

Welcome to Lake County Stormwater Management's Homeowners Association Workshop!

Tuesday, September 20, 2022



STORMWATER MANAGEMENT COMMISSION

House Keeping Items



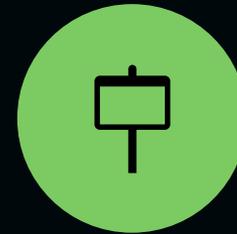
RESTROOMS
LOCATION



TIME FOR
QUESTIONS



REFRESHMENTS



SIGN-IN



MEETING
RECORDING

Agenda (it's packed!)

- Welcome, Overview, and Central Permit Facility Stormwater Features
 - Mia Gerace, SMC
- HOA Maintenance Responsibilities for Subdivision Drainage Systems
 - Brian Frank, SMC and Alana Bartolai, LC Health Department
- Stormwater Funding Assistance Programs
 - Juli Crane, SMC, Michelle Pope, SMC, and Kurt Woolford, SMC
- HOA Case Study: The Importance and Practices for Detention Basin Preventative Maintenance in Lakewood Grove HOA
 - Geoff Perry, Gewalt Hamilton Associates, Inc. and President of Lakewood Grove HOA
- What to Do When You Think You Need Professional Help
 - Debbie Budyak, ILM
- HOA Legal Maintenance Responsibilities for Subdivision Drainage Systems
 - John Bickley, III, Kovitz, Shifrin & Nesbit (Buffalo Grove)

Presenters' Contact Info

1. Mia Gerace, Lake County SMC
 - Email: MGerace@lakecountyil.gov
 - Phone: 847-377-7728
2. Brian Frank, Lake County SMC
 - Email: BFrank@lakecountyil.gov
 - Phone: 847-377-7704
3. Alana Bartolai, Lake County Health Dept.
 - Email: ABartolai2@lakecountyil.gov
 - Phone: 847-377-8009
4. Juli Crane, Lake County SMC
 - Email: JCrane@lakecountyil.gov
 - Phone: 847-377-7708
5. Michelle Pope, Lake County SMC
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6. Kurt Woolford, Lake County SMC
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7. Geoff Perry, Gewalt Hamilton Associates, Inc.
 - Email: GPerry@gha-engineers.com
 - Phone: 847-821-6231
8. Debbie Budyak, ILM
 - Email: DBudyak@ilmenvironments.com
 - Phone: 224-480-4098
9. John Bickley, III, Kovitz, Shifrin & Nesbit
 - Email: JBickley@ksnlaw.com
 - Phone: 847-777-7301



The Central Permit Facility

Construction completed in 2008

Funded in part by IL EPA's Section 319 of the
Clean Water Act

100-acre site

Building sits on only 16 acres

Houses Lake County's:

- Stormwater Management Commission
- Planning, Building, & Zoning
- Health Department

CPF Design Goals and Features

- A. Rain Gardens
- B. Bioswales
- C. Wetland Detentions
- D. Green Roof

BMPs = Best Management Practices







Rain Gardens

- CPF features 3 rain gardens: one in the front, one in the back, and the circle drive.
- Excavated landscape areas planted with deep-rooted native plants that soak up and filter pollutants from runoff.

Diagram retrieved from US Dept of Agriculture

https://www.nrcs.usda.gov/wps/portal/nrcs/il/plantsanimals/NRCS141P2_030726/



Benefits: Native Plants In Your Yard

- Climate appropriate/adapted: Do not require fertilizer, pesticides, herbicides or watering
- Deep root systems = greater soil stability
- Higher evapotranspiration = cooling
- Better stormwater infiltration
- Filters runoff pollutants
- Reduces runoff volume
- Recharges groundwater
- Provides wildlife habitat
- Can increase aesthetic value for the property

Bioswales

- Different from rain gardens
- When it rains, pollutants are washed into the stormsewer system
- Bioswale along south end of the visitor parking lot





More Bioswales

- Found throughout the parking lots to capture and filter runoff.
- Curb cuts allow the runoff to enter the swales.
- Seeded with deep-rooted native plants
- Once the swales are full, the excess runoff is directed to the wetland detention basins.



Wetland Detentions

- Two wetland design detention basins
 - front of the building
 - western edge
- The wetland basins slow down, evaporate and filter the runoff
- Design includes grids of wetland plants that capture and filter pollutants from the stormwater. Native plants on the side slopes protect the slopes from erosion as the water levels fluctuate

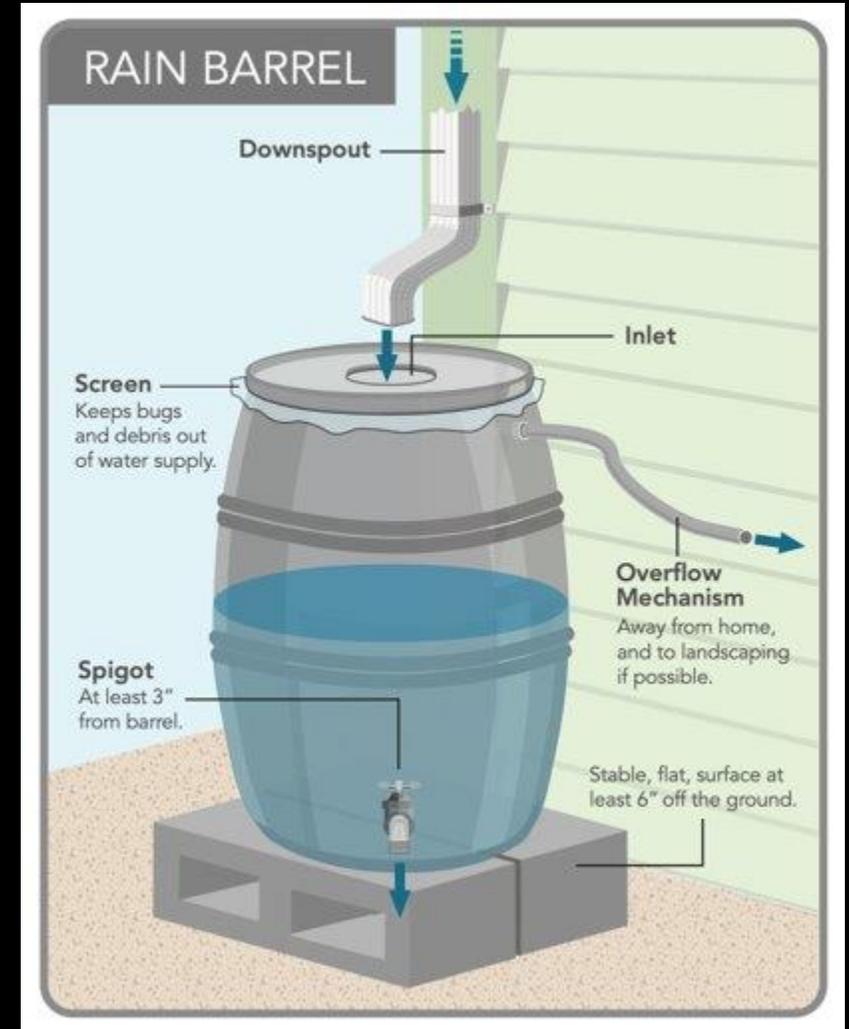
Green Roof

- Total Area: 8,077 SF
- Planted Area: 5,959 SF
- Second floor
- The plants and soil on the green roof absorb rainfall
- An 8in. deep soil mixture grows a variety of native plants
- Plants adjust to temperature swings and are drought tolerant
- Helps to moderate the temperature of the building: warmer in the winter & cooler in the summer



For Property Owners:

- These BMPs are scaled to suit a large campus
- Resources for managing stormwater on your own property can be found at:
<https://www.lakecountyl.gov/3548/Homeowner-Best-Practices>
- Rain barrels and rain gardens have high impacts while being both inexpensive and low maintenance.



Thank you!

Questions?

Mia Gerace

Stormwater Coordinator

Lake County Stormwater
Management Commission

Contact:

MGerace@lakecountyl.gov

847-377-7728



STORMWATER MANAGEMENT COMMISSION



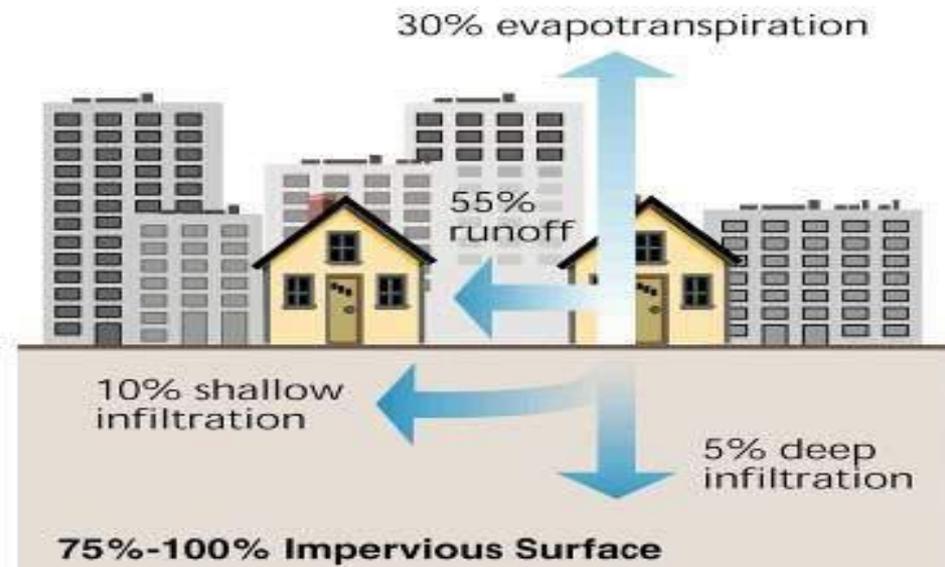
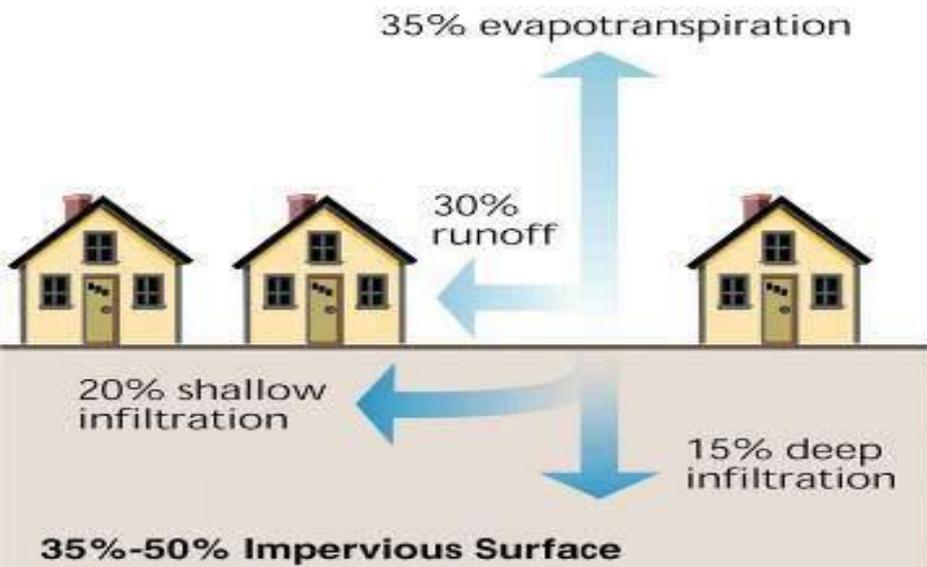
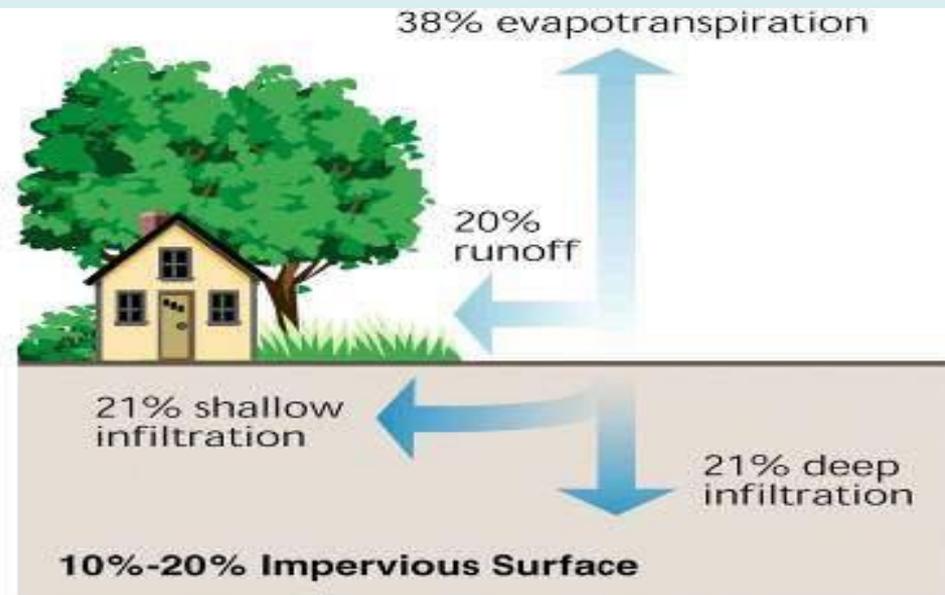
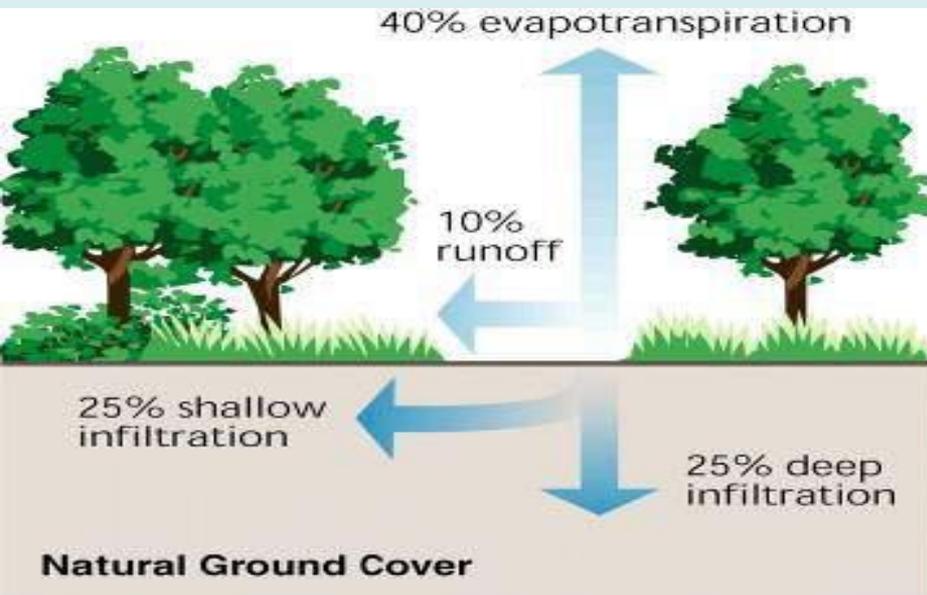
Homeowners Association Workshop

Maintenance Responsibilities for Subdivision Drainage Systems

Brian Frank, P.E., CFM
Chief Engineer



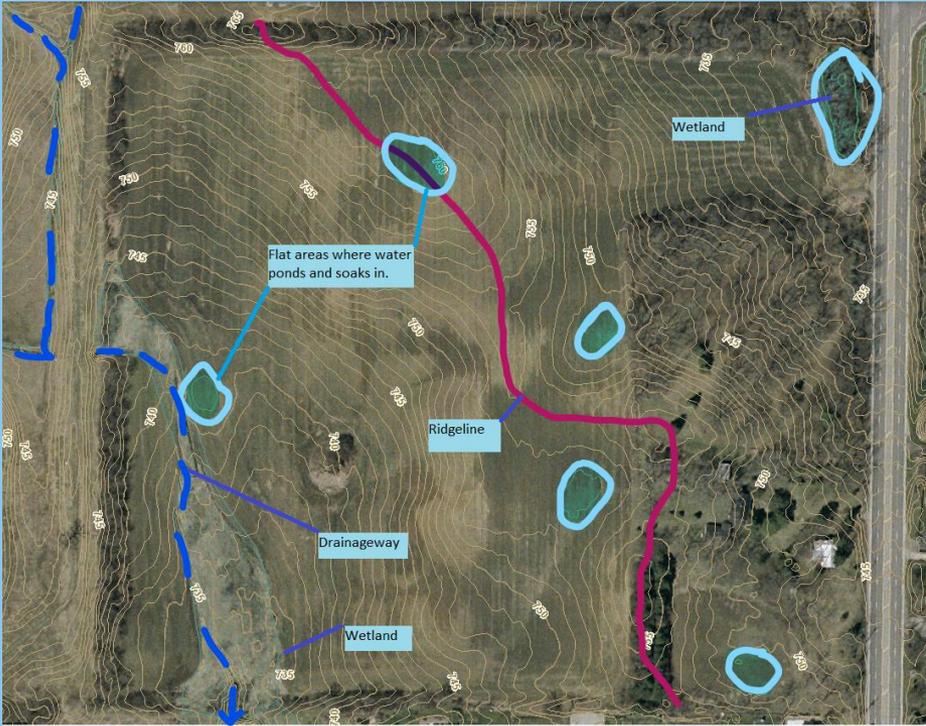
Why is Stormwater Management Important?





Modern Subdivisions

After...



Before...



During...





Modern Subdivisions

- Typical Subdivision Process
 - Large vacant land parcel (~20 – 200 acres)
 - No internal roads, utilities or impervious areas.
 - Subdivision process
 - Plat: Create Road Right-of-Ways, residential lots, outlots, easements on the lots, etc.
 - Construction of public improvements (roads and utilities), subdivision improvements (trails, playgrounds, detention basins, etc.), and construction of homes.



Modern Subdivisions

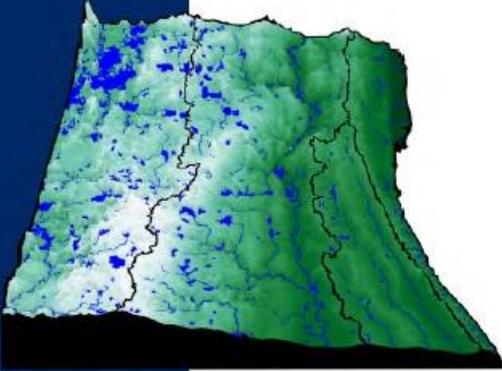
- Typical Subdivision Process (Cont.)
 - Public Improvement Maintenance
 - Roads, Sidewalks, Sanitary Sewers, Watermains & Fire hydrants; Stormsewers and other stormwater infrastructure to drain the subdivision roads.
 - Private Improvement Maintenance
 - Outlots, Detention Basins, Stormsewers and other stormwater infrastructure to drain private lots.
 - Private Lot Maintenance
 - Infrastructure to serve each private lot.
 - Ex: sump pump discharge, water & sewer services lines.



Watershed Development Ordinance (WDO)

- Construction Plans (grading, utilities, stormwater)
- Maintenance Plan
- Deed or plat restricted areas
- As-built drawings
- Originally adopted in 1992

WATERSHED
DEVELOPMENT
ORDINANCE



Lake County
Stormwater Management Commission
October 13, 2020



What needs Maintenance? Detention Basin/Buffers



Wet Detention Basins

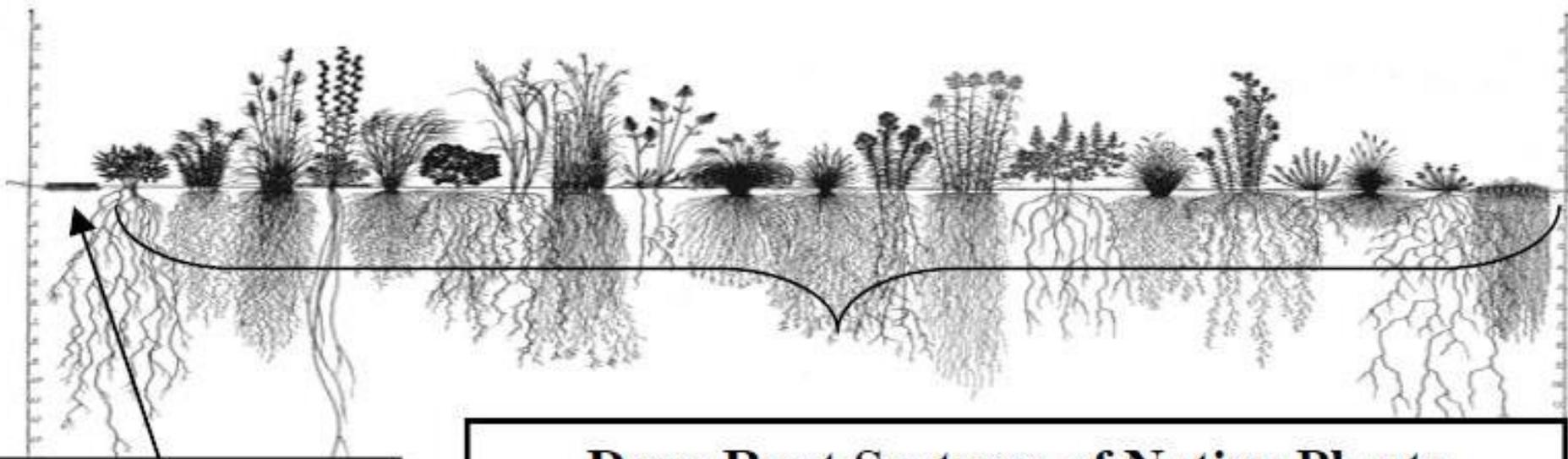


Native Plant Buffers





Looking Beneath the Surface



Turf Grass

Deep Root Systems of Native Plants

What Stormwater Structures need Maintenance?

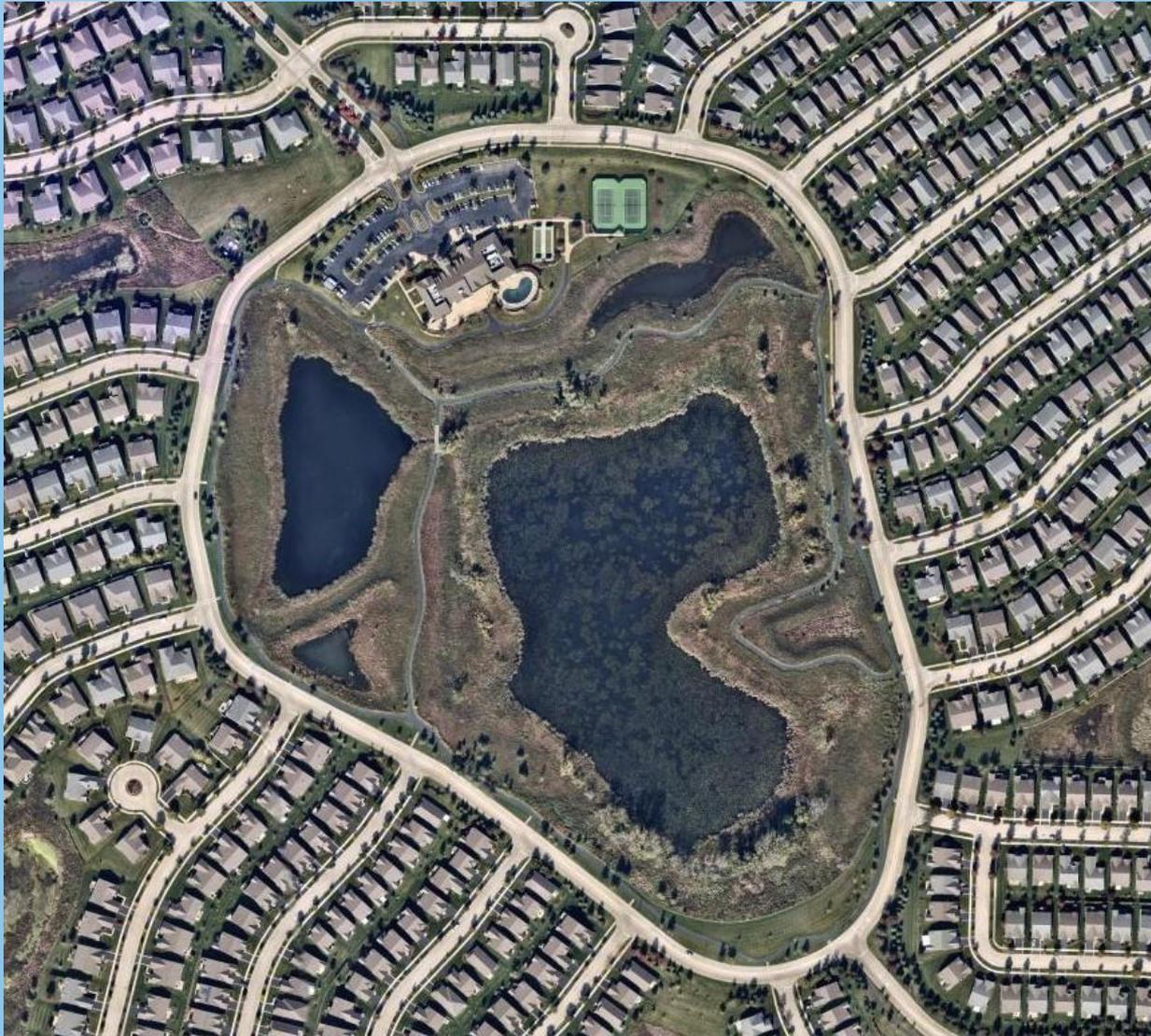


- Storm sewers
- Curb Inlets
- Pond Inlets & Outlets
- Culverts





Wetlands need Maintenance



Wetlands



Maintenance Plans include:

- ❖ **Maintenance tasks, type, and frequency**
- ❖ **Party responsible for performing tasks**
- ❖ **Description of deed/plat restricted areas for stormwater management**
- ❖ **Description of dedicated funding sources**
- ❖ **SMC provides a sample maintenance plan template**



Signs of Failing Stormwater Facilities

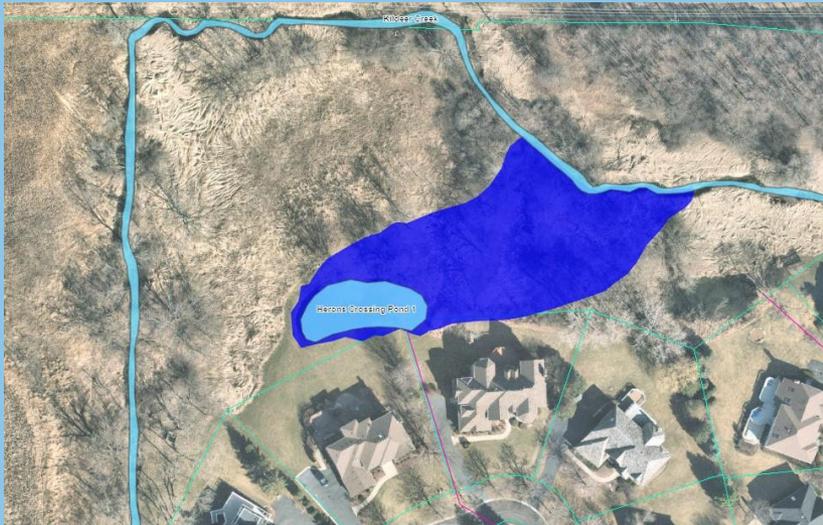
- Poorly draining areas
- Erosion and scour
- Deposits of sediment and silt
- Obstructed inlets
- Clogged restrictor manholes
- Displaced rock 'rip-rap'





Problems from lack of Maintenance:

- **Subdivision Roads or Downstream Roads Flooded**
- **Homes and property Negatively Affected by Flooding/erosion**
- **Adjacent downstream properties negatively affected by flooding**



<http://arcg.is/2qE69Et>



Questions?

500 W. Winchester Road, Libertyville, IL 60048

<https://www.lakecountyil.gov/553/Stormwater-Management-Commission>

bfrank@lakecountyil.gov

Phone: (847) 377-7700

Thank You!

Water Quality Concerns in Stormwater Detention Ponds

September 20th, 2022

5:30 – 8:30 PM

Alana Bartolai

abartolai2@lakecountyil.gov

847-377-8009

Ecological Services Program Coordinator

Lake County Health Department



LakeCounty

Health Department and
Community Health Center

Invasive Species

- What is an Aquatic Invasive Species (AIS)
 - Non-native plants, animals and pathogens.
 - Thrive in new environments
 - Cause and or contribute to economic loss as a result of environmental damage and harm to human health
 - Outcompete native species
 - Grow rapidly
 - Adapt easily



AIS & Stormwater Ponds

- AIS Spread through many means such as boater recreation, ballast water, & organism in trade.
- **Organism-in-trade hobbyists (aquarium, water gardens) one of many vectors of AIS.**
- Storm drains connected to our river, lakes, & wetlands
- In Illinois it is illegal to release or introduce any plant, animal, or fish into any waterbody other than the one from which it came.



Hydrilla Case Study

- World's worst aquatic invasive species”
- Prevention and Early Detection
Crucial for containment.
- Commercial applicator found in a 3.3
acre stormwater pond in Libertyville
2019
- Other non-natives
 - Lillies
 - Brazilian Elodea
- **Suspected Source: Aquarium/Water
Garden**



Hydrilla Case Study

- EDRR put in place from Hydrilla Task Force
- Alerts sent out through the Early Detection and Distribution Mapping System Midwest Network & USGS Nonindigenous Aquatic Species database.
- Suspected source aquarium release – letters from LCHD were sent to approximately 75 homeowners adjacent or near pond informing of the situation.
- Created sign with coordination from DNR and Illinois-Indiana Sea Grant
- Monitoring & Treatment = successful – no Hydrilla has reoccurred to date.

WARNING! HYDRILLA



HYDRILLA IS AN INVASIVE SPECIES and was found in this waterbody

Hydrilla (*Hydrilla verticillata*) poses a huge threat to our ponds, lakes and rivers. When hydrilla invades an area, ecologically important native aquatic plants are shaded out and displaced by hydrilla's thick mats.

Do your part to limit the spread of this invasive species:

- ✓ **REMOVE** all plants, animals, and mud from equipment.
- ✓ **DRAIN** all water from your boat and gear
- ✓ **DRY** everything thoroughly with a towel
- ✓ **DO NOT DISPOSE** of aquarium or water garden plants and animals into waterbodies.



TRANSPORTZERO.ORG



For AIS laws and questions refer to 515 ILCS Aquatic Life Code; 625 ILCS 45 Boat Registration and Safety Act
IDNR Aquatic Nuisance Species Program dnr.ans@illinois.gov

Chlorides in our Waterways

Once chloride is in the water it is very hard and expensive to remove

- Damages landscaping and native plants
- Gets into lakes and streams - some are classified as “impaired waters”
- Seeping into wells contaminating drinking water
- Impacts aquatic life - Interferes with reproduction cycles, toxic to eggs and juvenile stages
- Poor aquatic life scores dictate more stringent (&expensive) stormwater and wastewater regulations



Salt tolerant invasive plants are spreading



Rivers and streams are impaired by chloride from road salt



Landscape damage

Chlorides in our Waterways

If you want to learn about best management practices for winter maintenance, consider joining our upcoming Deicing Workshops

Parking Lots & Sidewalks workshop especially useful for HOA.

www.saltsmart.org/workshops
Sept 29th or Oct 11th
Virtual

A 12 ounce cup of salt is enough to cover 10 sidewalk squares.



REGISTRATION OPEN  www.SaltSmart.org

2022 Virtual Deicing Workshops

September 29, 2022 OR October 11, 20212
8 am—12pm

Hosted by:



Got Parking Lots?
Looking for ways to keep surfaces safe while protecting your infrastructure and the environment?
Attend one of our workshops to learn about widely accepted practices like using brine to treat parking lots and sidewalks ahead of storms to keep ice from bonding to surfaces.

- Who should attend?**
Staff from:
- Private Snow Contractors
 - School Districts
 - Park Districts
 - Libraries
 - Municipalities
 - Other Property Managers

Outreach Sponsors:



Registration is \$50 per workshop link, share link with all your employees.

Resources: Seasonal Outreach

Snow Removal FAQ

Salt smart. Save more.



Snow and Ice Removal Frequently Asked Questions

How does salt work to remove snow and ice?
Rock salt, or sodium chloride, works by lowering the freezing point of water, causing ice to melt even when the temperature is below water's normal freezing point of 32 degrees. For the salt to work, a heat source is needed. The heat source can be air temperature above 15 degrees Fahrenheit, heat from the sun or friction from car tires driving over the salt and ice.

When the temperature drops below 15 degrees, rock salt is no longer effective at removing snow and ice. At very low temperatures, use a blend formulated for low temperatures that contains calcium chloride or magnesium chloride to help melt ice.

When will the street in front of my house be plowed?
During a snow storm, road crews generally begin clearing streets according to the following priorities:

- First priority street routes – high-volume roadways and access to hospitals, police stations and fire stations.
- Second priority street routes – streets that lead directly onto first priority street routes.
- Third priority street routes – neighborhood streets and cul-de-sacs.

Why do some streets have less snow and ice when plowing is done?
Snow and ice removal plans try to provide consistent service, but some residential streets will be clearer than others due to certain factors, such as: when during the snow storm it is plowed, the amount of traffic on the road before and after plowing, the pavement temperatures and the type of pavement surface.

saltsmart.org

Poster

WHY BE SALT SMART?

Salt is polluting our rivers.

Chloride levels are increasing in our rivers, streams, and groundwater. Once salt gets into the water, it is difficult to remove.



It only takes **one teaspoon of salt** to contaminate **5 gallons of water.**



Where does the salt come from?

Chlorides in our rivers primarily come from **winter road salt**, and also from **water softener salts.**



The Impact of Chlorides

 Harms aquatic life	 Is expensive to remove	 Corrodes infrastructure	 Hurts our pets
• Chloride can be toxic to small aquatic life and disrupt aquatic community structure and diversity	• Once chloride is in the water, it is very hard and expensive to remove	• Corrodes concrete roads and bridges, as well as our cars and around business entryways	• Burns, dries, and cracks our pet's feet • Causes illness when licked off and ingested

Social Media Posts



WHEN THERE IS SNOW, GO SLOW.

Give yourself extra time to adjust to snow and ice on the road.



WINTER CLEAN-UP TIP

Driveways

It's illegal and unsafe to shovel snow and ice back onto the road, even when it's pushed into your driveway or plowed.



WHEN THERE IS SNOW, GO SLOW.



BE SALT SMART THIS WINTER!

DON'T CROWD THE PLOW.



A **12 ounce** cup of salt is enough to cover **10 sidewalk squares.**



BE PREPARED. KEEP AN EMERGENCY KIT IN YOUR CAR.



Blog Posts & Newsletter Articles



Bookmark



Together we can protect our local waterways by using the right amount of salt while keeping roads, driveways and sidewalks safe.



Outreach materials available at SaltSmart.org

Thank you!

Alana Bartolai

abartolai2@lakecountyil.gov

847-377-8009

Ecological Services Program Coordinator

Lake County Health Department





The “Ripple Effect”

WMB Grant Program Overview

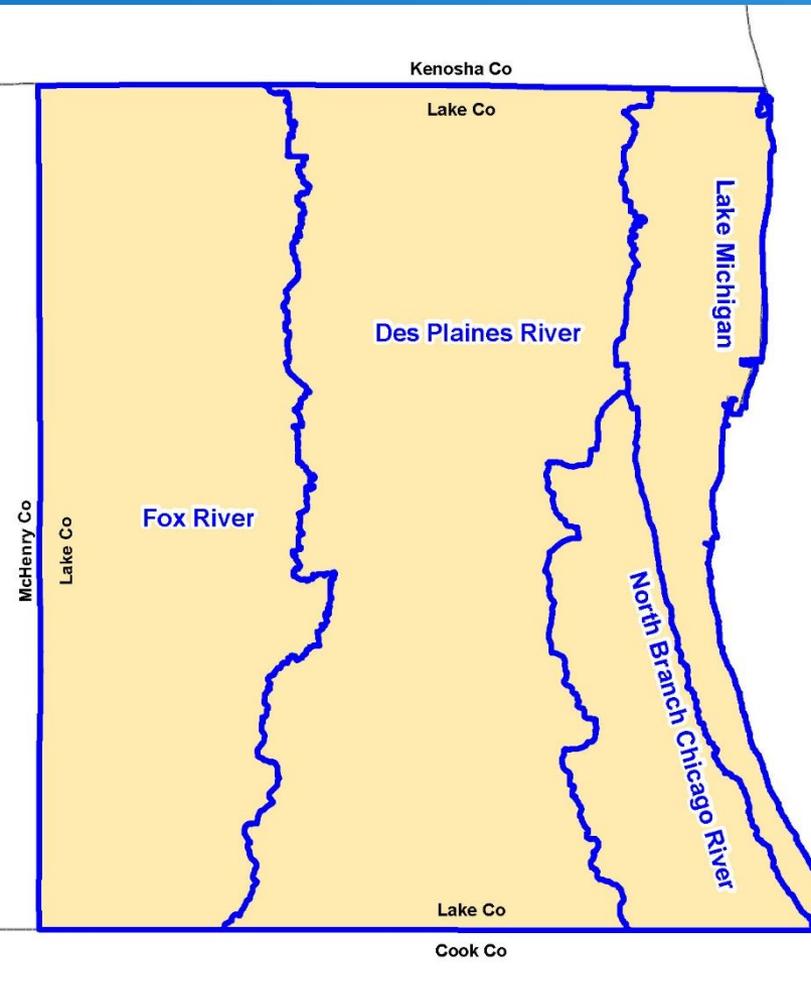


WMB Grants

- Purpose: Help reduce flood damages & improve water quality
- Annual cost-share program
- Reimbursable



WMB Grants, Cont.



- Funding by Watershed
- Limited funding = competitive application process
- Projects for individual maintenance needs = not eligible.
- Elected official sponsor (WMB member) required



WMB Grant Comparison

WMB (standard)

- Supports drainage improvement & flood reduction projects
- Local match = min. 50%*
- Budget varies annually, by watershed

WMAG

- Supports growth & sustainability of local watershed partnerships
- No cost share match
- \$12,000 annual budget

*Reduced cost share may be allowed within **Environmental Justice** areas of the County, as a project-specific determination



General WMB Grant Process

RFP

- Early August
- Pre-application meetings encouraged

Proposals
Due

- Early October – via SMC's *Inflow* portal
- SMC staff begin reviewing and scoring proposals

WMB

- Early December
- Staff present funding recommendations

SMC

- Early January
- Final approval and funding appropriation

WMB Scoring Criteria

WMB Project Prioritization Criteria				
Rank	Watershed: Lake Michigan, North Branch, Des Plaines, Fox	Maximum Possible Weight	Rating (0 – 5)	Score (Weight x Rating)
1	Interjurisdictional benefits	25		
2	Flood hazard reduction benefits	20		
3	Structural damage reduction	15		
4	Water quality benefits	15		
5	Natural resource benefits	10		
6	Nuisance flood reduction	5		
7	Multiple use benefits	5		
8	Outside funding utilization	5		
9	Phosphorus Public education component	5		

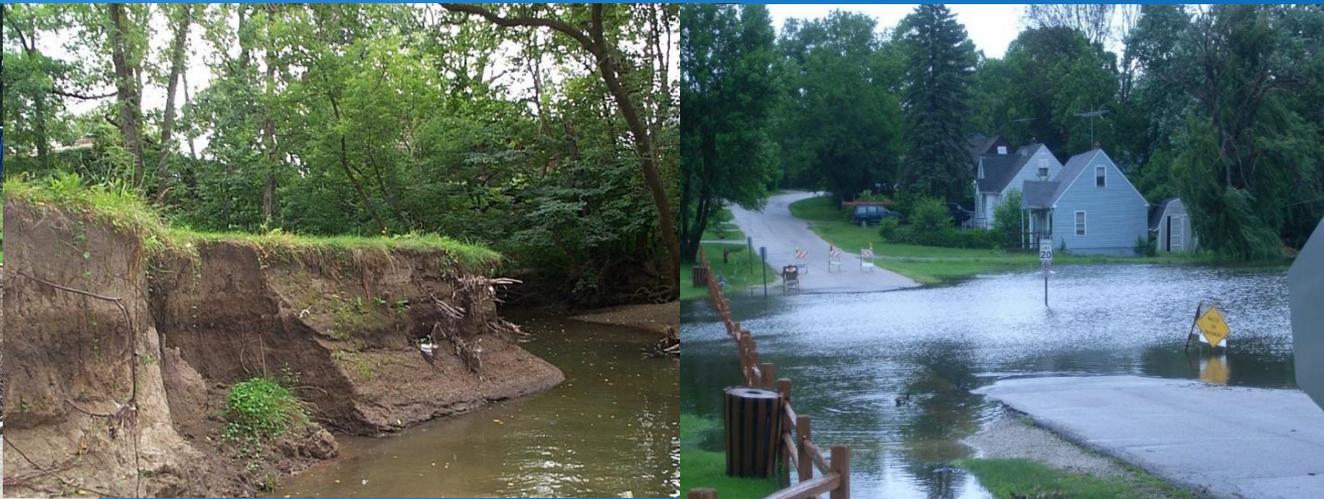
Preparing a WMB Grant Application

- Become familiar with funding program requirements
 - Project eligibility, application deadlines and administrative requirements
- Contact the Grant PM for your watershed
 - See if your project is a good match
 - Get grant language tips



Application Tips & Tricks

- Be detailed... assume SMC doesn't know the benefits.
- Quantify the project benefits
- Include images of the problem(s)
- Include a preliminary budget



Application Tips & Tricks, cont.

- Avoid P.L.O.T.S. (aka blanks in the application).
 - Think broadly about project benefits!
 - How many acres drain to you project site?
 - What other entities/agencies have ties to the area?
 - How did the project area fare in the 2017 flood?



Application Tips & Tricks, cont.

- Consider: Can the project be 'tweaked' to improve the score?



Application Tips & Tricks, cont.

- Don't ignore possible bonus points.

Bonus Credit	Maximum Possible Points	Score
Critical facilities	5	
Greater than 50% non-SMC cost-share	5	
Projects within Environmental Justice Areas	5	
Measure Recommended in a SMC-adopted watershed management plan	5	
Current Stormwater BMP Implementation (HOA only)	5	

FY23 WMB Grant Project Managers

Watershed	Contact/Email	Phone
Des Plaines River	Jacob Jozefowski	847-377-7717
Lake Michigan	Kelcey Traynoff	847-377-7711
North Branch of the Chicago River	stormwater@lakecountylake.org	847-377-7700
Fox River	Michelle Pope	847-377-7730

Questions?



Inflow & FY23 DCEO- STOCIP RFP Process

Lake County Stormwater Management Commission

Michelle Pope

stormwater@lakecountyiil.gov

Agenda

- Inflow Tutorial
- DCEO RFP
- Q/A section



Welcome to SMC's INFLOW

Email Address

Enter Password

Don't have an account? [Sign-Up](#)

[Forgot Password?](#)

Login

[Download DCEO-STOCIP RFP | WMB/WMAG RFP](#)

[INFLOW Training Webinars](#)



STORMWATER MANAGEMENT COMMISSION



What can I do with INFLOW?

Check Project Status, Submit Work Request, Explore your Streams.



Contact | ©2022 Lake County Stormwater Management Commission

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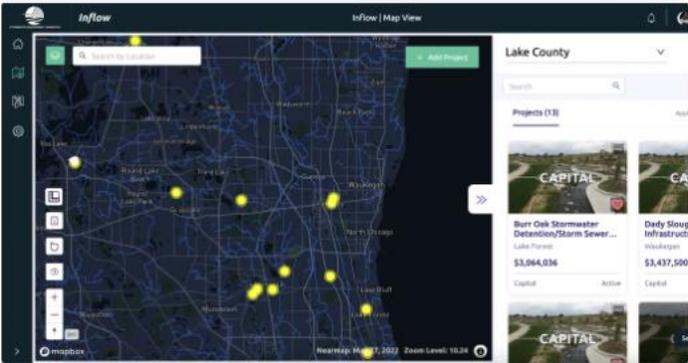


STORMWATER MANAGEMENT COMMISSION

Welcome!

Upcoming Webinars

Past Webinars



Welcome to INFLOW! Lake County Stormwater Management Commission's new intake site! In the upper right-hand corner, you will see the user that is logged in currently. On the left-hand toolbar, you will see two navigational pages (my inflow and map view). On map view, you are able to click on the layers icon to turn on and off certain layers on the map. In the upper right-hand corner of the map, there is a button to add projects. It is here where you can draw a polygon of where your project proposal is and upload the RFP for the project. The RFPs can be downloaded on the login screen. There are two upcoming webinars if you have any questions! (see webinar info on next tab)

Continue



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INFLOW?
t, Explore your Streams.



Privacy - Terms

Welcome to SMC's INFLOW

Email Address

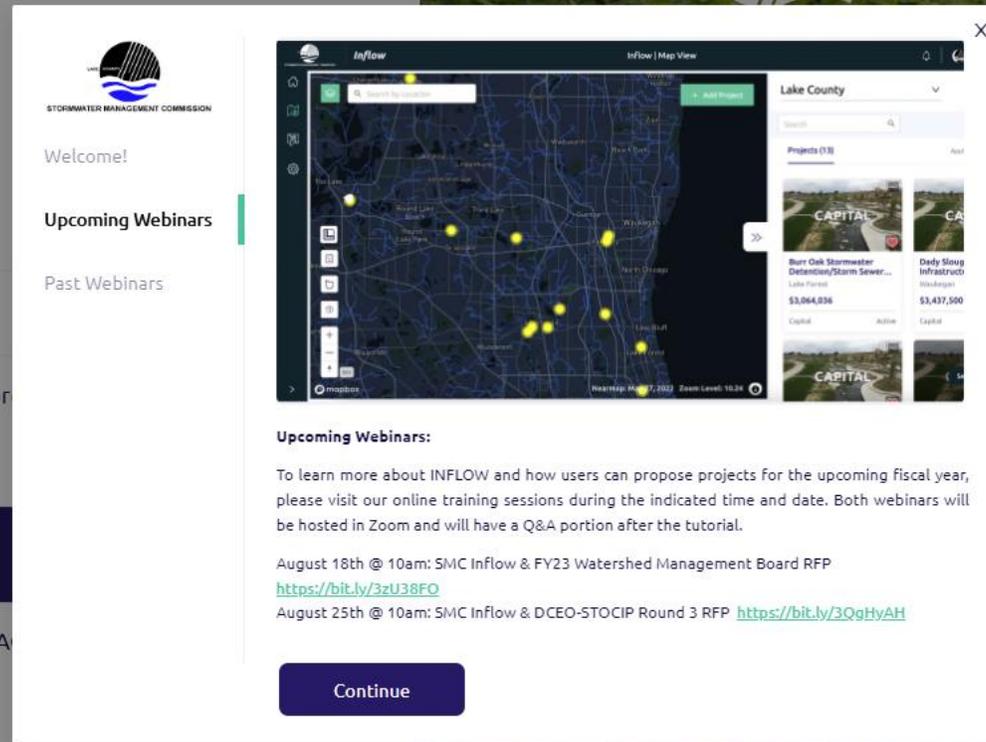
Enter Password

Don't have an account? [Sign-Up](#)

Login

Download DCEO-STOCIP RFP | WMB/WMA

[INFLOW Training Webinars](#)



Upcoming Webinars:

To learn more about INFLOW and how users can propose projects for the upcoming fiscal year, please visit our online training sessions during the indicated time and date. Both webinars will be hosted in Zoom and will have a Q&A portion after the tutorial.

August 18th @ 10am: SMC Inflow & FY23 Watershed Management Board RFP
<https://bit.ly/3zU38FO>

August 25th @ 10am: SMC Inflow & DCEO-STOCIP Round 3 RFP <https://bit.ly/3QgHyAH>

Continue



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INFLOW?

Explore your Streams.



Privacy • Terms

Sign Up!

Define your user role:

<input type="radio"/> SMC Staff	<input type="radio"/> Consultant / Contractor	<input checked="" type="radio"/> Local Government	<input type="radio"/> Other
---------------------------------	---	---	-----------------------------

First Name

Last Name

Email

Organization

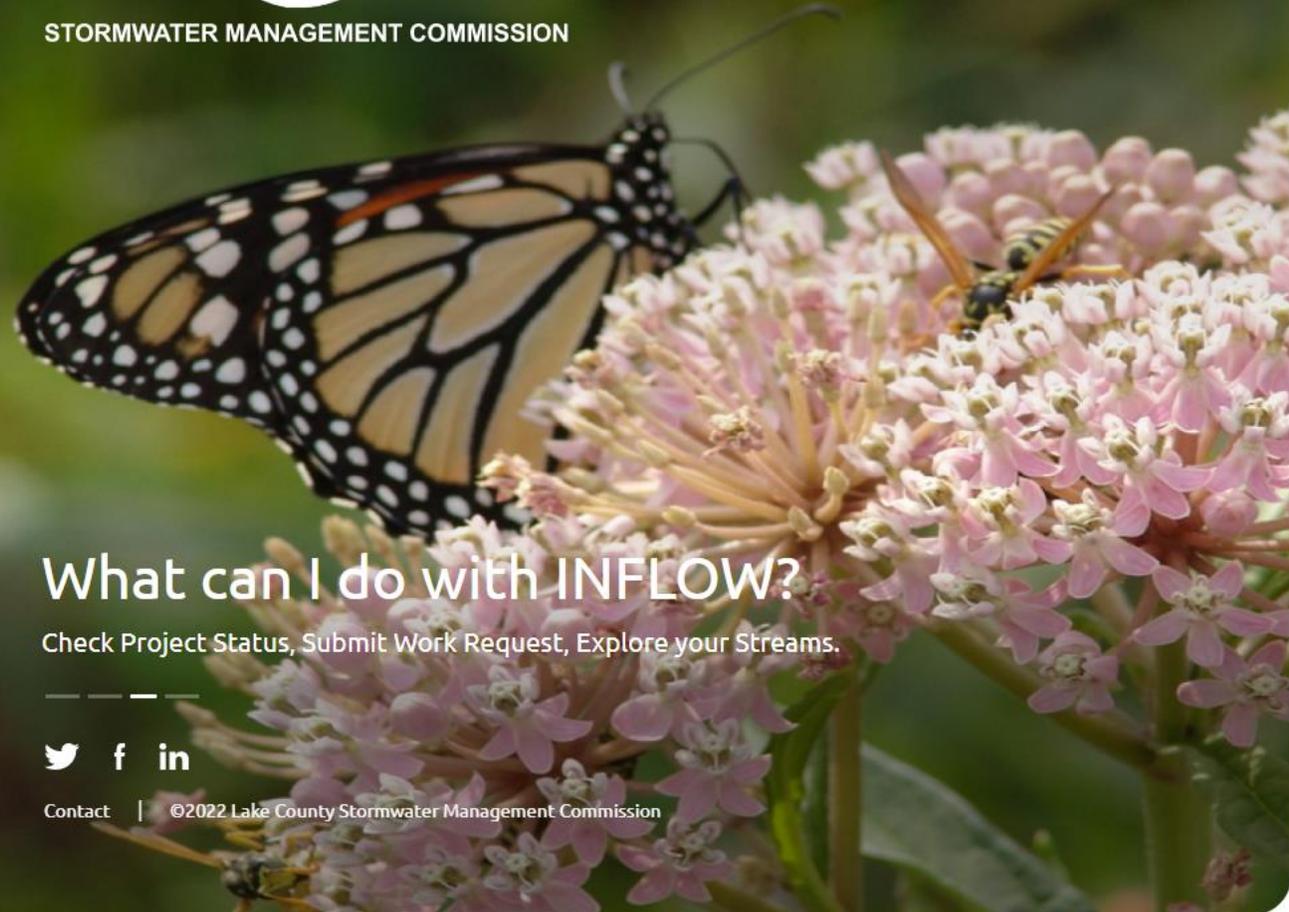
Password

Sign Up

I have an account [Login](#)



STORMWATER MANAGEMENT COMMISSION



What can I do with INFLOW?

Check Project Status, Submit Work Request, Explore your Streams.



Contact | ©2022 Lake County Stormwater Management Commission



STORMWATER MANAGEMENT COMMISSION

Hello! Thanks for signing-up!

Your registration was successful.

If you did not make this request you
can ignore this email.





STORMWATER MANAGEMENT COMMISSION

Your user profile has been approved!

Please login to Inflow by clicking the button below.

[Access Inflow](#)

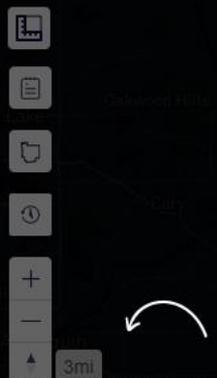


Search Location

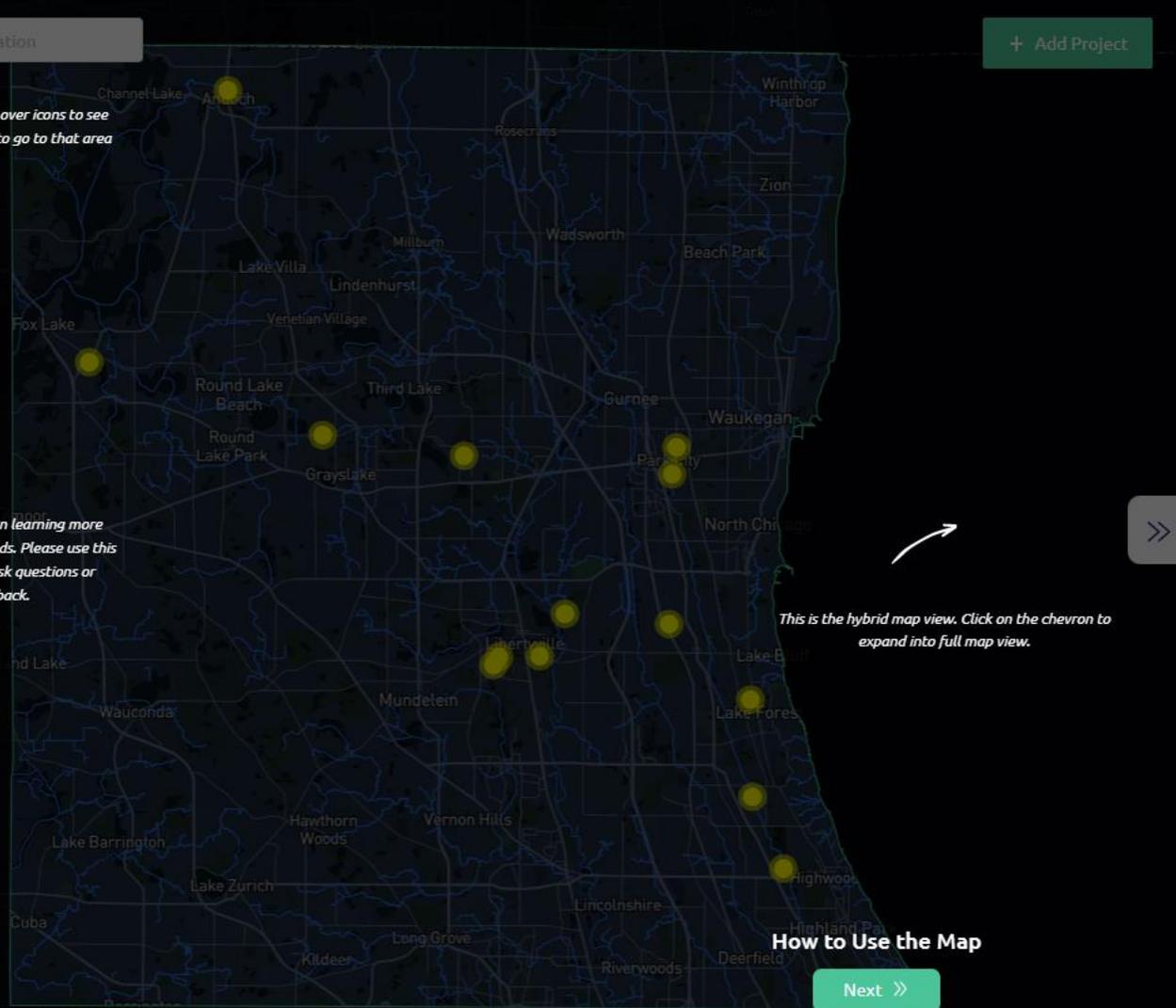
+ Add Project

This is the navigation bar. Hover over icons to see what they do, and click on them to go to that area of Confluence.

Explore Confluence and have fun learning more about your streams and watersheds. Please use this button to make suggestions, ask questions or provide overall feedback.



Click here to expand the navigation bar and see map descriptions of all the options.



How to Use the Map

Next >>

Lake County

Search

This area allows you to access notifications, user settings, and this Guide.

Projects (14)

Apply map view to filters



Burr Oak Stormwater Detention/Storm Sewer Project

Lake Forest

\$3,064,036

Capital

Active



Dady Slough Outlet and Infrastructure Improvements

Waukegan

\$3,437,500

Capital

Active



Haryan Farm Drainage System Repair Project

Grayslake

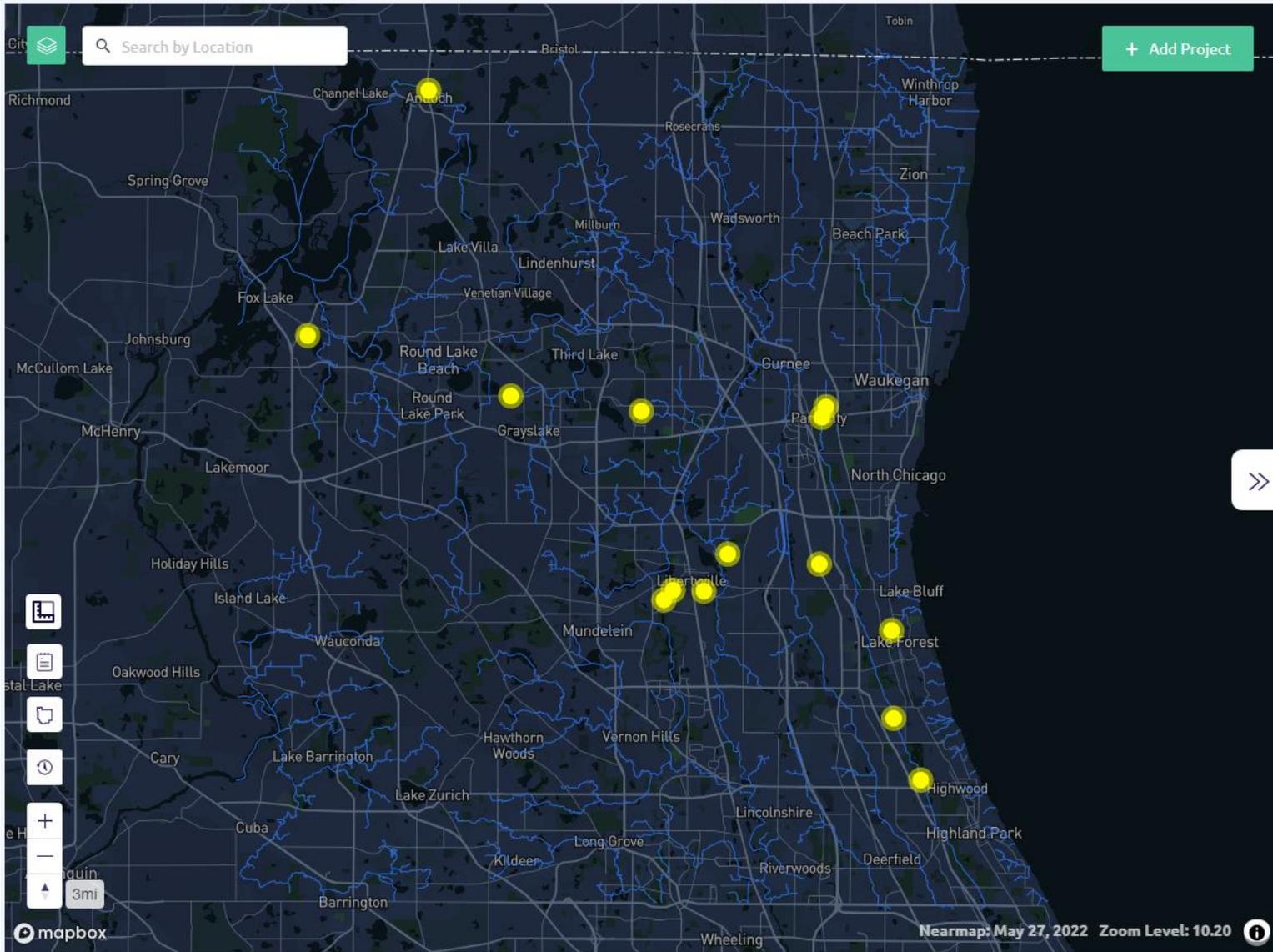
\$1,223,352



Highlands Neighborhood Drainage Improvements

Highland Park

\$1,236,104



Lake County

Search

Sort By

Projects (14)

Apply map view to filters



Burr Oak Stormwater Detention/Storm Sewer Project

Lake Forest

\$3,064,036

Capital

Active



Dady Slough Outlet and Infrastructure Improvements

Waukegan

\$3,437,500

Capital

Active



Haryan Farm Drainage System Repair Project

Grayslake

\$1,223,352

Capital

Active



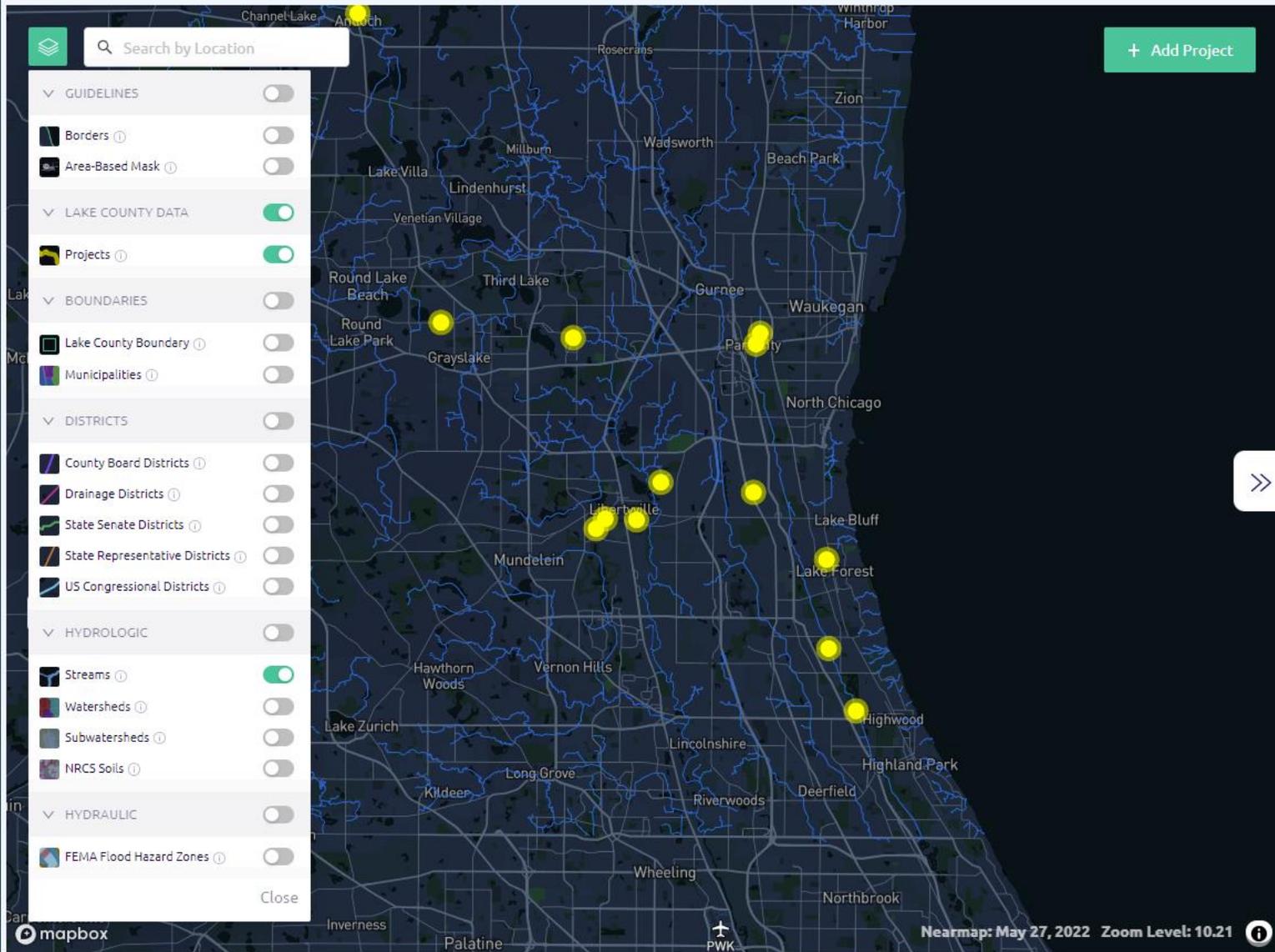
Highlands Neighborhood Drainage Improvements

Highland Park

\$1,236,104

Capital

Active



+ Add Project

Lake County

Search

Sort By

Projects (14)

Apply map view to filters



Burr Oak Stormwater Detention/Storm Sewer Project
 Lake Forest
\$3,064,036
 Capital Active



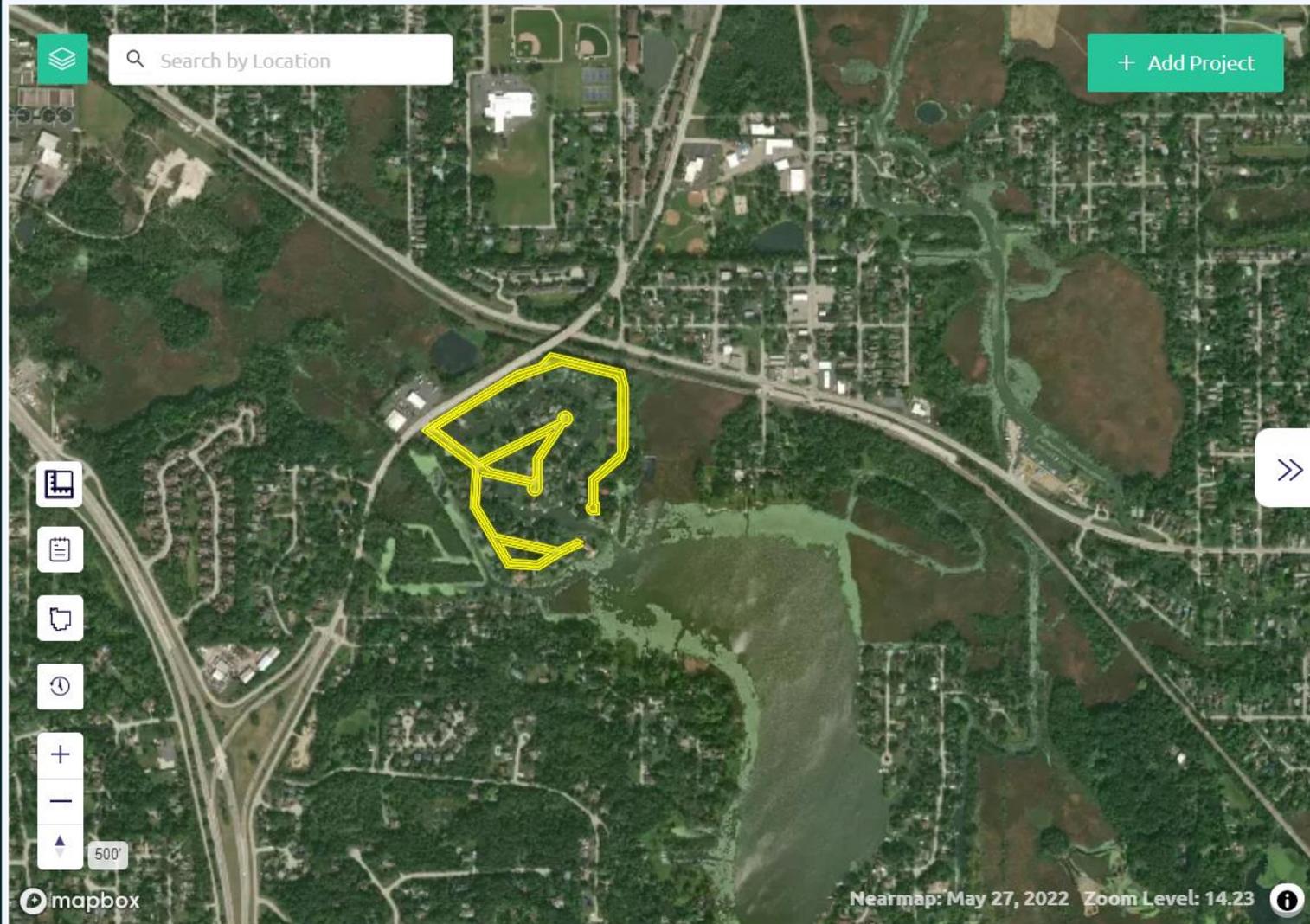
Dady Slough Outlet and Infrastructure Improvements
 Waukegan
\$3,437,500
 Capital Active



Haryan Farm Drainage System Repair Project
 Grayslake
\$1,223,352



Highlands Neighborhood Drainage Improvements
 Highland Park
\$1,236,104



Lake County



Search



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Projects (1)

Apply map view to filters



Knollwood Subdivision Flood Mitigation Project - Phase 1

Fox Lake

\$2,921,080

Capital

Active



Search by Location

+ Add Project

LAYERS ×

- Project >

PROJECT

Knollwood Subdivision Flood Mitigation Project - Phase 1

Fox Lake Fish Lake Drain

\$2,921,080

DCEO Phase 1 Active

[See Details](#)



500'

mapbox

Nearmap: May 27, 2022 Zoom Level: 14.23

Lake County



Search



Sort By

Projects (1)

Apply map view to filters



Knollwood Subdivision Flood Mitigation Project - Phase 1

Fox Lake

\$2,921,080

Capital

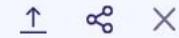
Active

Knollwood Subdivision Flood Mitigation Project - Phase 1

Capital Project • Fox Lake • Lake County • Fish Lake Drain Service Area

Active

\$2,921,080



<i>Stream</i>	Fish Lake Drain	<i>Start Year</i>	2022
<i>Completed Year</i>	N/A	<i>LG Manager</i>	N/A
<i>Lake County Manager</i>	N/A	<i>OnBase</i>	N/A

Description The PROJECT scope consists of elevating floodprone roadways, repair, and replacement of roadway surfaces and drainage structures and adjacent appurtenances, and reconfiguring floodplain storage and flow patterns within the Knollwood Subdivision

VENDORS

<i>Contractor</i>	N/A	<i>Consultant</i>	GeWalt Hamilton and Associates
-------------------	-----	-------------------	--------------------------------

TEAM ACTION ITEMS

- Jon Villines** Watershed Manager MHFD
- Jon Nelson** SEMSWA Arvada
- John Leone** Naranjo Applegate
- Tyler Rosburg** Icon Alpha
- Jeff Battiste** Project Engineer MHFD

COMMENTS

- Jon Villines** 5h ago
How long until 30% plans are ready for review?
- Tyler Rosburg** 4h ago
Probably April 1
- Jon Villines** 3h ago
Thanks, we'll have those turned around in a couple of weeks.
- Jane Nelson** 2h ago
It might take SEMSWA closer to three weeks

Contractor N/A

Consultant GeWalt Hamilton and Associates

MAP



-  **Jane Nelson** 2h ago
It might take SEMSWA closer to three weeks.
-  **John Leone** 1h ago
We don't have any concerns at this point.

 Send

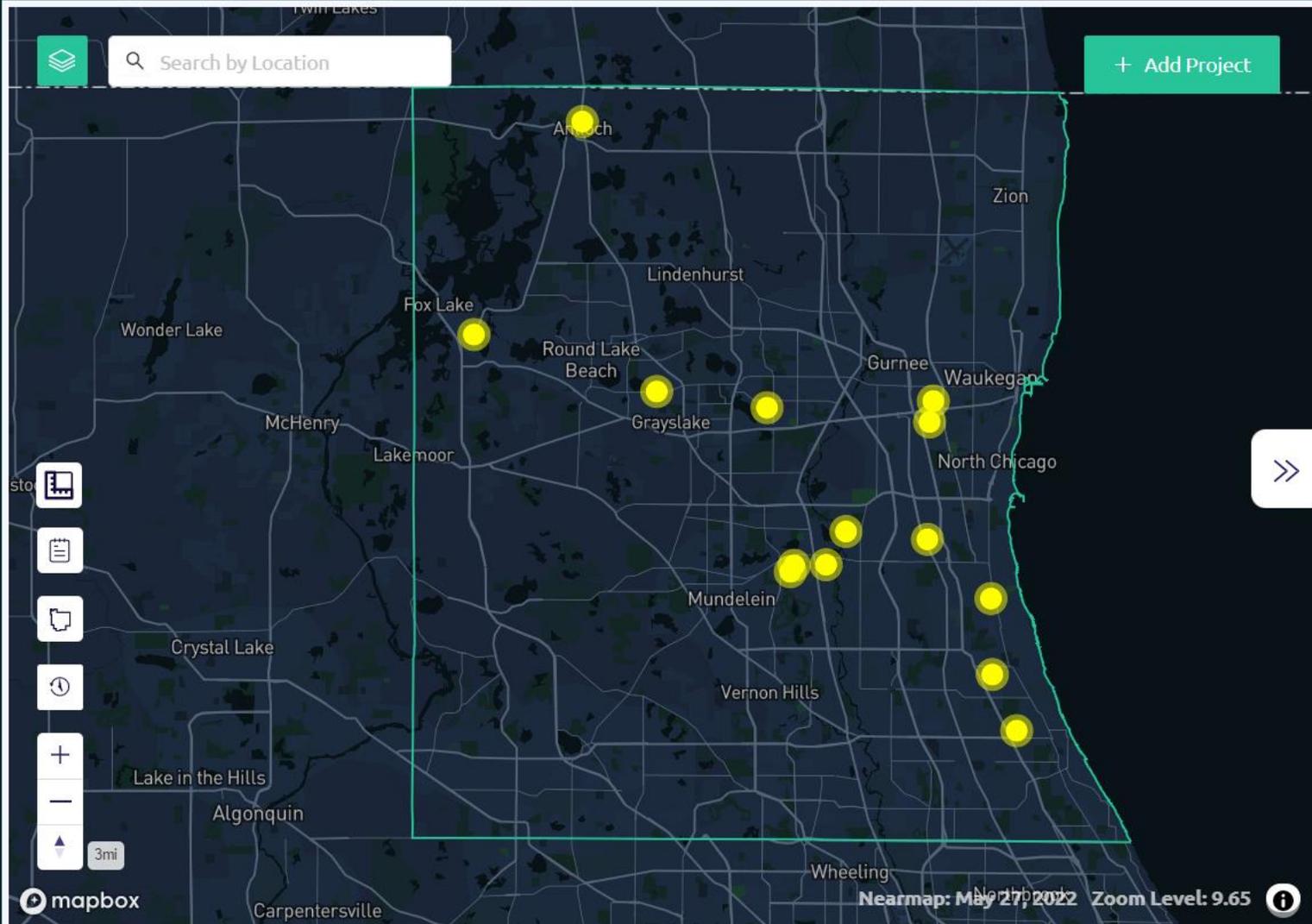
Sort By

ly map view to filters



Search by Location

+ Add Project



Lake County



Search



My Profile

Tutorial

Logout

Sort By

Projects (14)

Apply map view to filters



Burr Oak Stormwater Detention/Storm Sewer...

Lake Forest

\$3,064,036

Capital

Active



Dady Slough Outlet and Infrastructure Improvements

Waukegan

\$3,437,500

Capital

Active





Search by Location

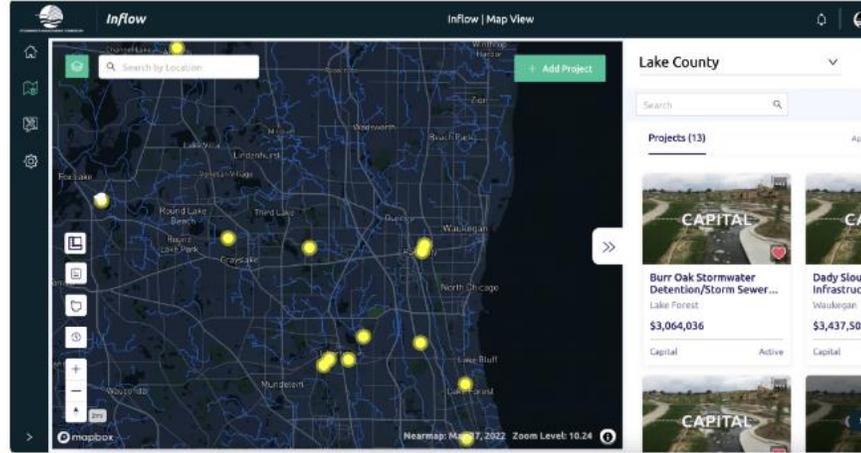


STORMWATER MANAGEMENT COMMISSION

Welcome!

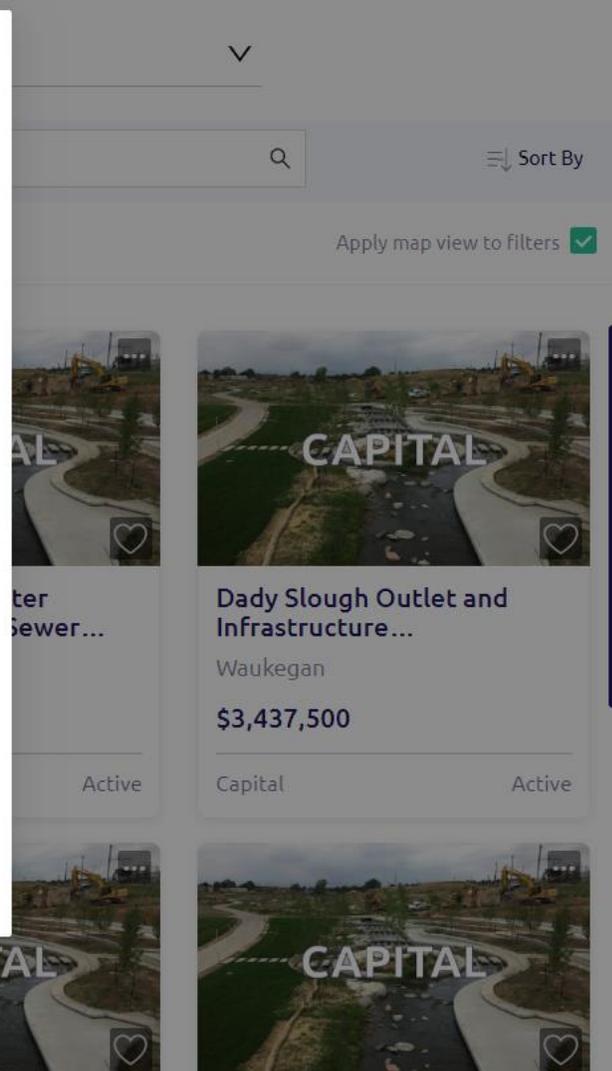
Upcoming Webinars

Past Webinars



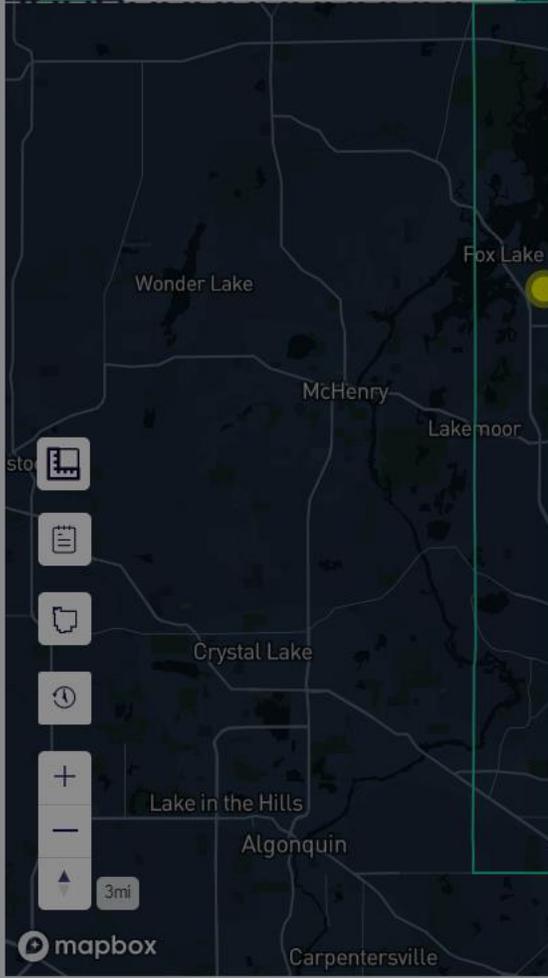
Welcome to INFLOW! Lake County Stormwater Management Commission's new intake site! In the upper right-hand corner, you will see the user that is logged in currently. On the left-hand toolbar, you will see two navigational pages (my inflow and map view). On map view, you are able to click on the layers icon to turn on and off certain layers on the map. In the upper right-hand corner of the map, there is a button to add projects. It is here where you can draw a polygon of where your project proposal is and upload the RFP for the project. The RFPs can be downloaded on the login screen. There are two upcoming webinars if you have any questions! (see webinar info on next tab)

Continue





Search by Location

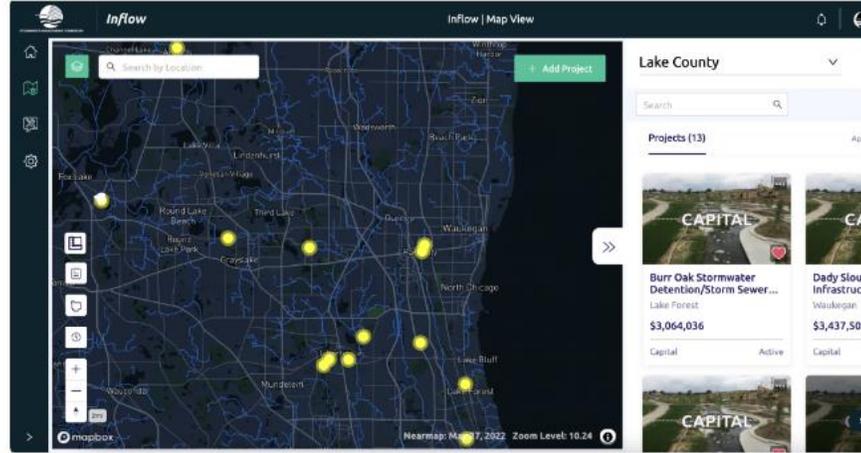


STORMWATER MANAGEMENT COMMISSION

Welcome!

Upcoming Webinars

Past Webinars



Upcoming Webinars:

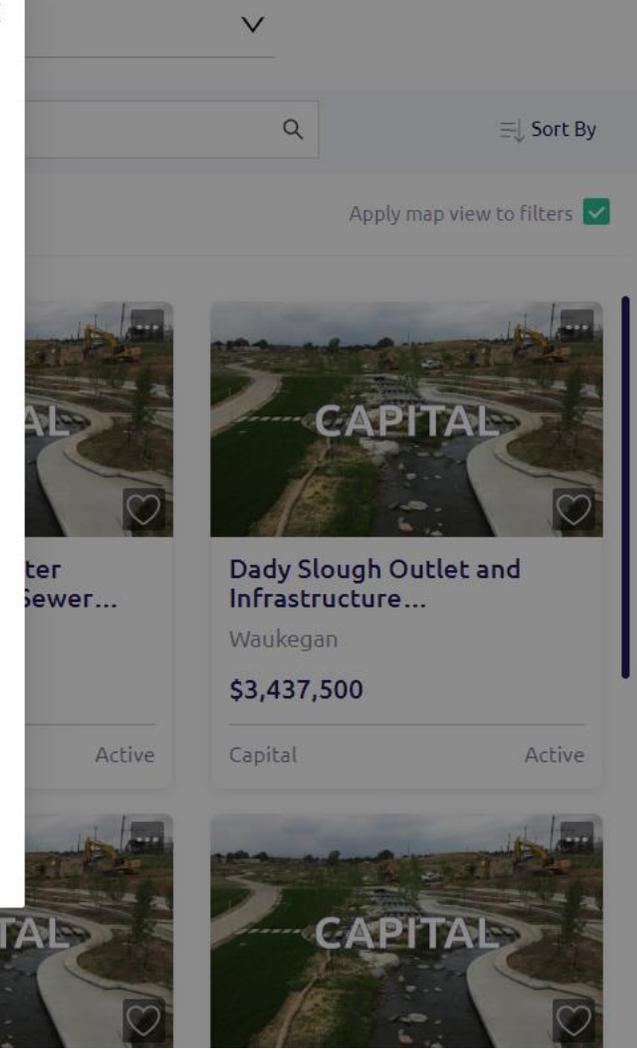
To learn more about INFLOW and how users can propose projects for the upcoming fiscal year, please visit our online training sessions during the indicated time and date. Both webinars will be hosted in Zoom and will have a Q&A portion after the tutorial.

August 18th @ 10am: SMC Inflow & FY23 Watershed Management Board RFP

<https://bit.ly/3zU38FO>

August 25th @ 10am: SMC Inflow & DCEO-STOCIP Round 3 RFP <https://bit.ly/3QgHyAH>

Continue





Search by Location

Map navigation controls: Home, Layers, Full Screen, Settings, Mapbox logo, 3mi scale, Nearmap: May 27, 2022 Zoom Level: 10.21

Create Project

X

Name

Choose a Project Type

 **Capital**
Master planned improvements that increase conveyance or reduce flow.

 **Maintenance**
Restore existing infrastructure eligible for MHFD participation.

 **Study**
Master plans that identify problems and recommend improvements.

 **Acquisition**
Property with high flood risk or needed for improvements.

 **Special**
Any other effort for which MHFD funds or staff time is requested.

Sort By

Apply map view to filters



Dady Slough Outlet and Infrastructure Improvements
Waukegan
\$3,437,500

Active Capital Active



Highlands Neighborhood Drainage Improvements
Highland Park
\$1,236,104

Inflow
STORMWATER MANAGEMENT COMMISSION

Search by Location

mapbox

Restoration

Capital ▾

Lake County

1. PROJECT INFORMATION *

* Required

Description ⓘ

Add description

2. CREATE PROJECT AREA * 📐

Click on the icon and draw a polygon to select stream segments

3. FINANCIAL INFORMATION

Total

Cost Being Requested ⓘ

Additional Cost ⓘ

4. LOCATION INFORMATION ⓘ

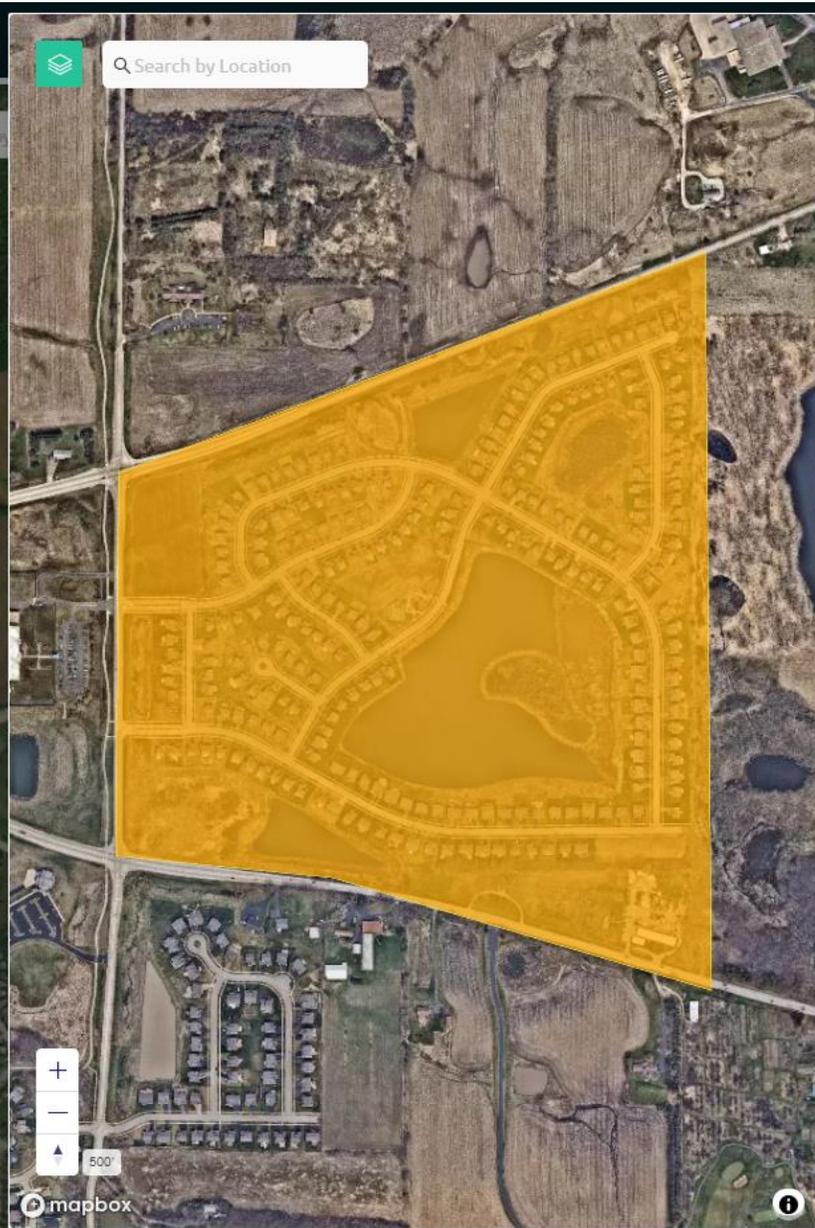
Watershed ⓘ County ⓘ

MP Michelle ▾ ⓘ

Sort By

Apply map view to filters ✓

Map navigation sidebar with icons for Home, Map, Layers, Search, and Settings. Includes a search bar and a vertical toolbar with zoom in (+), zoom out (-), and a 500' scale indicator.



Restoration

Capital ▾

Fox River Watershed · Lake County

1. PROJECT INFORMATION *

* Required

Description ⓘ

Description

2. CREATE PROJECT AREA * 📐

Click on the icon and draw a polygon to select stream segments

3. FINANCIAL INFORMATION

Total	<input type="text" value="\$150,000"/>
Cost Being Requested ⓘ	<input type="text" value="\$20,000"/>
Additional Cost ⓘ	<input type="text" value="\$0"/>

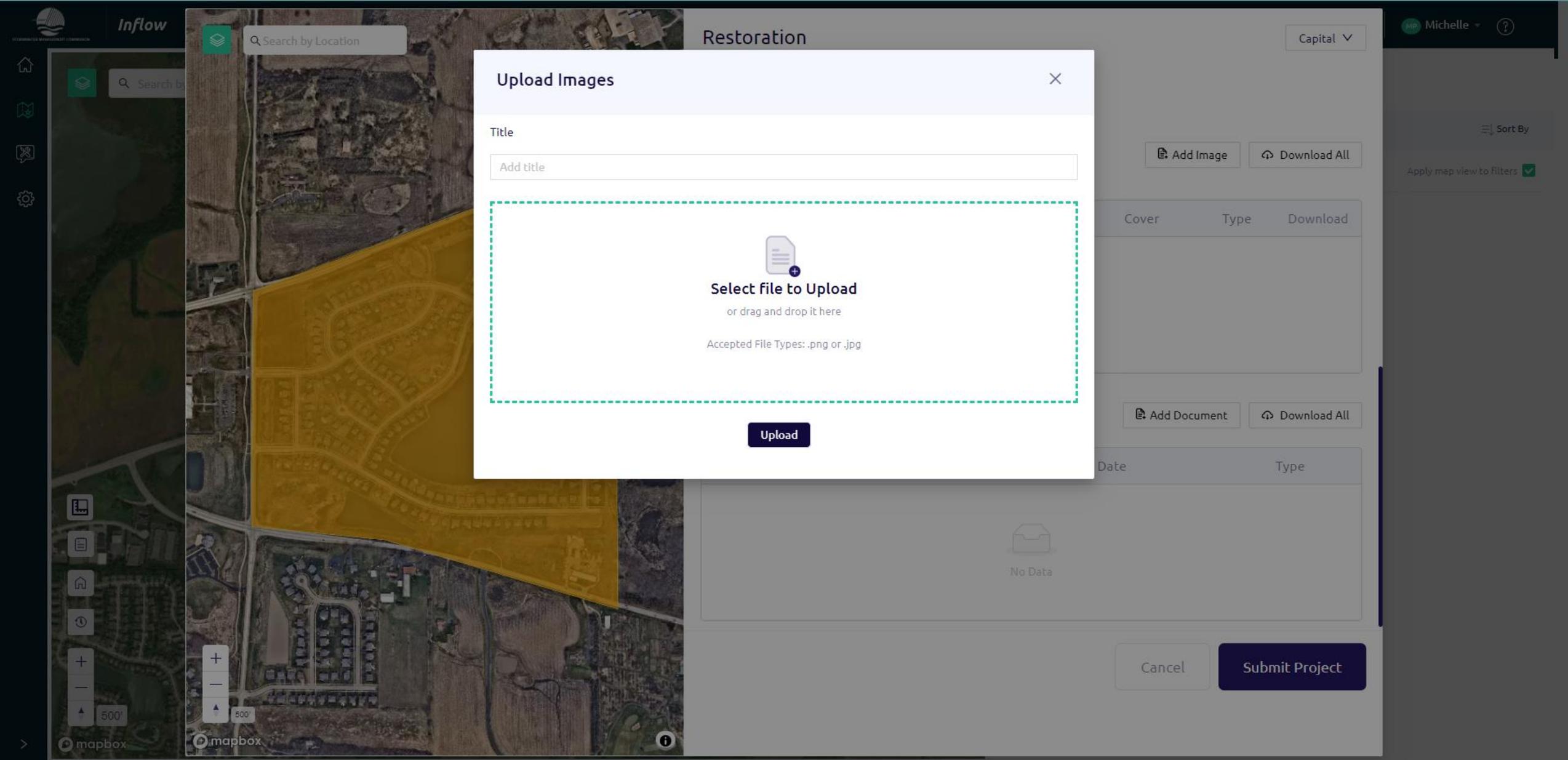
4. LOCATION INFORMATION ⓘ

Watershed ⓘ	<input type="text" value="Fox River X"/>	County ⓘ	<input type="text" value="Lake County"/>
-------------	--	----------	--

Cancel

Sort By

Apply map view to filters ✓



Upload Images



Title

Add title



Select file to Upload

or drag and drop it here

Accepted File Types: .png or .jpg

Upload

Add Image

Download All

Cover

Type

Download

Add Document

Download All

Date

Type



No Data

Cancel

Submit Project



Search by Location

Upload Documents



Title

Add title



Select file to Upload

or drag and drop it here

Accepted File Types: .docx, .xlsx, or .pdf

Upload

Add Image

Download All

Cover

Type

Download

Add Document

Download All

Date

Type



No Data

Cancel

Submit Project

Sort By

Apply map view to Filters



500'

500'

mapbox

mapbox



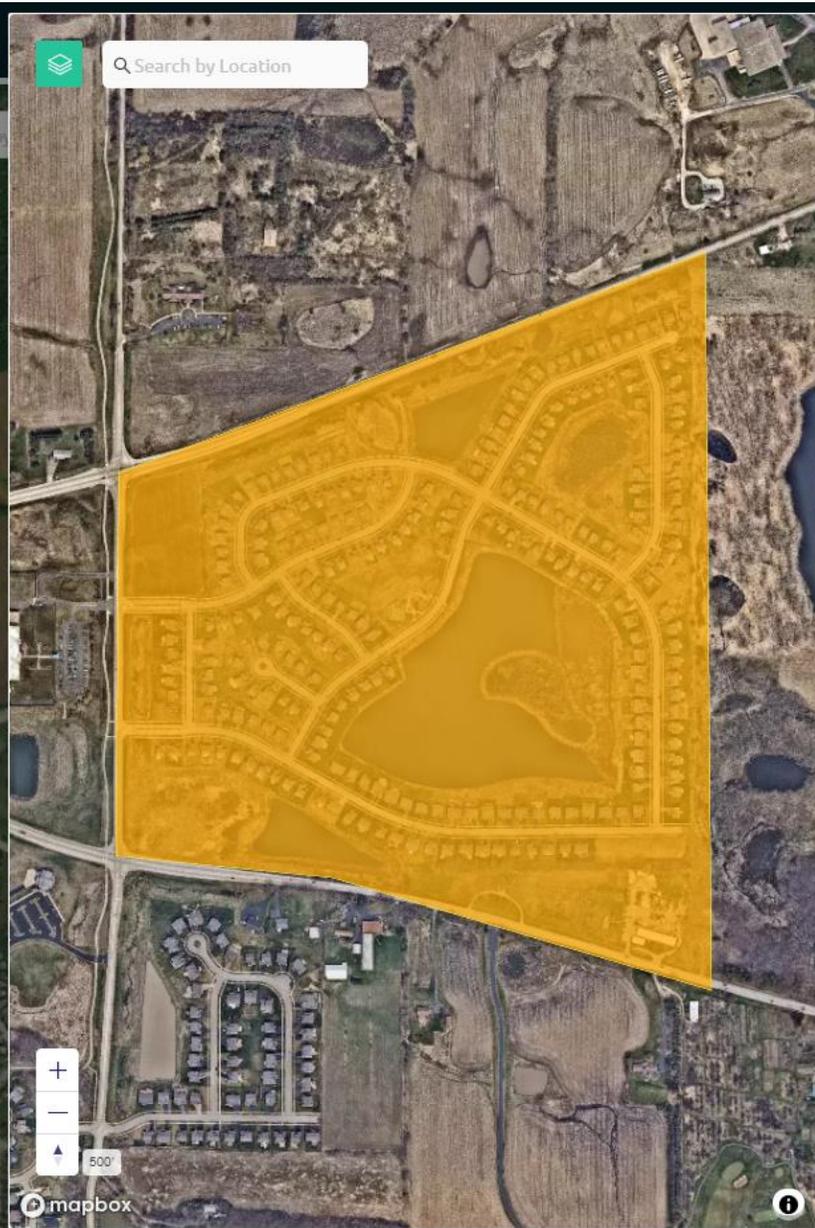
500'

500'

mapbox

mapbox

Navigation sidebar with icons for Home, Map, Layers, Settings, and a search bar.



Restoration

Capital ▾

Fox River Watershed · Lake County

Additional Cost

4. LOCATION INFORMATION ⓘ

Watershed County

Jurisdiction

5. UPLOAD IMAGES ⓘ

Uploaded

<input type="checkbox"/>	Filename	Size	Cover	Type	Download
<input type="checkbox"/>	Picture	1.21 MB	<input type="button" value="Cover"/>	<input type="button" value="PNG"/>	<input type="button" value="↑"/>

6. UPLOAD DOCUMENTS ⓘ

<input type="checkbox"/>	Filename	Size	Date	Type
<input type="checkbox"/>	Document	17.6 MB	23 May, 2022	<input type="button" value="PDF"/>

MP Michelle ▾ ⓘ
Sort By
Apply map view to filters



Search by Location

Restoration

Capital ▾

Fox River Watershed - Lake County

Additional Cost

\$0

4. LOCATION INFORMATION

Watershed

Fox River

County

Lake County

Jurisdiction

Lake County Forest Preserve District

Village of Volo

Unincorporated

Lake County

5. UPLOAD IMAGES

Add Image

Download All

Save your project



Please confirm your project edits below.

Cancel

Submit Project

6. UPLOAD DOCUMENTS

Add Document

Download All

<input type="checkbox"/>	Filename	Size	Date	Type	
<input type="checkbox"/>	Document	17.6 MB	23 May, 2022	PDF	

Cancel

Submit Project

Sort By

Apply map view to filters



mapbox



mapbox

[EXTERNAL] Lake County Inflow User submits a Project



inflow@lcsmc.org

To: Pope, Michelle



Thu 8/18/2022 7:40 AM

CAUTION: This email originated from outside of the organization! Do not click links, open attachments, or reply, unless you recognize the sender's email address and know the content is safe.



STORMWATER MANAGEMENT COMMISSION

A project has been submitted to the Fox River Watershed.

Please login to Inflow by clicking the button below and access the work request.

[Access Inflow](#)



500 West Winchester Road, Libertyville, IL 60048



Search by Location

mapbox Nearmap: May 27, 2022 Zoom Level: 0

Projects Received

Below are all projects submitted by local governments in Lake County.

Filter icons | [+ Add Project](#)

[View All](#)
[Des Plaines River](#)
[Fox River](#)
[Lake Michigan](#)
[N.B. Chicago River](#)

<input type="checkbox"/>	Name	Status	Submitted by	Project Type	Archive	Download	⋮
<input type="checkbox"/>	Restoration	Under Review	Michelle Pope Fox River	Capital	Archive	Download	⋮
<input type="checkbox"/>	First Project	Under Review	Admin Lake County Lake Michigan	Acquisition	Archive	Download	⋮
<input type="checkbox"/>	Sample Project (Wednesday)	Under Review	Admin Lake County Fox River	Minor Repairs	Archive	Download	⋮
<input type="checkbox"/>	New Project Test	Approved	Admin Lake County Fox River	Capital	Archive	Download	⋮

Questions?

stormwater@lakecountyil.gov

DETENTION BASIN PREVENTATIVE MAINTENANCE

LAKWOOD GROVE SUBDIVISION
ROUND LAKE, IL



Introduction

Your Responsibilities

Preventative Maintenance

Wrap-Up

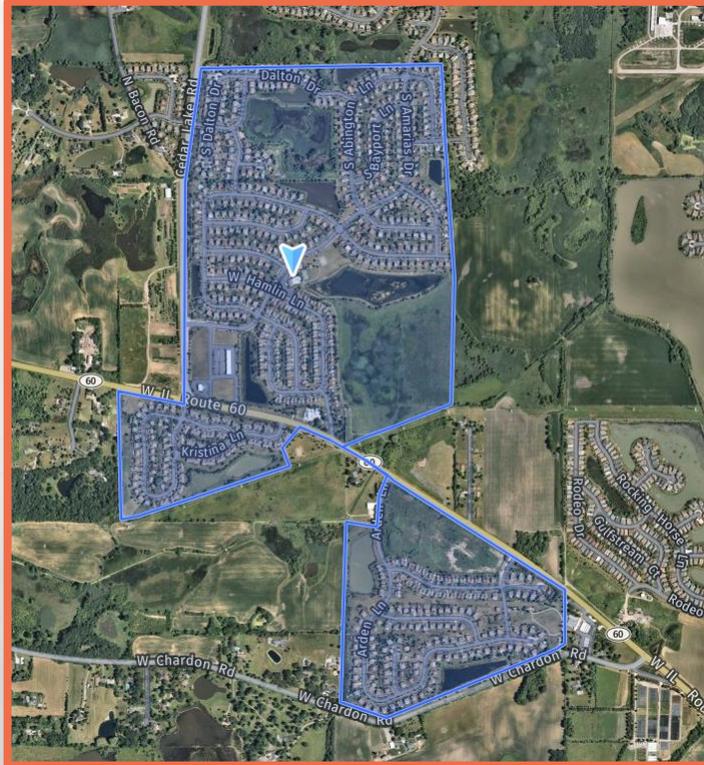
AGENDA

ABOUT ME



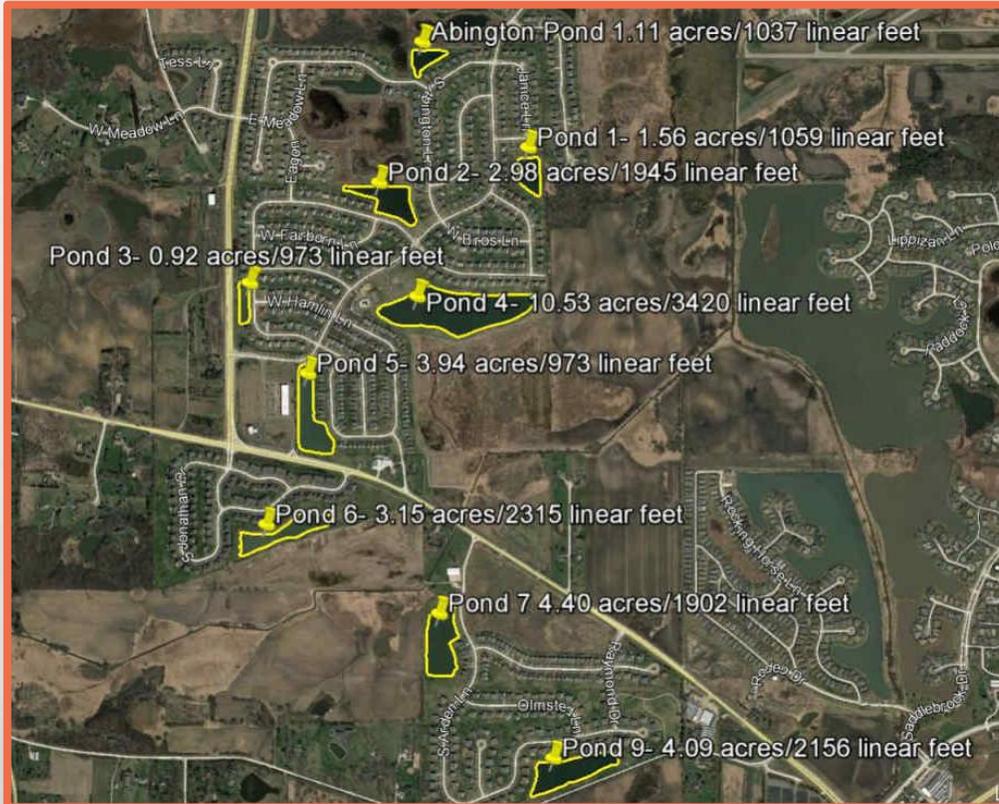
- **Senior Engineer at Gewalt Hamilton Associates**
- **Civil Engineer in Lake County for almost 20 years**
- **Enforcement Officer of the Lake County Watershed Development Ordinance**
- **President of the Lakewood Grove HOA since 2016**
- **On Lakewood Grove HOA Board since 2011**

LAKWOOD GROVE, ROUND LAKE



- **IL Route 60 & Cedar Lake Road**
- **800 Homes**
- **Over 400 Acres**

YOUR RESPONSIBILITIES



- **What are you responsible for?**
- **Nine detention basins in LWG**
 - **28.5 ac. surface area**

YOUR RESPONSIBILITIES



Included Written Requirements



\$35k in LWG Annual Budget

RESERVES PLAN

Reserve Advisors, LLC

RESERVE EXPENDITURES

Lakewood Grove Homeowners Association
Round Lake, Illinois

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful Remaining	Costs, \$																	
							Unit (2019)	Total (2019)	30-Year Total (Inflated)	16 2025	17 2026	18 2027	19 2028	20 2029	21 2030	22 2031	23 2032	24 2033	25 2034	26 2035				
Property Site Elements																								
4.020	2,000	2,000	Square Yards	Asphalt Pavement, Crack Repair, Patch and Seal Coat, Parking Area	2020	3 to 5	1	2,000	4,000	4,000	37,422		5,990		6,982									
4.021	3,200	3,200	Square Yards	Asphalt Pavement, Crack Repair, Patch and Seal Coat, Walking Paths	2020	3 to 5	1	2,000	6,400	6,400	57,076		9,578		11,579									
4.045	2,000	2,000	Square Yards	Asphalt Pavement, Total Replacement, Parking Area	2024	15 to 20	5	35.00	70,000	70,000	205,461				126,614									
4.080	3,200	3,200	Square Yards	Asphalt Pavement, Total Replacement, Walking Paths	2024	15 to 20	5	24.00	76,800	76,800	212,844				126,375									
4.110	1,100	90	Linear Feet	Concrete Curbs and Gutters, Parking Area, Partial	2032	to 65	13 to 30+	38.00	3,420	41,800	17,086				5,624									
4.140	5,600	420	Square Feet	Concrete Sidewalks, Amenity Center, Partial	2024	to 65	5 to 30+	11.00	4,620	61,600	28,283				7,802									
4.285	5,800	3,800	Linear Feet	Fences, Wood, Cedar Lake Road and IL Rte. 60	2021	15 to 20	2	33.00	191,400	191,400	494,017			233,220										
4.660	1	1	Allowance	Playground Equipment	2021	15 to 20	2	63,000.00	63,000	63,000	164,924													
4.710	1	1	Allowance	Ponds, Erosion Control and Buffer Zone Maintenance	2031	10 to 15	12	70,000.00	70,000	70,000	216,725				123,679									
4.720	1	1	Allowance	Ponds, Sediment Removal, Bathymetric Survey	2021	to 10	2	10,000.00	10,000	10,000	40,628													
4.730	122,500	2,450	Square Yards	Ponds, Sediment Removal, Partial, Phased	2032	to 30	13 to 17	30.00	73,500	3,675,000	524,808													
4.800	1	1	Allowance	Signage, Entrance Monuments, Inspections and Repairs	2022	8 to 12	3	10,000.00	10,000	10,000	43,980													
4.830	800	800	Square Yards	Tennis Court, Color Coat	2020	4 to 6	1	9.00	7,200	7,200	75,252													
Clubhouse Elements																								
5.400	3	1	Allowance	Furniture, Phased	2022	to 20	3	11,200.00	11,200	33,600	65,388				17,076									
5.450	2	2	Back	HVAC Equipment, Split Systems	2022	12 to 18	3	7,800.00	15,600	15,600	42,964					9,999								
5.500	1	1	Allowance	Interior, Renovations, Complete	2030	to 25	11	52,000.00	52,000	52,000	67,596													
5.510	1	1	Allowance	Interior, Renovations, Partial	2022	to 8	3	9,000.00	9,000	9,000	40,861				14,123									
5.520	2	2	Back	Interior, Renovations, Retail Floors	2030	to 25	11	25,000.00	50,000	50,000	64,964													
5.600	46	46	Squares	Roof Assembly, Asphalt Shingles (incl. Gutters and Downspouts)	2022	15 to 20	3	495.00	22,770	22,770	62,816				30,367									
5.700	2,400	2,400	Square Feet	Walls, Entries, Impediments, Partial Paint Finishes and Repairs	2021	4 to 6	2	1.40	3,360	3,360	23,892					8,225								
5.800	700	700	Square Feet	Windows and Doors	2020	to 35	1	64.00	44,800	44,800	47,867													
Pool Elements																								
6.200	6,200	6,200	Square Feet	Concrete Deck, Impediments, Partial Repairs and Repairs	2020	8 to 12	1	1.40	8,680	8,680	34,438				14,283									
6.300	1,400	1,400	Square Feet	Cover, Vinyl	2020	6 to 8	1	3.00	4,200	4,200	23,385				6,298	7,599								
6.400	300	300	Linear Feet	Fences, Aluminum	2040	to 25	21	60.00	18,000	18,000	34,683				24,683									
6.500	1	1	Allowance	Furniture	2022	to 12	3	15,000.00	15,000	15,000	65,972					28,457								
6.600	6	6	Back	Light Poles and Fixtures	2030	to 30	11	3,200.00	19,200	19,200	30,312													
6.800	2	1	Allowance	Mechanical Equipment, Phased	2021	to 15	2 to 8	8,000.00	8,000	17,000	66,443				13,659	15,748								
6.800	1,400	1,400	Square Feet	Pool Finish, Harder	2020	8 to 12	1	16.00	22,400	22,400	88,744					15,959								
6.800	180	180	Linear Feet	Pool Finish, Tile and Coping	2020	to 30	11	100.00	18,000	18,000	22,363													
Anticipated Expenditures, By Year:									\$2,940,811	107,420	142,023	233,220	100,000	19,000	239,800	55,217	0	123,079	158,800	21,971	95,760	0	10,000	0

RESERVE EXPENDITURES

Lakewood Grove Homeowners Association
Round Lake, Illinois

Line Item	Total Quantity	Per Phase Quantity	Units	Reserve Component Inventory	Estimated 1st Year of Event	Life Analysis, Years Useful Remaining	Costs, \$				16 2035
							Unit (2019)	Per Phase (2019)	Total (2019)	30-Year Total (Inflated)	
Property Site Elements											
4.020	2,000	2,000	Square Yards	Asphalt Pavement, Crack Repair, Patch and Seal Coat, Parking Area	2020	3 to 5	1	2,000	4,000	4,000	37,422
4.021	3,200	3,200	Square Yards	Asphalt Pavement, Crack Repair, Patch and Seal Coat, Walking Paths	2020	3 to 5	1	2,000	6,400	6,400	57,076
4.045	2,000	2,000	Square Yards	Asphalt Pavement, Total Replacement, Parking Area	2024	15 to 20	5	35.00	70,000	70,000	205,461
4.080	3,200	3,200	Square Yards	Asphalt Pavement, Total Replacement, Walking Paths	2024	15 to 20	5	24.00	76,800	76,800	212,844
4.110	1,100	90	Linear Feet	Concrete Curbs and Gutters, Parking Area, Partial	2032	to 65	13 to 30+	38.00	3,420	41,800	17,086
4.140	5,600	420	Square Feet	Concrete Sidewalks, Amenity Center, Partial	2024	to 65	5 to 30+	11.00	4,620	61,600	28,283
4.285	5,800	5,800	Linear Feet	Fences, Wood, Cedar Lake Road and IL Rte. 60	2021	15 to 20	2	33.00	191,400	191,400	494,017
4.660	1	1	Allowance	Playground Equipment	2021	15 to 20	2	63,000.00	63,000	63,000	164,924
4.710	1	1	Allowance	Ponds, Erosion Control and Buffer Zone Maintenance	2031	10 to 15	12	70,000.00	70,000	70,000	216,725
4.720	1	1	Allowance	Ponds, Sediment Removal, Bathymetric Survey	2021	to 10	2	10,000.00	10,000	10,000	40,628
4.730	122,500	2,450	Square Yards	Ponds, Sediment Removal, Partial, Phased	2032	to 30	13 to 17	30.00	73,500	3,675,000	524,808
4.800	1	1	Allowance	Signage, Entrance Monuments, Inspections and Repairs	2022	8 to 12	3	10,000.00	10,000	10,000	43,980
4.830	800	800	Square Yards	Tennis Court, Color Coat	2020	4 to 6	1	9.00	7,200	7,200	75,252

- 30-Year Plan
- Three Pond Items – Total: \$782k

PREVENTATIVE MAINTENANCE ITEMS

- **CLEAN INLETS & OUTLETS**
- **SHORELINE STABILIZATION**
- **WATER QUALITY**
- **MOSQUITOS**

CLEAN INLETS & OUTLETS

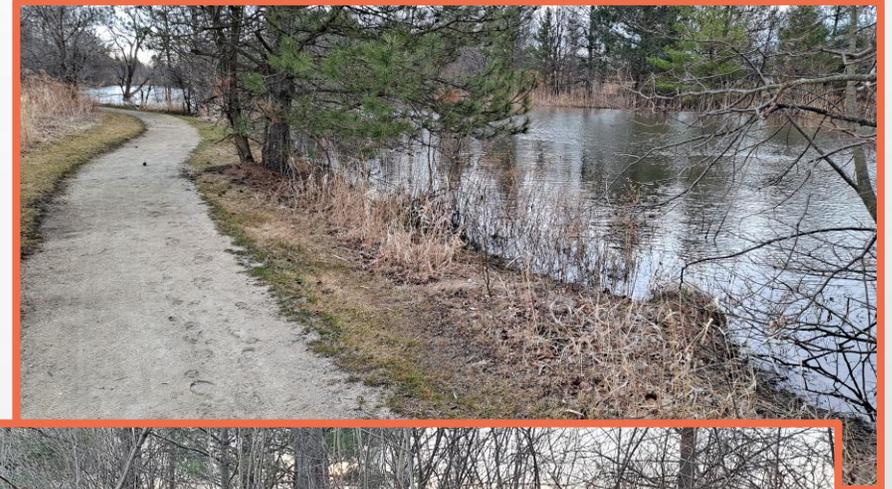


BLOCKAGE BELOW GROUND



A HANDY TOOL!

OR ...



THIS SHOULD BE DRY

EXPENSIVE!

SHORELINE STABILIZATION



EROSION!



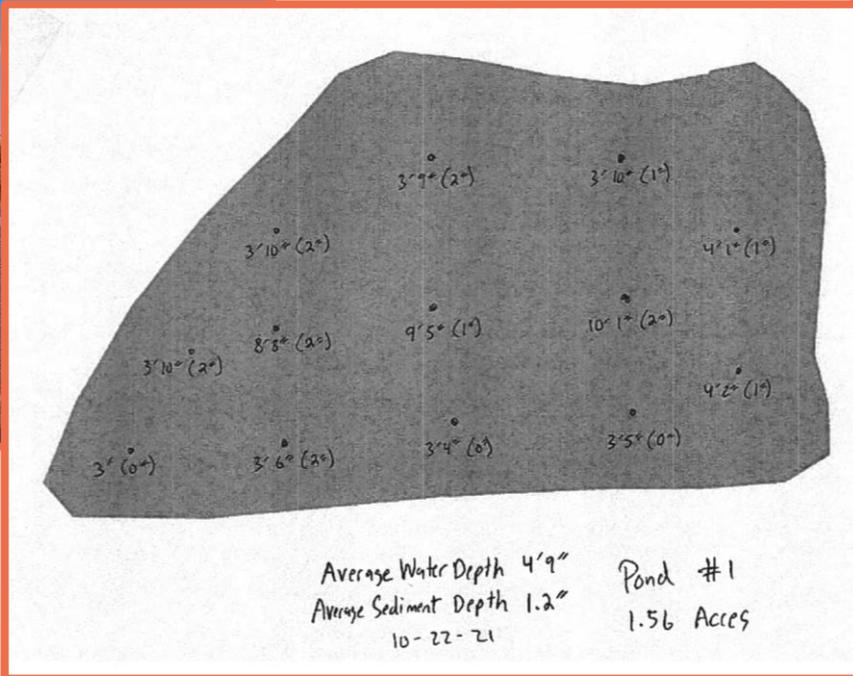
BUFFER STRIP



WATER QUALITY



AESTHETIC VS. FUNCTIONAL



110 Le Baron Street, Waukegan, IL 60085 | (847) 244-6662
info@ilmenvironments.com | ilmenvironments.com

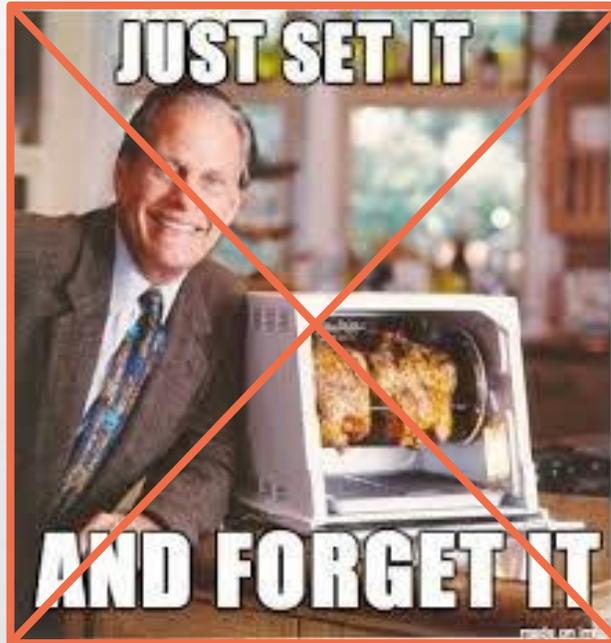
SERVICE REPORT

Site Lakewood Grove Date Jul 29, 2022
 Service Task Description Algae Control Visit 7
 Personnel Christian
 Wind 4 mph Direction WNW Air Temps 73 Sky Partial Clouds
 Waterfall N/A Water Supply N/A Aeration Not Applicable

Pond # & Size	Product	Amount	Target Plant	DO (MG/L)	Temp (C)	PH	Secchi (feet)	Level
Abingtonn Pond 1.11	SeClear, Cide Kick	1 gal, 4 oz	Filamentous Algae	7.83	25.7	8	3	Normal
Pond 1 1.56	Captain XTR	1 gal	Filamentous Algae	8.76	24.9	8	3	Normal
Pond 2 2.98	SeClear, Cide Kick	1 gal, 4 oz	Filamentous Algae	9.17	25.3	8	3	Normal
Pond 3 0.92	SeClear, Cide Kick	1 gal, 4 oz	N/A	6.37	26.1	8	3	Normal
Pond 5 3.94	SeClear, Cide Kick	1 gal, 4 oz	Filamentous Algae	9.28	25.9	8	3	Normal
Pond 6 3.15	SeClear, Cide Kick	1 gal, 4 oz	Filamentous Algae	6.85	24	8	3	Normal
Pond 7 4.4	SeClear, Cide Kick	1 gal, 4 oz	Filamentous Algae	9.43	25.2	8	3	Normal
Pond 9 4.09	SeClear, Cide Kick	4 gal, 16 oz	Filamentous Algae	8.68	25.6	8	3	Normal



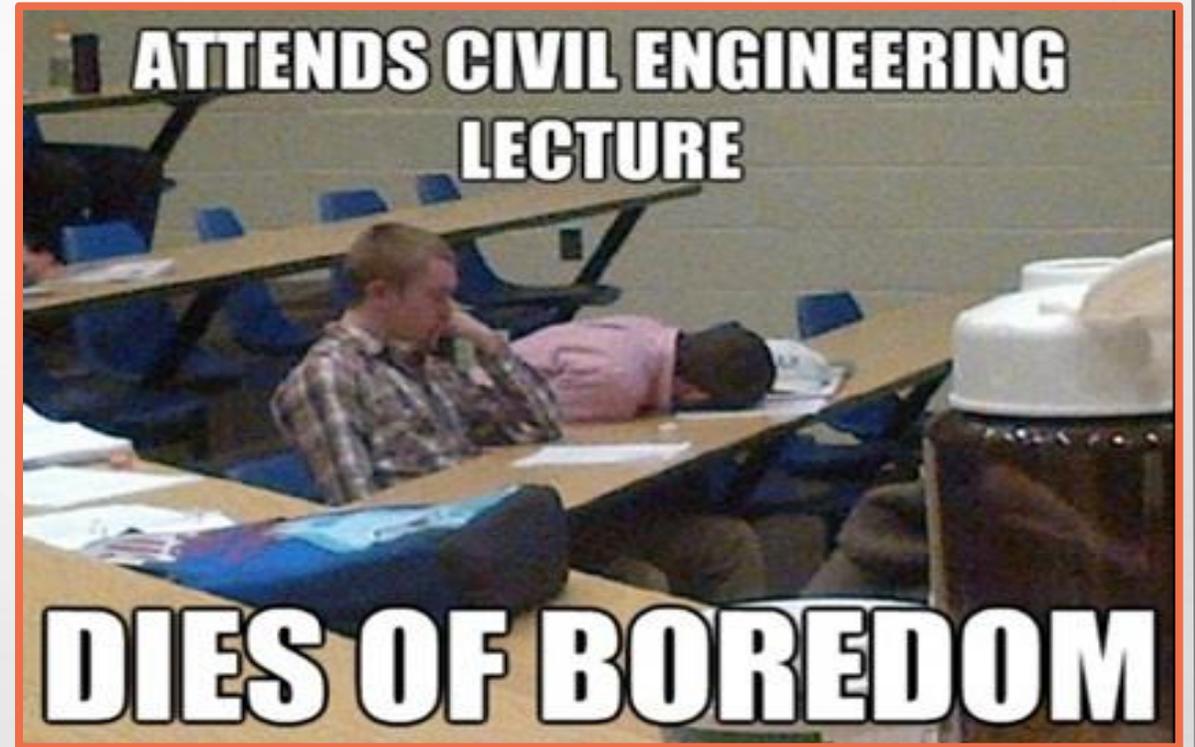
WRAP-UP



**MAKE A PLAN
AND EXECUTE IT**

THANK YOU!

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Lake County Stormwater Management Commission HOA Workshop: What to Do When You Think You Need Professional Help?

Debbie Budyak, Director of Client Services
ILM Environments



Why Use A Professional Contractor?

- Experience.
- Licensed to apply EPA-approved herbicides.
- Current on new approaches/technologies.
- Treatments based on actual water conditions.
- Evolving chemical-free options.





Timing

- Pick your contractor now!
- Early contract agreements ensure we can start in early spring.
- The later we start services during the growing season, the harder it is to bring your BMP under control.

Consensus!

- Does your board or lake committee agree on approach?
- Identify main point of contact.
- Share service reports to help with communication.



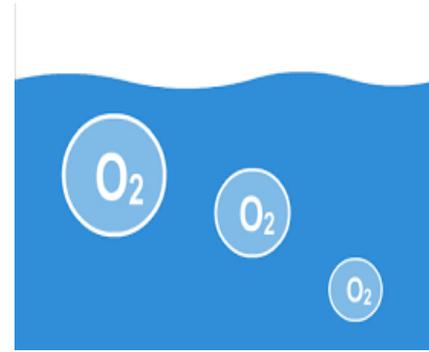
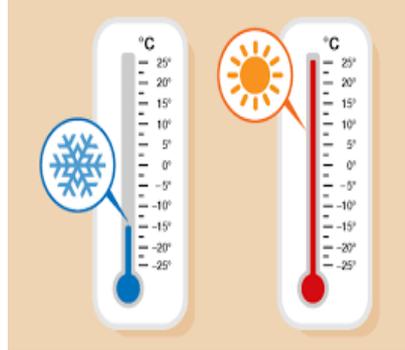


Using Multiple Contractors

- Clear on tasks between contractors to avoid overlap.
- Understanding what each contractor offers (bundling services with one contractor is easier to manage and may be cheaper).
- Encourage contractors to work together if needed to ensure HOA gets best results.

Conditions

- Challenges of varying conditions.
- Factors that influence treatment.
- Adjusting management approaches.



Thank you

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