Robinson ENGINEERING

Municipal Expertise. Community Commitment.

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

May 31, 2017

Project No. 05-770.FF

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

RE: Village of Frankfort
NPDES Permit MS4 Annual Report
Reporting Cycle 2016-2017
Permit No. ILR40 - 0194

Dear Sir/Madam:

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

- MS4 Annual Facility Inspection Report for 2016-2017
- TMDL Status (Based on 2016 IEPA Assessment)
- Various Attachments supporting Minimum Control Measures

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: Terry Kestel, Public Works Superintendent – Village of Frankfort
Jay Patel – IEPA-Des Plaines office

Illinois Environmental Protection Agency

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

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

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

Report Period: From March, 2016 To March, 2017

Permit No. ILR40 0194

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

Name: Village of Frankfort Mailing Address 1: 432 W. Nebraska Street

Mailing Address 2: County: Will

City: Frankfort State: IL Zip: 60423 Telephone: 815-469-2177

Contact Person: Terry Kestel Email Address: tkestel@vofil.com
(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

Cook 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))

NKO
Owner Signature:

5-24-17
Date:

Terry Kestel
Printed Name:

Superintendent of Public Works
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

WHEN IT RAINS IT DRAINS

After the Storm

For more information contact:

or visit
www.epa.gov/npdes/stormwater
www.epa.gov/nps

EPA United States Environmental Protection Agency

EPA 833-B-03-002

January 2003

THE YEAR OF CLEAN WATER

A Citizen's Guide to Understanding Stormwater

WHEN IT RAINS IT DRAINS

What is stormwater runoff?

Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Impervious surfaces like driveways, sidewalks, and streets prevent stormwater from naturally soaking into the ground.

Why is stormwater runoff a problem?

Stormwater can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm sewer system is discharged untreated into the waterbodies we use for swimming, fishing, and providing drinking water.

The effects of pollution

Polluted stormwater runoff can have many adverse effects on plants, fish, animals, and people.

- Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats.
- Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels.

- Bacteria and other pathogens can wash into swimming areas and create health hazards, often making beach closures necessary.
- Debris—plastic bags, six-pack rings, bottles, and cigarette butts—washed into waterbodies can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.
- Household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish and shellfish or ingesting polluted water.
- Polluted stormwater often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.

Stormwater Pollution Solutions

Residential

Recycle or properly dispose of household products that contain chemicals, such as insecticides, pesticides, paint, solvents, and used motor oil and other auto fluids. Don't pour them onto the ground or into storm drains.

Lawn care

Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams. In addition, yard clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams.

- Don't overwater your lawn. Consider using a soaker hose instead of a sprinkler.
- Use pesticides and fertilizers sparingly. When use is necessary, use these chemicals in the recommended amounts. Use organic mulch or safer pest control methods whenever possible.
- Compost or mulch yard waste. Don't leave it in the street or sweep it into storm drains or streams.
- Cover piles of dirt or mulch being used in landscaping projects.

Septic systems

Leaking and poorly maintained septic systems release nutrients and pathogens (bacteria and viruses) that can be picked up by stormwater and discharged into nearby waterbodies. Pathogens can cause public health problems and environmental concerns.

- Inspect your system every 3 years and pump your tank as necessary (every 3 to 5 years).
- Don't dispose of household hazardous waste in sinks or toilets.

Auto care

Washing your car and degreasing auto parts at home can send detergents and other contaminants through the storm sewer system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a waterbody.

- Use a commercial car wash that treats or recycles its wastewater, or wash your car on your yard so the water infiltrates into the ground.
- Repair leaks and dispose of used auto fluids and batteries at designated drop-off or recycling locations.

Pet waste

Pet waste can be a major source of bacteria and excess nutrients in local waters.

- When walking your pet, remember to pick up the waste and dispose of it properly. Flushing pet waste is the best disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local waterbodies.

Education is essential to changing people's behavior. Signs and markers near storm drains warn residents that pollutants entering the drains will be carried untreated into a local waterbody.

Residential landscaping

Permeable Pavement—Traditional concrete and asphalt don't allow water to soak into the ground. Instead these surfaces rely on storm drains to divert unwanted water. Permeable pavement systems allow rain and snowmelt to soak through, decreasing stormwater runoff.

Rain Barrels—You can collect rainwater from rooftops in mosquito-proof containers. The water can be used later on lawn or garden areas.

Rain Gardens and Grassy Swales—Specially designed areas planted with native plants can provide natural places for rainwater to collect and soak into the ground. Rain from rooftop areas or paved areas can be diverted into these areas rather than into storm drains.

Vegetated Filter Strips—Filter strips are areas of native grass or plants created along roadways or streams. They trap the pollutants stormwater picks up as it flows across driveways and streets.

Commercial

Dirt, oil, and debris that collect in parking lots and paved areas can be washed into the storm sewer system and eventually enter local waterbodies.

- Sweep up litter and debris from sidewalks, driveways and parking lots, especially around storm drains.
- Cover grease storage and dumpsters and keep them clean to avoid leaks.
- Report any chemical spill to the local hazardous waste cleanup team. They'll know the best way to keep spills from harming the environment.

Erosion controls that aren't maintained can cause excessive amounts of sediment and debris to be carried into the stormwater system. Construction vehicles can leak fuel, oil, and other harmful fluids that can be picked up by stormwater and deposited into local waterbodies.

- Divert stormwater away from disturbed or exposed areas of the construction site.
- Install silt fences, vehicle mud removal areas, vegetative cover, and other sediment and erosion controls and properly maintain them, especially after rainstorms.
- Prevent soil erosion by minimizing disturbed areas during construction projects, and seed and mulch bare areas as soon as possible.

Construction

Agriculture

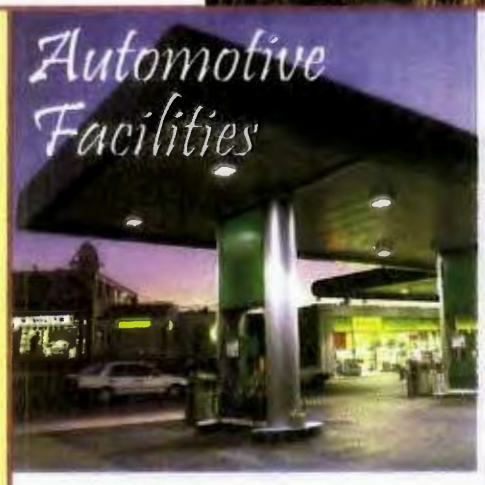
Lack of vegetation on streambanks can lead to erosion. Overgrazed pastures can also contribute excessive amounts of sediment to local waterbodies. Excess fertilizers and pesticides can poison aquatic animals and lead to destructive algae blooms. Livestock in streams can contaminate waterways with bacteria, making them unsafe for human contact.

- Keep livestock away from streambanks and provide them a water source away from waterbodies.
- Store and apply manure away from waterbodies and in accordance with a nutrient management plan.
- Vegetate riparian areas along waterways.
- Rotate animal grazing to prevent soil erosion in fields.
- Apply fertilizers and pesticides according to label instructions to save money and minimize pollution.

Forestry

Improperly managed logging operations can result in erosion and sedimentation.

- Conduct preharvest planning to prevent erosion and lower costs.
- Use logging methods and equipment that minimize soil disturbance.
- Plan and design skid trails, yard areas, and truck access roads to minimize stream crossings and avoid disturbing the forest floor.
- Construct stream crossings so that they minimize erosion and physical changes to streams.
- Expedite revegetation of cleared areas.



Automotive Facilities

Uncovered fueling stations allow spills to be washed into storm drains. Cars waiting to be repaired can leak fuel, oil, and other harmful fluids that can be picked up by stormwater.

- Clean up spills immediately and properly dispose of cleanup materials.
- Provide cover over fueling stations and design or retrofit facilities for spill containment.
- Properly maintain fleet vehicles to prevent oil, gas, and other discharges from being washed into local waterbodies.
- Install and maintain oil/water separators.

Uninvited Guests In Storm System

By Terry Kestel, Superintendent of Public Works

There are 80 miles of storm drains, 170 detention ponds, and numerous storm inlet and outlet structures throughout the Village of Frankfort that make up the storm drain system. This system is designed to collect the rain water during a rain event and hold it so it can be released slowly back into the waterway. Keeping the storm inlet and outlet structures open is a vital part of the storm system operating properly.

Every so often industrious little animals take the opportunity to make the storm system their home. I am referring to *Castor Canadensis*, more commonly known as the North American beaver. This animal needs to create flooded areas to build a home and have a food source. This is where the Village storm system becomes a possible location for them. They simply dam up the outfall structure to raise the water level and begin to look for food. The food source for the beavers is branches. With

the water level raised they can now easily chew off trees and branches and pull them into the water to the lodge that they have built for winter.

Unfortunately, the beaver's activities don't allow for the Village storm system to work properly, therefore creating potential flooding areas. Because of this the Village hires a licensed trapper to remove them from the pond. Once the beavers are removed, the drains are cleared and the storm system can continue to operate properly.

As fall approaches, the beavers begin to prepare for winter by selecting a site to build their home. Should Village residents notice any areas in the Village storm system being dammed by beaver activity please notify the Public Works Department at (815) 469-2177.

Daylight Saving Time Ends

Sunday, November 6
at 2:00 A.M.
Set clocks back 1 hour.

2016 Leaf Collection Program

The Village will provide five free curbside leaf collections this year. Leaves will be picked up once a week from **October 24 to November 21.**

Branch & Yard Waste Collection

The last scheduled day for Village provided branch pick-up service is **October 17.** NuWay Disposal will continue yard waste and branch pick-up through November. Branch bundles must be tied with string in a size that can be handled by one man. Bundles and yard waste bags **must** have a yard waste sticker affixed to them for pick-up.

Do you have a question or comment for the Village Board during the live Village board meeting?

Just email voflive@vofil.com during the meeting!

Avoiding Potential Drainage Issues

By Terry Kestel, Superintendent of Public Works

Often when deciding what topic to write about for the Village's newsletter, I try to use some of the past work orders that residents called in to see if there is a common reoccurring issue. This process has led me to write about such issues as uneven sidewalks, damaged parkway trees, sinkholes, and other issues that have been reported to Public Works. This process has led me to this edition's topic, "storm water drainage."

During rain events the Village will receive a handful of calls about water backed up in an area on the street or yard. Crews are dispatched and usually find a storm drain that has become blocked by debris. For the majority of these requests, once the drain is cleared, the area in question quickly returns to its normal drainage function.

However, there are calls that we

receive where this drainage issue is more complex. After crews determine that the storm drains are cleared of debris, the next step would involve finding out why the water isn't getting to the drain. In most of these cases, we discover that homeowners have inadvertently altered the original drainage pattern. This happens when landscape berms, fences, or other items are placed in the drainage route that was designed to channel the water during rain events. This restriction causes the water to either go outside the drainage easement or stay in an area causing a saturated area of lawn. To avoid creating this issue, please make sure the work to be performed is done with a Village Permit. This assures that a Village staff member has an opportunity to review the planned work so that it does not negatively affect your drainage or that of your neighbors.

If you have any question regarding drainage issues feel free to contact Frankfort Public Works or to obtain a permit, please contact the Village of Frankfort Building Department. Both departments can be reached at 815-469-2177. ✿

Trustee Talk, continued from page 3

over the last several years. Many of these later opportunities came at us somewhat quickly, which has caused us to up our game on the next phase of this long-range plan. That chapter has not yet been written.

None of this is possible without those business owners who invest in our community. The government can set the stage for commercial development by working with developers and owners but we are not in the business of running a business. This public private partnership is key to developing and maintaining a vibrant business district.

The Historic Business District is thriving. With the recent addition of another highly popular restaurant we see this area the healthiest it has been in my fifteen years on the board. Now, we just have to figure out where to park all those cars. And, if someone has a catchier name than "Parking Study", let us know. We may be talking about it ten years from now.

(To read the entire Hitchcock Study, visit www.villageoffrankfort.com under "Work/Historic Business District") ✿

2016 Branch Pickup Schedule

April 4 through October 17

Branches should be set out by 7:00 AM on Monday, stacked neatly with cut ends facing the street.

For additional details, visit www.villageoffrankfort.com under "Live/Village Services."

A-1/F-2

Uninvited Guests In Storm System

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Just email voflive@vofil.com during the meeting!

PROCLAMA[redacted]

VILLAGE [redacted] FRANKLIN [redacted] NEBRASKA [redacted]

WHEREAS, [redacted] Sterling Morton proposed [redacted] Nebraska [redacted] Agriculture [redacted] special [redacted] planting of trees; [redacted]

WHEREAS, [redacted] holiday [redacted] Arbor [redacted] observed [redacted] planting of more [redacted] million [redacted] of Nebraska; [redacted]

WHEREAS, Arbor [redacted] observed throughout [redacted] nation [redacted] world, especially [redacted] early spring [redacted] planting conditions [redacted] optimum; [redacted]

WHEREAS, April [redacted] Village of Franklin's [redacted] activities, [redacted] celebrates spring cleanup [redacted] planting endeavors through community-wide [redacted] enhancement initiatives; [redacted]

WHEREAS, [redacted] reduce [redacted] erosion, [redacted] precious topsoil [redacted] water, [redacted] heating [redacted] cooling, [redacted] moderate [redacted] temperatures, [redacted] produce oxygen, [redacted] provide [redacted] hospitable [redacted] habitat [redacted] wildlife; [redacted]

WHEREAS, [redacted] planting of trees, shrubs, flowers [redacted] pristine [redacted] reduce [redacted] debris, increase property values, enhance [redacted] economic vitality of business [redacted] beautify [redacted] community; [redacted]

WHEREAS, [redacted] Village [redacted] Franklin [redacted] recognized [redacted] National Arbor [redacted] Foundation [redacted] desires [redacted] continue [redacted] planting activities [redacted] endeavors; [redacted]

[redacted] **THEREFORE,** [redacted] I, [redacted] Richard Thiessen, [redacted] Village [redacted] Franklin, [redacted] hereby [redacted] proclaim April [redacted] "Earth [redacted] Day" [redacted] Village [redacted] Franklin [redacted] and [redacted] encourage [redacted] support [redacted] Village's [redacted] efforts [redacted] woodlands [redacted] support [redacted] Village's [redacted] efforts [redacted] beautify [redacted] Franklin's [redacted] community. [redacted]

[redacted] 3rd [redacted] day [redacted] April [redacted]

[redacted] Richard Thiessen, Village President

Attest:

[redacted] Darrell Village [redacted]

A-4/B-7
(Earth Day Trash Collection)

A[redacted]vitati[redacted] to J[redacted] Us...

EARTH DAY/ARBOR DAY CELEBRATION

SATURDAY, APRIL 16, 2016

EARTH DAY

Village of Frankfort

CLEAN-UP PROGRAM

[redacted]:30 A.M. – Volunteer Lunch [redacted]:30 AM

UTILITIES/PUBLIC WORKS FACILITY

524 CENTER ROAD

SAME LOCATION FOR SIGN UP & LUNCH – 524 CENTER ROAD!

CONTINENTAL BREAKFAST
EARTH DAY T-SHIRTS
FREE VOLUNTEER LUNCHEON AT
Utilities/Public Works Building (524 Center Road)
AFTER CLEAN UP (11:30 AM)

[redacted] MORE INFORMATION CALL [redacted] 815-469-2177 www.villageoffrankfort.com

If you have a large group, please contact Mary Canino at 815-469-21[redacted] mcanino@vofil.com to sign up. For additional details!

STORM[illegible] MANAGEMENT FACILITY INSPECTION FORM

[illegible] Inspection: 11/0/4/6
Name [illegible] Inspector: [illegible]
Location: [illegible]
Type [illegible] Facility: [illegible]

ITEM:

	CONDITION		
	ACCEPTABLE	REPAIR	COMMENTS
Control Structure			
Restrictor			
Outlet Structure			
[illegible] Structure(s)			
Embankment			
Safety Ledge			
[illegible] Channel			
Erosion Control			
Vegetation			
Shoreline			
Aquatic Habitat			
Other			

[illegible] Inspection [illegible] include [illegible] general observance [illegible] modification/alteration [illegible] approved [illegible] permit, [illegible] evidence [illegible] illegal discharge (stains, [illegible] sheen, etc.), obstruction [illegible] either natural [illegible] sedimentation, [illegible] vegetation [illegible] made [illegible] fence, dumping, accessory structures.

General Comments: Trees [illegible] along [illegible] outlets [illegible] clean [illegible] [illegible] armored [illegible]

Repair [illegible] Below

[illegible] Repair: [illegible]
[illegible] Repaired: [illegible]
Performing Repair: [illegible]
Re-Inspection: [illegible]
Inspector: [illegible]

STORMWATER MANAGEMENT FACILITY INSPECTION FORM

Inspector: 11/10/16

Name Inspector: [illegible]

Location: [illegible]

Type Facility: [illegible]

SWM

	ACCEPTABLE	REQUIRES REPAIR	COMMENTS
Control Structure	X		
Restrictor	X		
Other Structure	X		
Structure(s)		X	
Embankment	X		
Safety Ledge	X		
Channel	X		
Erosion Control			
Vegetation			
Shoreline			
Aquatic Habitat			
Other	X		

Inspection [illegible] include [illegible] general observation [illegible] modification/alteration [illegible] approved [illegible] permit [illegible] evidence [illegible] illegal discharge (stains, [illegible] sheen, etc.), obstruction [illegible] either natural [illegible] sedimentation [illegible] vegetation [illegible] made [illegible] fence, dumping, accessory structures.

General Comments: [illegible] check [illegible] slets [illegible] Sep [illegible]

Repair [illegible]

Repair:

Repaired:

Performing Repair:

Re-inspection:

Inspector:

STORM [illegible] ER MANAGEMENT [illegible] ACILITY INSPECTION FORM

[illegible] Inspection: 11/10/16

Name [illegible] Inspector: John Osborne

Location: [illegible]

Type [illegible] Facility: [illegible]

Item	[illegible]	CONDITION REPAIR	COMMENTS
Control Structure	[illegible]		
[illegible] Restrictor	[illegible]		
Outlet Structure	[illegible]		
[illegible] Structure(s)			
Embankment			
Safety Ledge	X		
Channel	W-?		
Erosion Control		[illegible]	
Vegetation	✓		
Shoreline	✓		
Aquatic Habitat	✓		
Other			

[illegible] Inspection [illegible] general observation [illegible] modification/alteration [illegible] approved [illegible] permit [illegible] evidence [illegible] illegal discharge (stains, [illegible] sheen, etc.), obstruction [illegible] other nature [illegible] sedimentation, [illegible] vegetation [illegible] fence, dumping, accessory structures.

General Comments: Pond [illegible] orth [illegible] erode [illegible] West South side

Repair [illegible] Report

[illegible] Repair: [illegible]

[illegible] Repaired: [illegible]

Performing Repair: [illegible]

Re-Inspection: [illegible]

Inspector: [illegible]

Stormwater Detention

12. Label the type of pond (dry bottom) on the plan.
13. Village Design Standards require a 2.5" minimum diameter restrictor. It appears that the restrictor elevations can be raised (to decrease the head and increase orifice diameter). Raising the orifice will also reduce impacts from any tailwater in the downstream existing sewer. This will also assist inspection and maintenance of the orifices. Please revise the calculations and detail accordingly. Also, it appears that the discharge used in the TR-20 model should utilize a zero release below the bottom of the pond. Furthermore, the rim elevation on the detail shall match the grading and utility plans.
14. *Include a note on the plans and plat indicating the maximum lot coverage (as percent and area) on Lots 5-9 to restrict buildout to correspond with the detention calculations.*

Stormwater Conveyance

15. Revise the storm sewer configuration:
    a. All pipe shall have 3' minimum cover, where feasible.
    b. Please revise the storm sewer configuration so that runoff from Lot 9, including sump pump and downspout flows, is collected in a structure, rather than or prior to sheet flow across the sidewalk.
    c. Provide more than 0.01' separation at crossing B to accommodate variations during construction.
    d. We note that the rim elevations for structures C2 and C3 do not provide 1' freeboard to the HWL.
16. Revise storm sewer calculations and exhibit:
    a. Based on revisions in the previous comment.
    b. The calculations and exhibit should consistently indicate areas, times of concentration, and slopes.
    c. The 100-year runoff for areas B3 and B4 shall be routed to the pond.
    d. Confirm the drainage areas in StormCAD are accurate for C4 and C5.
    e. All 100-year storm sewer requires analysis with a tailwater (10-year minimum). Please verify that the tailwater applied at all flared end sections is at least at the 10-year pond elevation.
    f. All 100-year storm sewer requires analysis of grate capacity. It appears that the structures at running grade would benefit from using directional inlets.
17. Revise the plan to show connections for sump pump discharge lines.
18. Revise the details for the flared end section and grates per IDOT standards.
19. Provide an exhibit showing areas of inundation. Also include the following:
    a. Maximum elevations of ponding prior to overtopping.
    b. Arrows indicating direction of overtopping. (Remove/revise arrows on grading plan).
    c. Elevations on the grading plan where the sidewalk will need to accommodate the overland flow route (west of Structure C4).
    d. Provide existing and proposed grades near structure D2 to ensure overflow to the pond rather than offsite.
20. Provide calculations to verify the proposed emergency overland flow route provides sufficient protection of existing and proposed buildings (1' minimum freeboard) from the 100-year storm during potential storm sewer failure. Add cross sections to the plan to ensure swales will provide the required capacity.
21. Provide an exhibit of all offsite tributary areas and demonstrate that the proposed storm sewer and overland flow route systems can accommodate all offsite runoff.

Grading Plan

22. The grading plan shall comply with Village slope requirements. Label proposed buildings with TF and/or ground at all corners, especially in locations where the foundations are stepping. Clarifications are needed for locations of Walk Outs and Look Outs, to confirm proposed grades comply with slope requirements and positive drainage is provided. See Exhibit 1, Grading Plan Markup, for additional information. Village slope requirements are as follows:
    a. *Driveway slopes shall not exceed 8%.*
    b. *Rear yards shall not exceed 10%.*
    c. *Side yards shall have positive slope away from building pad areas, not to exceed 20%.*

Water Distribution

23. Label the watermain diameter on Sheet 9.
24. Label each proposed valve on the main line to be in a vault (or revise legend).
25. Significant cut is proposed over the existing watermain. Where 1' or more of cut is proposed, confirm the location and depth of the existing watermain to ensure adequate cover is still provided after the proposed lowering for the entrance (or lower the watermain).
26. Provide ground elevations for each hydrant consistent with Grading Plan.
27. Specify where casing and/or watermain quality pipe will be used (crossings A, C and D).

Sanitary Sewer

28. The entire length of pipe between Sanitary Sewer Manhole No. 2 and No. 1 should have trench backfill.
29. *Show the future force main in the Colorado Avenue ROW.*

Roadway

30. The draft annexation agreement requires installation of a 5' sidewalk off-site to the east. Plans for the sidewalk were not included in the current submittal.
31. Increase the length of the vertical curve to provide additional stopping sight distance. Typically the Village requires 30 mph minimum design speed for residential streets.
32. Add a note requiring a proofroll of subbase material; the Village shall be contacted at least 2 business days in advance of the proofroll.
33. Revise the pavement cross section to require 2 ¼" Binder Course.
34. Add a note to require 2% maximum cross slope on the sidewalk.
35. Provide a detail for the truncated domes; specify that the contrasting color is to be brick red.
36. Provide a stop sign at the intersection of Iron Gate Court.
37. Show the location of the proposed street sign.

Erosion and Sediment Control

38. Provide a Storm Water Pollution Prevention Plan, including notes, details, etc. demonstrating compliance with state requirements. Also, include signature blocks for the owner and contractor. Two fully executed SWPPPs will be required to be submitted to the Village prior to issuing a notice to proceed.
39. Identify each tree for protection; add a detail.
40. Label all storm structures to be provided with inlet protection.
41. Specify erosion and sediment control measures for the swales (include detail drawings).
42. Indicate the location of temporary stockpiles. Specify erosion and sediment control measures.
43. Add silt fence and excelsior blanket around all ponds.
44. Sheet 7 includes details for the following items that are not identified on Sheet 6: Culvert Inlet Protection – Silt Fence, Inlet Protection – Fabric Drop Plan, Inlet Protection – Excavated Drain Plan. Remove the details from Sheet 7 or update Sheet 6.
45. Add a note to require stabilization within 14 days of disturbance.

Conditions

A. *Approvals from outside agencies are the responsibility of the owner and/or owners' engineer,* including but not limited to IEPA Water, Sewer and NPDES.
B. *It is the owner and owner's consultants' responsibility to verify that all existing and proposed utilities (electric, gas, telephone, underground cable, water, sewer, etc.) and related easements are shown on the plans and that they will be relocated/removed accordingly with any and all required approvals.*

Please note that this engineering review is based on the Village of Frankfort Design Standards (June, 2009) and the Village of Frankfort Flood Regulations (July, 2008) and excludes review of site, planning, zoning, photometric, signage

and landscaping requirements of other Village ordinances and codes being performed by the Development Services Department and other Village designees.

Should you have any questions or require any further information, please feel free to contact me at (815) 806-0300. At the time of resubmittal of this project, please include a disposition letter responding to each comment listed, as well as reference to revision on plan sheet or calculation (where applicable).

Very truly yours,

ROBINSON ENGINEERING, LTD.

Dana E. Ludwig

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

CC: Jeff Cook – Village of Frankfort
Zach Brown – Village of Frankfort
Adam Nielsen – Village of Frankfort

Robinson ENGINEERING

Municipal Expertise, Community Commitment

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

October 3, 2016

Project 14-655.01

Joseph A. Schudt & Associates
9455 Enterprise Drive
Mokena, IL 60448

Attn: D. Warren Opperman, PE

RE: Sturdi Iron
22405 Center Road
Engineering Review #3

Dear Mr. Opperman:

On behalf of the Village of Frankfort, we reviewed the 9/14/16 Site Improvement Plans and 9/13/16 Plat of Easement for the above referenced project and have the following comments to be addressed. Italicized items remain open since previous correspondence.

1. Add/revise the following items on the newly submitted SWPPP:
    a. Stormwater detention shall be constructed prior to all other mass grading.
    b. Revise the description for area receiving runoff: reference the existing Zone A on the property.
    c. Remove/modify the note requiring the MS4 to conduct site visits.
    d. Add specifications for stabilization (permanent and temporary) for the stockpile.
    e. Add a note requiring techniques to divert upland runoff past the disturbed site.
    f. Add a place to provide contractor's contact information (name, phone number, address).
    g. Revise all references from Will County to the Village of Frankfort.
2. Revise the newly submitted Plat of Easement; see the PDF from our Survey Department.
3. Label the width of the overflow weir.
4. *Further clarifications are needed for the storm sewer sizing and overland flow route: Include a drainage area exhibit (onsite and offsite).* Demonstrate drainage patterns west of and in Center Road ROW. The USGS map shows a drainage divide west of Center Road to be evaluated prior to confirming the site grading and infrastructure sizing. Furthermore, County Topo indicates that the low point in Center Road (below 770) may be in front of this property and contribute to drainage across the site. *Provide documentation to clarify where surrounding properties drain. Both driveway culverts drain to the center of the property, upstream and west of the proposed 15" RCP. If offsite flows are tributary, the sewer shall be placed in an easement.*
5. *Revise the restrictor detail and storm inlet to match Village Design Standards* (or remove the snout).
6. *Digital files will be required, including .dwg and .pdf of the entire final plan set.*

Notes/Conditions

A. Signed SWPPPs are required to be filed with Village Staff prior to construction.
B. The engineer's estimate for the cost of construction for letter of credit items is $32,410.00. Please confirm the total letter of credit amount and verbiage with Village Staff.
C. *Approvals from outside agencies and/or utility companies are the responsibility of the owner and/or owners' engineer.*
D. IEPA has assigned NPDES Permit Number ILR10X553, however, an effective date is not yet posted (IEPA indicates a submitted date of 9/20/16).
E. *As-built topography will be required after the project is constructed.*
F. *Detention was calculated and designed based on the limits of parking and other site features as shown. Any future development of the site requires additional analysis and stormwater volume to be constructed.*

Please note that this engineering review is based on the Village of Frankfort Design Standards (June, 2009) and the Village of Frankfort Flood Regulations (July, 2008) and excludes review of site, planning, zoning, photometric, signage and landscaping requirements of other Village ordinances and codes being performed by the Development Services Department and other Village designees.

Should you have any questions or require any further information, please feel free to contact me at (815) 806-0300. At the time of resubmittal of this project, please include a disposition letter responding to each comment listed, as well as reference to revision on plan sheet or calculation (where applicable).

Very truly yours,

ROBINSON ENGINEERING, LTD.

Dana E. Ludwig

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

CC: Jeff Cook – Village of Frankfort
Zach Brown – Village of Frankfort
Adam Nielsen – Village of Frankfort

D-1/D-2/D-4/E-2/E-4

Robinson ENGINEERING

Municipal Expertise. Community Commitment.

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

May 18, 2017

Project 16-R0322

DesignTek Engineering, Inc.
9930 190th Street, Suite L
Mokena, IL 60448

Attn: Mr. Mike Ford, PE

Re: Iron Gates Estates
Colorado Acres LLC
Final Engineering Review

Dear Mr. Ford:

On behalf of the Village of Frankfort, we reviewed the following documents for the above referenced project and have the following comments to be addressed. Italicized comments remain unaddressed or are still in progress from previous correspondence or communications:

- 4/12/17 Final Engineering Improvement Plans
- 4/12/17 Final Stormwater Management Report

General

1. Please address conditions of the Plan Commission:
   a. Include of a no fence / no access easement along Colorado Avenue for Lots 1, 11, and 12.
   b. Consider increasing the north preservation easement up to 40'.
   c. Add landscaping at 432 and 426 Colorado Avenue.
2. Include the attached indemnification language on the plans.
3. Maintenance of the pond and walls shall be specifically listed in the CCRs as part of the common area.
4. Provide a Plat of Subdivision for review, including easements for public utilities and drainage.
5. The letter of credit estimate is under review and comments, if applicable, will be provided separately.
6. Digital files are required, including .dwg of lot lines and utilities and .pdf of the entire final plan set.

Retaining Walls

7. *Revise the wall elevations and/or length to adjacent to the entrance to transition to adjacent properties:*
   a. *At the south end of the wall (W8 thru W7), the proposed top of wall elevations are 712.4-717.7 while the existing contour lines at the property line (eight feet to the east) are 718-720 (or higher). Slopes of grassed area shall be no greater than 5:1.* Grade transitions need to be addressed in the east-west and north-south directions. It appears that the wall will not be able to be terminated in the location shown; extend the wall to the east, parallel to the existing curb of Colorado Avenue, to provide transitions and grading within the Design Standard requirements. Parkway slopes and geometry shall accommodate the sidewalk.
   b. Provide existing spot elevations at the property line and a blown up grading plan for this area.
   c. Specify a distance between the south end of the wall and the property line/sidewalk.
8. *Confirm fence/handrail requirements with the Building Department.*
9. Plans for the walls are required, with details and specifications, signed and sealed.
10. Materials and colors shall be submitted to Village Staff for review.
11. The owner and/or contractor are responsible for verifying soil conditions and subgrade conditions for the retaining wall and all other structures on site.

D-6

Frankfort Commons Phase Erosion Control Inspection 3/2/2016

Lower DuPage R[redacted]ver

Watershed Coa[redacted]t[redacted]on

C[redacted]rtifi[redacted]te [redacted]f Attendan[redacted]

TRMA
Manufacturers Association

Parking Lots [redacted]idewalks Deicing [redacted]orkshop
Three Rivers Manufacturers' Association
September [redacted]

RTI
CONSULTING, INC.
serving environment

[redacted]rry Kestel
Village Of Frankf[redacted]rt

Presenters: Connie [redacted] Forte Consulting; Chris Walsh, C[redacted]nsul[redacted]
Jennifer Hammer, [redacted] Conservation [redacted]ndation/LDRWC

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FRANKFORT FINANCIAL SYSTEM                                    VILLAGE OF FRANKFORT
05/24/2017  08:39:24      Exp. Guideline W/Detail II          GL050S-V08.04 COVERPAGE
                                                              GL525P

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*                     * * *  E  X  P  E  N  S  E     * * *                     *
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Report Selection:

Inclusions Ranges:  Begin                    (thru) End
  Fund & Account... 13.441.4238_____________  13.441.4238_____________
                    _____________________     _____________________

  Approval Plan..................... ____  thru  ____

  Calendar Start Date.............. 05 01 2015
  Calendar End (As Of) Date........ 04 30 2016


  Level to Page Break.............. 1 . 0      (1.0 to 5.0)

  MTD or QTD or YTD  (M/Q/Y)....... Y

  Print Inactive Accounts Too?..... N          (Y/N)
  Exclude Accounts with Zero Dollars. Y        (Y/N)
  (A)nnual Budget or (Y)ear-to-Date.. A        (A/Y)


Run Instructions:
  Jobq Banner   Copies Form  Printer      Hold Space  LPI  Lines CPI  CP SP RT
    3  EXPENSE    01        LASER2        Y    S      6    066   10
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Exp. Guideline W/Detail II
FOR THE PERIOD(S) MAY 01, 2015 THROUGH APR 30, 2016

SOURCE-JE-ID	VENDOR/CUSTOMER/EXPLANATION	REF/REC/CHK	INVOICE	P.O.	F	9	ANNUAL REVISED BUDGET	ENCUMBERED	ACT MTD POSTED AND IN PROCESS	ACT YTD POSTED AND IN PROCESS	REMAINING BALANCE	PCT	DESCRIPTION	FIL
13	ROAD & BRIDGE FUND													
441	STREETS													
	MAINTENANCE SERVICES:													
4238	R&M - STREET SWEEP						25,000.00	0.00	12,721.20	36,241.67	11,241.67-	144	----------]]]]	
D-060115-815	001026 NU-WAY DISPOSAL SERVICE,	114282	5017851						N	120.75			STREET SWEEPING 5/2	A
D-061515-849	001026 NU-WAY DISPOSAL SERVICE,	114408	5028359						N	9,448.73			STREET SWEEPING ALL	A
D-070615-861	001026 NU-WAY DISPOSAL SERVICE,	114558	5075594						N	896.40			SWEEPING DUMPS 6/5	A
D-070615-861	001026 NU-WAY DISPOSAL SERVICE,	114558	5081888						N	2,751.94			STREET SWEEPING 6/20	A
D-081715-951	001026 NU-WAY DISPOSAL SERVICE,	115021	5122003						N	483.00			STREET SWEEPING	A
D-090815-973	001026 NU-WAY DISPOSAL SERVICE,	115197	5139834						N	1,732.50			STREET SWEEPING	A
D-110215-071	001026 NU-WAY DISPOSAL SERVICE,	115694	5201747						N	1,811.26			ST SWEEPING 10/7	A
D-111615-098	001026 NU-WAY DISPOSAL SERVICE,	115853	5212477						N	2,596.13			STREET SWEEPING 10/29	A
D-120715-114	001026 NU-WAY DISPOSAL SERVICE,	116016	5206309						N	1,627.00			STREET SWEEPING DISPOSAL	A
D-010416-167	001026 NU-WAY DISPOSAL SERVICE,	116247	5261869						N	2,052.76			STREET SWEEP 12/9	A
D-042516-335	001026 NU-WAY DISPOSAL SERVICE,	117081	5346280						N	850.00			DEBRIS RMVL-ST SWEEPING	A
C-043016-009	YEAR END CLOSING									36,241.67-			R&M - STREET SWEEP	A
A-043016-375	001969 MATTHUIS TRUCKING INC	117303	13635						N	360.00			@15@DEBRIS REMOVAL 4/25	A
A-043016-375	001026 NU-WAY DISPOSAL SERVICE,	117309	5380392						N	10,029.20			@15@STREET SWEEPING-APR	A
A-043016-375	001026 NU-WAY DISPOSAL SERVICE,	117309	5387547						N	1,482.00			@15@SWEEPING DISPOSAL	A
TOTAL:	MAINTENANCE SERVICES:						25,000.00	0.00	12,721.20	36,241.67	11,241.67-	144	----------]]]]	
TOTAL:	STREETS						25,000.00	0.00	12,721.20	36,241.67	11,241.67-	144	----------]]]]	
TOTAL:	ROAD & BRIDGE FUND						25,000.00	0.00	12,721.20	36,241.67	11,241.67-	144	----------]]]]	

SOURCE-JE-ID	VENDOR/CUSTOMER/EXPLANATION	REF/REC/CHK	INVOICE	P.O.	F	9	ANNUAL REVISED BUDGET	ENCUMBERED	ACT MTD POSTED AND IN PROCESS	ACT YTD POSTED AND IN PROCESS	REMAINING BALANCE	PCT	DESCRIPTION	FIL
GRAND TOTAL							25,000.00	0.00	12,721.20	36,241.67	11,241.67-	144	----------]]]]	

TOTAL NUMBER OF RECORDS PRINTED 16

F-2
(Ditch Cleaning)


F-2
(Ditch Cleaning)

F-1

Hickory Creek Watershed Planning Group

www.hickorycreekwatershed.org

February [illegible] 10:30 AM

Location: New Lenox Public Works Garage
[redacted] Ellis Road, New Lenox, [redacted] 60451

Attendees: [illegible]

MEETING MINUTES

[redacted] to Order [redacted] Call

[illegible] [illegible]

[redacted] Welcome and Introductions

[redacted] Presentations

[redacted] "Origins of Sodium Chloride [redacted] Nitrate Contamination within the Illinois [redacted] Basin" presented by Walt Kelly, Illinois State Geological Survey

This presentation will discuss the use of groundwater chemical compositions, nitrate isotopes, and chloride/bromide ratios of seasonally-collected water samples from the Illinois River Basin from Chicago to its confluence with the Mississippi River. Our study revealed that nitrate within the river is dominated by agricultural sources during the spring/late and discharge from the wastewater treatment plants during the summer. Road salt was the dominant source of sodium and chloride in the winter and early spring, and treated waste water the dominant source during the rest of the year. Chloride has increased 1.2 mg/L per year in the Illinois River since the 1960s when road salt was first used, and continues to increase.

Questions & Answers:

Paul B. asked were the sampling locations mapped as part of the study. Walt K. replied yes the sampling locations were mapped. He also mentioned, in some cases samples were collected across the river to ensure a stormwater samples represented concentrations in the center of the river.

"Facing Stormwater Management Challenges with [redacted]" presented by Dan Bouchard, [redacted]

For years geospatial technology has provided the tools and capabilities for managing stormwater infrastructure. Fairly recent developments in mobility and interoperability has expanded the technology to dramatically improve all facets of stormwater management. In this brief presentation, Mr. Bouchard will

provide an overview of the plan highlighting inventory and/or locations of stormwater outfalls, locating illicit discharges and tracking and accounting system for improvement needs.

Mr. Boudreau is a certified GIS Professional and member of CBBEL's Enterprise IT Group serving as the Geospatial Systems Lead heading up the Geospatial Information Management and Solutions team.

Questions & Answers

- *Thomas S. asked what is the typical cost/fees for the smaller GIS units. Dan B. responded that Trimble has a smaller unit which costs about $7,500.*
- *Ahmed [redacted] asked what is the cost for the [redacted] survey? Dan [redacted] responded that the survey application is free and is available through the ArcGIS online service.*
- *Dan P. asked what is the cost to have the Mobile GIS and reporting consulting services? Dan B. responded that it depends on the community's existing data availability and goals.*

[redacted] Approval [redacted] Minutes

Scott K. moved to approve the December 2016 meeting minutes. Thomas S. seconded. Minutes approved.

[redacted] Correspondence

Nutrient Management

1) Update on HCWPC's Nutrient Management Strategy and meeting with IEPA

Lindsay [redacted] provided a summary of the HCWPC's board members' meeting with the IEPA in Springfield. Lindsay [redacted] said that she presented to the IEPA an overview of HCWPC monitoring program and nutrient management strategies, and opened the discussion on the group's next steps.

Bill S. responded that, on IEPA's response to the watershed group's next steps (e.g. either focus on the Third Party TMDL approach, nutrient management strategies with the POTWS chloride variance, NSP or a combination). Additionally, should the group merge with Lower Des Plaines Watershed Workgroup or remain separate? The IEPA responded to say it would be up to HCWPC on how they want to proceed, but to keep in mind that the impairments identified in Hickory Creek and its tributaries will need to be addressed. Bill S. summarized that it will come down to monitoring commitment from the HCWPC members as to determining which 303d list of impairments will be addressed by the planning group.

Dan P. mentioned when it comes to nutrient management, specifically a nutrient implementation plan (NIP) for phosphorus reduction, the IEPA does not have guidance for the planning group, but Dan is always that the group will need to collect more data.

Allison S. stated that the Illinois Association of Wastewater Agencies and the Environmental Action Group of Illinois are working on "universal language" for managing nutrients. The language may include that by 2030 the major wastewater plants will have a 0.5 mg/l phosphorus limit or effluent based limits. Additionally, IEPA is really pushing a water quality based effluent limit depending on the watershed.

Dan P. reminded the HCWPC members that the watershed group initially was moving toward focus on best management practice (BMP) implementation, not the Third Party TMDL. Because until the Hickory Creek dam is ... for removal it didn't make sense to do a large effort in upstream BMP and monitoring and implementation until the dam study was further along. But now it seems like the dam study is being stalled, we will need to broaden our scope either individually or as a watershed group.

F-1

[illegible] mentioned that [illegible] proposal for phosphorus sampling [illegible]

-Update on the proposed Lower Des Plaines Watershed Workgroup (LDPWW)

Allison K. mentioned the LDPWW [illegible] with IEPA earlier in February [illegible] monitoring [illegible] 2017. The LDPWW [illegible] members [illegible]

Report of Officers, Sub-Committees

Chloride Variance

-Update on the Lower Des Plaines Chloride Variance Workgroup

Lindsay B. mentioned that the Lower Des Plaines Chloride Variance Workgroup (LDPCVW) has a continuous conductivity probe installed in collaboration with the USGS in the lower Des Plaines River at Channahon, IL.

Lindsay B. also mentioned, that the LDPCVW had a conference call with Scott Twait with IEPA earlier this year. Based on the conference call, LDPCVW will have to decide if they will pursue development of chloride variance technical document and seek legal counsel or if the members will submit a chloride variance individually.

[illegible] of the [illegible] Area Waterways (CAW) committees

Lindsay B. mentioned that CAW hopes to submit their chloride variance [illegible] sometime this early summer.

-Update on Chloride Toxicity studies

Lindsay B. reported that the toxicity studies are completed and the reports are [illegible].

Old Business

SFSC Residential Construction [illegible]

[illegible] asked the HCWP members to review the [illegible] and send any comments to Lindsay B. by February 28th. She also asked the members if they would like for [illegible] members and municipal officials [illegible]. The feedback from the members [illegible] send the final version to the HCWP members and also post online.

Hickory Creek BMP Implementation RFP - Extended deadline till February 28, 2017

Lindsay B. mentioned that RFP deadline was extended. She encouraged members to submit their projects and the RFP application form by February 28, 2017.

Hickory Creek Bio Blitz results

Lindsay B. stated that the 2016 Bio Blitz results are in and the memorandum is available on the Hickory Creek watershed website ([illegible]).

New Business

Volunteer Monitoring Program

2017 Volunteer Monitoring Program work/discussion about monitoring recommendations

Lindsay B. provided an overview of monitoring recommendations, including sampling for [illegible] in the summer months, continuous DO monitoring, and coordinating with [illegible] County Stormwater department on oil & grease data collected.

VI Announcements/Comments

2017 Special Achievement Award [illegible] Chapter of the American Council of Engineering Companies Engineering Excellence Award (EEA)

2017 [illegible] Conference presentation on Hickory Creek Bio-Blitz (2/28/17)

VII Next meeting agenda

Next meetings [illegible] as follows:

April 13, 2017 at 10 am

June 15th at 10 am (Annual meeting)

Will [illegible] [illegible] [illegible] second [illegible] Monday [illegible]

Village of Frankfort – TMDL Status

According to the 2016 Assessment by the IEPA, none of the assessed waterways within the Village of Frankfort have an approved TMDL. The following is a summary of information obtained from the Resource Management Mapping Service (www.rmms.illinois.edu/RMMS-JSAPI/):

Assessed Stream/ Watershed	**Hickory Creek**	**Jackson Branch**	**Des Plaines River**	**Kankakee River**	**Forked Creek**
Location	Within Corporate Limits	Downstream of Corp. Limits (assessed limits)	Downstream of Corp. Limits	Downstream of Corp. Limits	Downstream of Corp. Limits
HUC 10	0712000406	0712000409	0712000409	0712000118	0712000117
AUID	IL_GGF (Frankfort Trib), IL_GG-06 (Hickory Creek), IL_GGC-FN-C1 (Union Ditch)	IL_GCB	Various	Various	Various
2016 303(d) List/ Prioritization (Appendix A-1)	Medium	Medium	Medium	Medium	No Data Available
Designated Use (Appendix A-1)	Aquatic Life, Primary Contact Recreation	Aquatic Life	Fish Consumption, Primary Contact Recreation	Fish Consumption	No Data Available
Cause of Impairment (Appendix A-1)	*(Watershed impairments, may or may not be a direct contribution from Frankfort MS4):* Arsenic, Chloride, Dissolved Oxygen, Fecal Coliform, pH, Phosphorus (Total), Total Suspended Solids (TSS)	Dissolved Oxygen, Total Phosphorus, Zinc	Fecal Coliform Mercury, Polychlorinated biphenyls	Mercury, Polychlorinated biphenyls	No Data Available
Schedule for TMDL Development, 2016-2018 (Appendix A-3)	Not listed.	Not listed.	Not listed.	Not listed.	Not listed.
Status (Appendix A-6)	Not listed.	Not listed.	Not listed.	Not listed.	Not listed.
IEPA Projects in TMDL Watersheds (Appendix A-7)	Not listed.	Not listed.	Not listed.	Not listed.	Not listed.
Category 4C: Not caused by pollutants (Appendix A-8)	Not listed.	Not listed.	Not listed.	Not listed.	Not listed.
TMDL Report on Website	N/A	N/A	N/A	TMDL for Kankakee/Iroquois Watershed, Tetra Tech, 2009	N/A

What Is a TMDL?

The establishment of a Total Maximum Daily Load sets the pollutant reduction goal necessary to improve impaired waters. It determines the load, or quantity, of any given pollutant that can be allowed in a particular water body. A TMDL must consider all potential sources of pollutants, whether point or nonpoint. It also takes into account a margin of safety, which reflects scientific uncertainty, as well as the effects of seasonal
variation.

Why Develop TMDLs?

Section 303(d) of the federal Clean Water Act requires states to identify waters that do not meet applicable water quality standards or do not fully support their designated uses. States are required to submit a prioritized list of impaired waters, known as the 303(d) List, to the U.S. Environmental Protection Agency for review and approval. The CWA also requires that a TMDL be developed for each pollutant of an impaired water body. Illinois EPA is responsible for carrying out the mandates of the Clean Water Act for the state of Illinois.

The TMDL Process

Developing TMDLs in a watershed begins with the collection of vast amounts of data on factors including water quality, point source discharge, precipitation, soils, geology, topography, and land use (construction, agriculture, mining, etc.) within that specific watershed. All impaired water-body segments within the watershed are identified, along with the potential pollutants causing the impairments.

Next, Illinois EPA determines the tools necessary to develop the TMDL. In most cases, computer models are used to calculate pollutant loads. The appropriate model or models are selected based on the pollutants of concern, the amount of data available, and the type of water body. Once the model is selected, the data collected for the watershed are entered, and the model is calibrated and verified so that the computed values match those of known field data. The model can then be used to develop different scenarios, by first determining the amount of specific pollutants each source contributes, then calculating the amount each pollutant needs to be reduced, and finally specifying how the reduced pollutant load would be allocated among the different sources.

After the reduced pollutant loads have been determined, an implementation plan is developed for the watershed spelling out the actions necessary to achieve the goals. The plan specifies limits for point source discharges and recommends best management practices (BMPs) for non-point sources. It also estimates associated costs and lays out a schedule for implementation. Commitment to the implementation plan by the citizens who live and work in the watershed is essential to success in reducing the pollutant loads and improving water quality.

Improved Water Quality

The goal of TMDLs is better water quality for Illinois. Improving lakes, rivers, and streams has a positive impact on the quality and quantity of the fish and animals that depend on these waters for habitat, food, breeding, and survival. This in turn contributes to balanced, healthy ecosystems.

Beyond the ecological benefits, cleaner water increases opportunities for fishing, boating, and other recreational activities and improves the overall appearance of lakes, rivers, and streams. A cleaner source of drinking water can mean lower treatment costs, which may reduce water expenses for local citizens and businesses. Protecting and restoring the quality of Illinois waters is ultimately the responsibility of everyone. The success of a TMDL implementation plan typically depends on the cooperation of those who live and work in the watershed. Citizens can take ownership of their local water bodies by adopting suggested BMPs and encouraging others to do the same. By integrating sound science with public support, TMDLs can be a valuable tool for improving and protecting our precious water resources.

For more information about Illinois' TMDL program, visit: www.epa.state.il.us/water/tmdl