" causing unsafe conditions, collection of the second round of fish and macroinvertebrate sampling plates was not completed. A subset of the mainstem sites will be resampled in 2020. Results and reporting will be combined with data collection from 2018, 2019 and 2020 will be available in 2020.**

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

The LDWG 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 Des Plaines 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 will be posted on the LDWG website. It is not the role of the bioassessments to identify specific remedial actions on a site specific or watershed basis.

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.

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.

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.

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.

Water Chemistry

Methodology

Water column and sediment samples are collected as part of the LDWG bioassessment programs. 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. Sediment sampling is done at a subset of 168 sites using the same procedures as IEPA.

The parameters sampled for are included in Table 1 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.

Table 1. Water Quality and sediment Parameters sampled as part of the LDWG 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	Semi-volatile Organics
Iron	Volatile Organic Compounds
Lead	
Magnesium	
Zinc	

See attached 2019 Outreach Summary for materials produced.