

## **Illinois Nutrient Loss Reduction Strategy USWG Meeting**

**May 12, 2020 2-3pm**

*In attendance:* Eliana Brown, Illinois Extension; Kate Gardiner, Illinois Extension; Layne Knoche, Illinois Extension; Lisa Merrifield, Illinois Extension; Jeff Edstrom, Illinois DNR Coastal Program; Leslie Heath, City of Champaign; Elliot Lagacy, Illinois Department of Agriculture; Holly Hudson, Chicago Metropolitan Agency for Planning; Raelynn Parmely, Illinois Farm Bureau; Patrick McPartlan, Kane-DuPage SWCD; John Sloan, NGRREC; Iyana Simba, Illinois Environmental Council; Steve Brendel, Madison County Planning and Development; Mary Mitros, DuPage County Stormwater Management, Mary Beth Falsey, DuPage County Stormwater Management; Allison Neubauer, Illinois-Indiana Sea Grant; Christine Davis, Illinois EPA; Trevor Sample, Illinois EPA; Stephen McCracken, The Conservation Foundation; Lisa Krause, Illinois DNR Coastal Programs

### **Summary**

#### **Welcome**

Eliana Brown welcomed everyone to the meeting.

#### **Member Updates**

Illinois Extension is working on a rain garden maintenance app, delivering webinars, including one on the Illinois NLRS, and exploring Illinois NLRS curriculum options for students. Illinois Extension also successfully hosted the first Equitable Green Infrastructure Conference virtually and is developing a whitepaper. DuPage County Stormwater Management is offering their technical training for municipal and county staff virtually, is incorporating e-learning into their contract with SCARCE, and is offering a virtual workshop on water quality best management practices for homeowners. CMAP hosted a webinar on the regional impact of COVID-19 on municipal revenue, transportation, and climate. Parkland College is adapting the NGICP training to comply with Illinois' Stay at Home order. Illinois Department of Natural Resources hosted a one-day course to introduce people in the Calumet region to green infrastructure.

#### **Onsite Disposal Systems in the Illinois Coastal Region: Lessons from the Coastal Nonpoint Pollution Program Approval Process – Jeff Edstrom, Illinois Coastal Management Program**

Jeff Edstrom shared an overview of the Illinois Coastal Management Program and an update on onsite disposal systems in the Coastal Clean Waters Program. He shared how Illinois is locating and inspecting these onsite disposal systems and information on the authorities on the matter.

#### **Pollution Prevention with Lawn to Lake – Allison Neubauer, Illinois-Indiana Sea Grant**

Allison Neubauer covered the history of the Lawn to Lake program and shared its current project, which is to work as an interdisciplinary team within Illinois Extension to target natural lawn care communications to homeowners in Illinois. They utilized a survey and focus groups to discover what homeowners want to know about natural lawn care and the team is developing new outreach materials based on those findings.

#### **Wrap Up**

Eliana Brown announced the next meeting for June 9<sup>th</sup> and reminded members to let her know if they would like to give a presentation at future meetings.

## Meeting Minutes

### Welcome

Eliana Brown welcomed everyone to the meeting, took attendance, and explained how the Zoom meetings work for the Urban Stormwater Working Group.

### Member Updates

Eliana Brown, Illinois Extension: My team and I are working with a fall call to develop a tracking app for the Red Oak Rain Garden; Kate Gardiner, Jennifer Woodyard, and Haley Haverback-Gruber and I are hosting an Everyday Environment webinar on the Illinois NLRs; and we are speaking to the Illinois EPA on exploring curriculum for schools on the Illinois NLRs, which could be called “NLRs Junior.”

Mary Mitros, DuPage County Stormwater Management: We are renewing our contract with SCARCE for high school education and incorporating e-learning into the contract. We have been doing lots of webinars for adults and believe we could transform that into student learning. We would love to chat and come up with some ideas. Separately, DuPage County is offering technical training for municipal and county staff online. DuPage County Stormwater Management is partnering with The Conservation Foundation and SCARCE to host a virtual workshop on native gardens, composting, rain barrels and other ways to reduce pollution reaching local waterways.

Holly Hudson, CMAP: CMAP staff hosted a webinar on the regional impact of COVID-19 on municipal revenue, transportation, and climate. She can provide the link if people are interested.

Lisa Merrifield, Illinois Extension: Held Equitable Green Infrastructure Summit, which looked at green infrastructure, workforce development, and social justice. Working on a whitepaper and she would like to send it to this group to get comments.

Heidi Leuszler, Parkland College: I am running the NGICP program out of Parkland College in Champaign. We are trying to reimagine what the training will look like under Shelter in Place rules. An online training seems feasible and we are trying to figure out how to modify the curriculum. Parkland may be able to lead the one-day trainings that OAI and the partners put together that we were able to have in person on March 10<sup>th</sup>, so there is the possibility that those take an online presence as well. WEF is interested in adopting this as an official option. Parkland College has some online resources for agriculture for high school students.

Lisa Krause, Illinois Department of Natural Resources: We hosted a one-day overview course to introduce people in the Calumet region to green infrastructure. We have met as the Calumet Stormwater Collaborative to discuss the future of this program and partnering with Parkland College and others to move it forward and keep developing the training.

### **Onsite Disposal Systems in the Illinois Coastal Region: Lessons from the Coastal Nonpoint Pollution Program Approval Process** – Jeff Edstrom, Illinois Coastal Management Program

- What is coastal management?
  - Protecting, restoring, and establishing a responsibility in preserving and developing the nation’s coastal communities and resources, where they are under the highest pressure.

- Ensure that the nation’s coast and oceans, including the Great Lakes and island territories, are healthy and thriving for this and future generation”
    - The mission is “to ensure the conservation and responsible use of our nation’s coastal and ocean resources”
  - Illinois was officially approved as a Coastal Management Program on January 31, 2012.
  - Purpose is to:
    - Support partnerships among governmental agencies and organizations;
    - Strengthen local stakeholder capacity;
    - Initiate and continue effective coastal management.
  - Illinois Coastal Habitat includes:
    - Dune and swale
    - Nearshore habitat
    - Ravines
    - Riparian and stream habitats
    - Urban habitats
    - wetlands
  - Priorities:
    - Persistent toxins
    - Sustainable development
    - Habitat and natural areas
    - Information and indicators
    - Nonpoint source pollution
    - Invasive species
    - Areas of concern
    - Economic development
    - Climate change
    - Priority waterways
    - Access and recreation
- Coastal Clean Waters Program
  - Close coordination with Illinois EPA
  - Convened a small advisory panel of experts
  - Exclusions: Agriculture, Forestry, etc.
  - Surveyed key stakeholders for broader input on priorities
  - Public Review and input.
- Nonpoint Pollution Program
  - Agriculture (Request for exclusion approved)
  - Forestry (Request for exclusion approved)
  - Urban Areas
    - Pollution Prevention (Updated with interim approval)
    - Roads, Highways and Bridges (Updated with interim approval)
    - Onsite Disposal Systems (Updated with interim approval)
  - Marinas and Recreational Boating (Updated with interim approval)
  - Wetlands, Riparian Areas, and Vegetated Treatment Systems (Approved)
  - Monitoring (Updated with interim approval)

- Hydromodification (Updated with interim approval)
- Additional Management Actions (Updated with interim approval)
- Requirements for the Program
  - Are there existing regulatory programs in place?
    - What are the state laws?
    - Are their local ordinances?
    - How are they enforced?
  - What are the education, public outreach and technical and financial assistance programs?
  - Are there voluntary programs in place to encourage better practices?
  - If there are voluntary programs, is there backup authority to enforce if voluntary is not enough?

#### Onsite Disposal Systems in the Coastal Clean Waters Program

- Onsite Disposal Systems
  - Limited number in Illinois coastal area
  - Mostly sewerred
  - Concentrations in certain areas, but not clear where
  - Authorities
    - State Law -- Illinois Private Sewage Disposal Code (77 IAC 905)
      - State reviews and approves plans for private sewage disposal systems and alternative private sewage disposal systems before construction.
      - About 90 local health agencies in Illinois are reviewers either by authority of a local ordinance or as an "agent" of the Department
    - Lake County
      - Lake County Onsite Wastewater Treatment System Ordinance
        - Requires proper design and installation of new systems for the treatment and disposal of wastewater,
        - Establishes and provides for enforcement of minimum standards for the location, installation, alteration, operation, maintenance, management, monitoring
        - Field inspection and water testing are initiated to determine if there is a failure and, if present, the extent of the failure.
        - A permit from LCDPH is required to repair, replace, or decommission a system. Existing systems requiring maintenance upgrades are subject to approval by LCDPH.
        - When a site plan is approved in accordance with these requirements, the owner of the OSDS shall be required to meet the maintenance and inspection of any new or existing component that is subject to the requirements of the relevant sections of the ordinance.
      - Lake County Public Nuisance Ordinance
        - Public nuisance to maintain and/or operate an onsite wastewater disposal system in a condition that the Health

Officer determines is detrimental or potentially detrimental to the health and/or safety of the inhabitants of Lake County, Illinois.

- Cracked/damaged septic tank riser or cover
    - Exposed drop/distribution box
    - Failure to properly supply, operate or maintain the disinfecting component of a surface discharge onsite wastewater disposal system
    - Failure to provide required reports of inspection and/or management activities of an onsite wastewater disposal system or system component.
  - North Shore Water Reclamation District Sewer Ordinance
    - Requires all buildings or properties used for human occupancy, employment, recreation, or other purposes, situated within the District and within 300 feet of a public sewer, to connect directly with the public sewer.
    - If they are not and it is determined that they are in violation, the owner must comply within one year after the date of official notice.
- How Many OSDS in Illinois Coastal Region?
  - Know how many received permits since passage of 1997 Ordinance
  - How to locate OSDS when some are not recorded?
    - Public outreach
    - Monitor for problems with systems
  - Lake County Health Department received a small grant to identify parcels with probable OSDS:
    - Compare parcel layer with Sanitary Sewer customer list
    - Conduct a GIS assessment of parcels identified as having a possible septic system
    - Conduct field reconnaissance on parcels identified as having potential septic system
    - Review assessments and reconnaissance information and create maps of the information
    - Create an internal database or spreadsheet with information on parcels indicating whether there is a septic system on the site, is connected to the sewer, or neither
  - OSDS Locations
    - 1276 systems with a permit
    - 409 probable systems installed prior to permitting requirements
      - 85% pre-1980 homes
      - 62% pre-1962 homes
    - Total 1685
- Inspections
  - OSDS Inspections

- OSDS inspections are not required by law in Illinois
  - Often a push to enact inspection requirements at point of sale
- Mortgage Companies
  - When do mortgage companies require OSDS inspections?
    - The independent appraiser, whose assessment is required by the lender, recommends or requires a full inspection or test based on seeing evidence of a failing OSDS system
    - The Purchase Agreement requires a full inspection
    - The Mortgage Product Guidelines (such as through FHA, USDA or VA) requires an inspection
    - Underwriter discretion if documentation in the mortgage file indicates there may be a need for an inspection.
- Real Estate Transfers
  - According to Lake County real estate agents, OSDS inspection generally done at time of sale at recommendation of purchaser's agent or mortgage company
    - House a big investment
    - OSDS upgrade, replacement can be \$10,000 - \$15,000
      - Affects certainty over sale
      - Do not want to face extra cost after sale
      - Analyzed annual percentage of property transfers – Averages 5% per year
- Tracking Inspections
  - To track inspections and new OSDS permits, ICMP will:
    - Survey a representative sample of Lake county real estate agents every five years to determine whether the voluntary OSDS inspections performed during the property transfer process continues as a general practice
    - Crosscheck the list of properties sold during the previous five years against the list of properties with OSDS in the coastal area to identify properties that went through the title transfer process
    - Identify properties for which a new (first-time or subsequent) OSDS permit was issued
    - Calculate the number and percentage of properties that with permits and those properties that have changed title to determine the inspection rate
    - Review the numbers and locations of OSDS complaints and violations and assess their outcomes
  - Given that about 5% of homes in this area are sold per year, it is estimated that approximately 75% of homes with OSDS will be sold during the next 15 years with associated well and septic inspections as part of the pre-sale review process.
- Meeting the Federal Guidance
  - Have sufficient authorities to regulate OSDS

- Inspection approach combined with enforcement records, ordinance effectiveness and tracking provide a good framework to indicate that Illinois meets Coastal Management Nonpoint Program guidelines
  - Will track over the next 15 years with five-year milestones to determine if the approach is truly effective
- Will the Approach Identifying OSDS Work Elsewhere?
  - Reasonable approach for a small area like the Illinois Coastal region with small number of OSDS and one wastewater treatment utility
  - More difficult in Lake County Fox River watershed
    - Significantly more OSDS
    - Multiple wastewater utilities
    - More parcels than can be individually assessed on a data layer
  - Alabama Coastal Program approach
    - Compare parcel layer to wastewater customer layer
    - Overlay the results with the electric utility customer layer by parcel
      - If a parcel has electrical hook-up, very likely has an OSDS system

### **Questions**

Eliana Brown: Did you get inspection reports from the mortgage companies?

Jeff Edstrom: These are voluntary, so it's not required to file them. Now that we have the addresses, there is an opportunity to provide outreach materials to them and emphasize the importance of maintenance and inspections. People are hesitant to turn in an inspection report because it goes into public record, so that is one issue they are trying to overcome.

Eliana Brown: You mentioned that you might be sending out outreach material. Are there other next steps?

Jeff Edstrom: In terms of the nonpoint program, public outreach materials are the primary focus. Maintenance is so critical and if you've never had a septic system, you'd be surprised.

Stephen McCracken: We run a similar exercise where we overlay the wastewater treatment map with residential and cross-reference them. We found variability in the quality of wastewater maps. Some had it in GIS or AutoCad, but most did not have it in that format. Did any groups have a Plan B for how you might be able to produce a GIS map?

Jeff Edstrom: The electric utility hookup data is probably the best option. In Alabama, they were lucky that someone who was in senior leadership in the local electric company, so they could get the data easily. One of the interesting things with the wastewater utility is that one of the things they said was that if we found any of their customers to let them know.

Heidi Leuszler: Was this going to take 15 years to go through all the inspections?

Jeff Edstrom: The timeline is as homes get sold, you'll identify that this is one that was very likely to have had an inspection. You can't get 100% on this and some people will have a home for decades. The goal is to get a large enough number and the guidance on that changes.

## Pollution Prevention with Lawn to Lake – Allison Neubauer, Illinois-Indiana Sea Grant

### History of Lawn to Lake

- Started in Lake Champlain in 2007, moved to southern Lake Michigan in 2010 with a Great Lakes Restoration Initiative grant
- Program goals:
  - Inform homeowners and communities how actions we take on land have effects on our watersheds.
  - Offer resources to encourage adoption of sustainable lawn and landscaping practices.
- Publications and presentations made available statewide, partner with Master Gardeners and Master Naturalists as well
- Originally focused on the Lake Michigan watershed, but have expanded statewide with the help of the Illinois Extension network

### Current Project

- Targeting natural lawn care communications to homeowners in Illinois thanks to the Interdisciplinary Collaborations in Extension Grant
- Partners include Illinois-Indiana Sea Grant, Agricultural Communications Program, and the Illinois Extension Watershed Outreach Associates
- Steps:
  - Survey Illinois residents
  - Develop communications materials
  - Conduct focus groups
  - Revise and finalize communications materials
- Survey Results:
  - 841 respondents; 799 had a lawn
    - 89% were homeowners
    - Size: 47% small, 26% medium, 26% large
    - 67% manage their own lawns, 21% ask other household members to take care of it
    - 95% said they participate in caring for their lawns
    - 82% felt they had some to a great deal of experience
  - Demographics:
    - 65% female
    - 85% college graduates or held advanced degrees
    - 80% between 35-74 years old
    - Results are skewed based on the demographics
  - Most have never tested their soil, most cut the grass to be under 3 inches, many choose plant or grass species that best fit yard conditions and are willing to do it in the future
  - Interested in managing pests and weeds responsibly, choosing the right plant for the right place, and testing soil
  - Major concerns included pesticides the environment, biodiversity, and water quality
  - Current sources of lawn care information include internet research, University Extension experts, and family and friends

- Preferred sources of lawn care information include internet research, University Extension experts, and brochures or factsheets
- Conclusions
  - Although some respondents are testing their soil and following best practices when it comes to planting and fertilizer/pesticide use, there is room for improvement, and many are willing to adopt new practices.
  - Although outreach materials aren't currently a source of lawn care information, they are a priority.
  - Continued engagement of Extension experts is key to successful natural lawn care education.
- Focus Groups
  - January 9, 2020: Effingham
  - January 16, 2020: Rock Island
  - January 23, 2020: Lake

#### Coming Soon

- Outreach Materials
  - Brochures on:
    - Soil Health/Testing
    - Right Plant Right Place
    - IPM
  - Factsheets: "What's in your Watershed?"
  - Website and updated digital guidebook
  - Library displays
- Natural Lawn Care workshops
  - Originally scheduled to be in person, hosted via webinar instead
- Connecting with other UIE staff and units

#### Questions

Jeff Edstrom: Have you spoken to any of the big box stores like Home Depot? Sometimes they have classes on Saturdays.

Allison Neubauer: We haven't done that. I think that's a great next step for once we have these outreach materials.

Holly Hudson: When did you say you think you'll have the materials? What are the plans for Indiana?

Allison Neubauer: By the end of June. We are working to have Purdue staff serve as expert technical reviewers with the hope that they will adopt some of these materials.

John Sloan: I'm fascinated by the soil information. While I was at Texas A&M, we had a program that worked pretty well to promote soil testing where we offered homeowners a free soil test and the idea was that they would take the soil test results to a nursery and the nursery would help them choose plants.

Allison Neubauer: That's a really great set-up.

Holly Hudson: I've done some soil tests on my own lawn, but it's not necessarily an easy thing. You've reached your choir in a way of people who are already in your network. But how does soil testing become easier and more available?

Allison Neubauer: I agree, knowing where to go for a soil test, how much it costs, and where to take it can be questions that hold people back.

Eliana Brown: Maybe this should be part of NLRS Junior and have students get a soil test from their homes.

### **Wrap-Up**

The next virtual meeting is scheduled for June 9<sup>th</sup>. Eliana will include partner update links when sharing the meeting minutes. Let Eliana know if you'd like to give a presentation at a future meeting.