

Urban Stormwater Education Subgroup

Wednesday, October 25, 2023

Starts at 1:30 PM



Photo by Eliana Brown



ILLINOIS
NUTRIENT LOSS
REDUCTION STRATEGY

Welcome!

Please type your name and affiliation in the chat box.



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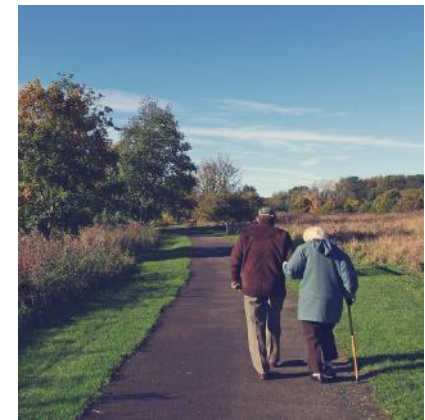
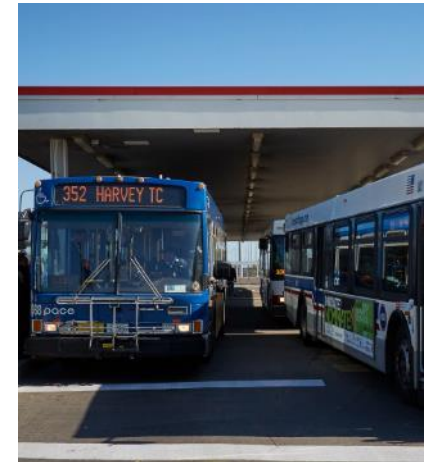
Agenda

1:30 – 1:40 (10 minutes)	Welcome & Introduction of Katy Solak, Graduate Student Intern <i>Eliana Brown, University of Illinois Extension</i>
1:40 – 2:00 (20 minutes)	CMAP Resource Repository Overview and Next Steps <i>Kate Evasic, Chicago Metropolitan Agency for Planning</i> <i>Eliana Brown</i> 10-minute presentation followed by a 10-minute discussion
2:00 – 2:15 (15 minutes)	Lawn to Lake Program Overview <i>Steph Mueller, Illinois-Indiana Sea Grant</i> 10-minute presentation followed by a 5-minute Q&A
2:15-2:25 (10 minutes)	Round Robin Member Updates (time permitting) Members provide a 1- to 3-minute update on current programs or projects
2:25 – 2:30 (5 minutes)	Next steps <i>Eliana Brown</i>



Calumet Stormwater Collaborative 2018 Stormwater Repository

Kate Evasic
Senior Planner



Goal

Create a curated list of resources for Calumet Stormwater Collaborative (CSC) members and Calumet communities.



Key contributors

Planning and Policy Workgroup

Center for Neighborhood Technology

CMAP

Cook County Forest Preserves

IDNR Coastal Management

Metropolitan Planning Council

University of Illinois



Phases

1

Prioritize and compile resources into one document

Completed: 2018

2

Build out a website tailored to different users

Put on hold...

Process

- Created spreadsheet
- Populated with initial resources
- Shared initial resources with CSC members
- Solicited additions during monthly meeting

Categories

Data and tools - data, imagery, design tools, benefit calculators

Design and implementation - design guidelines, implementation strategies

Education and engagement - factsheets, pamphlets, reports, manuals

Funding and financing - grants and other financing options

Policies and regulations - regulatory requirements, policy documents, model ordinances

Shortcomings

- Maintenance
- Usability
- Promotion



Where to go from here?

- Hired Grad student Katy Solak to work on the updating the resource repository. We have a start and possibly an end goal.
- **Start**
 - Began by reviewing existing one, identifying whether links are active and from which organization.
 - Found 40% dead links – primarily from MWRD, DuPage Co, and USACE.



Where to go from here?

- Hired Grad student Katy Solak to work on the updating the resource repository. We have a start and possibly an end goal.
- **Possible end goal**
 - Illinois Groundwork Resource Library



Illinoisgroundwork.org

GSI DESIGN

Start here to explore green stormwater infrastructure (GSI) design

LEARN MORE →

Illinois GROUNDWORK provides green infrastructure research, tools, and resources to stormwater professionals, local leaders, and community members.



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Where to go from here?

- What about the interim steps?
 - Redo some of the CMAP process, expanding to statewide representation.
 - Would need to identify stormwater professionals for Katy to interview.



Discussion

- Thoughts about this project overall
- Thoughts about end goal
- Thoughts about participation and identifying others
- Bringing this to full Urban Stormwater Working Group





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Illinois Extension

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN



**PURDUE
UNIVERSITY®**

Extension - Forestry
and Natural Resources



NATURAL LAWN CARE PRACTICES FOR CLEAN LAKES

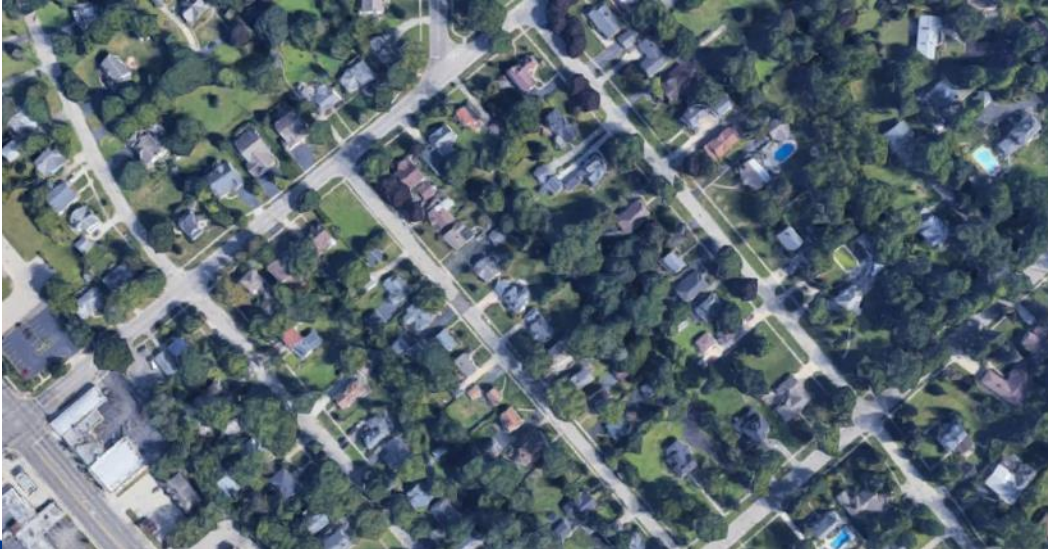
Steph Mueller | Pollution Prevention Assistant



Lawn care as an urban runoff issue



Chicago, IL | Google Maps 2019



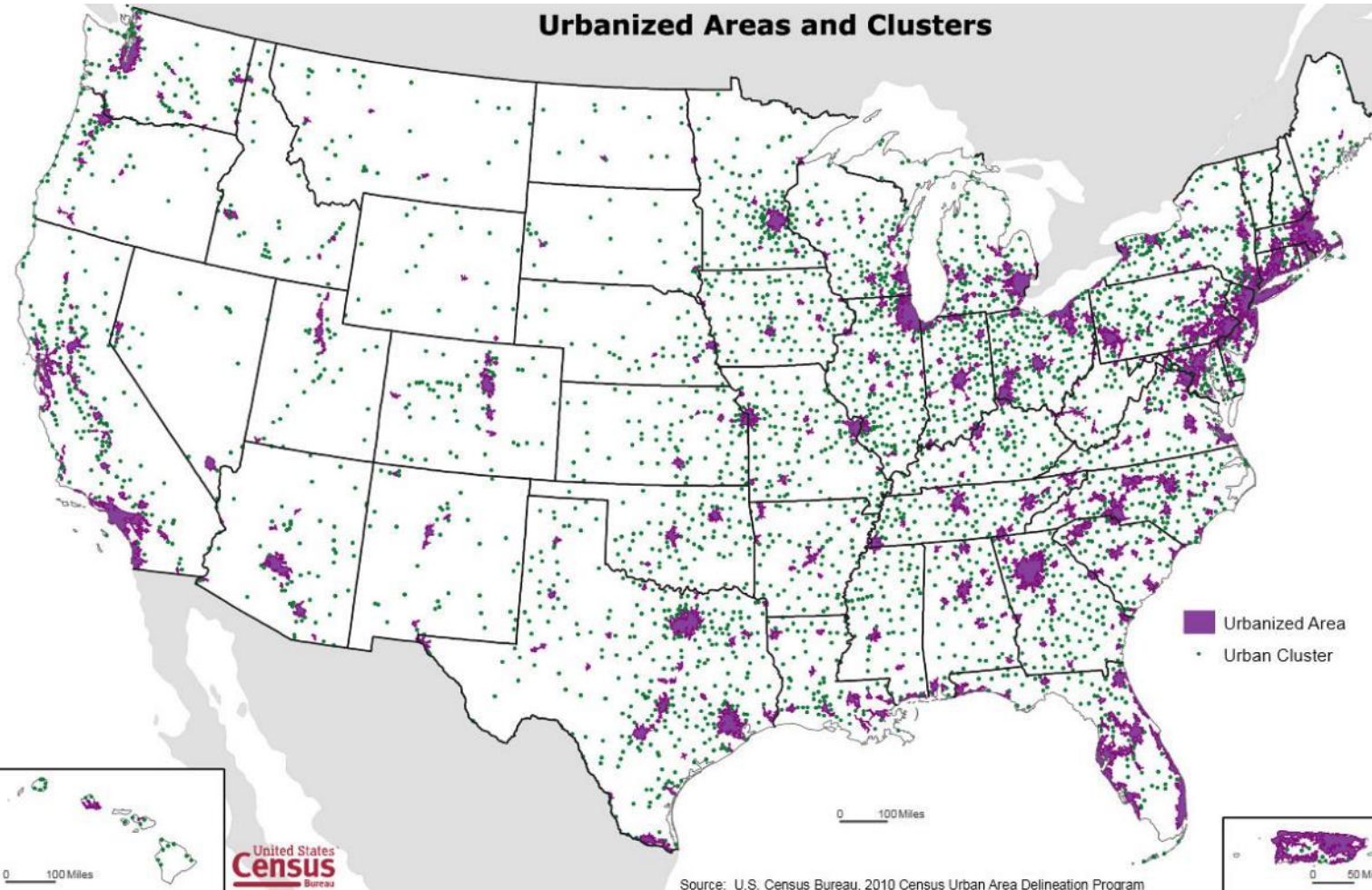
Crystal Lake, IL | Google Maps 2019



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Urbanized Areas and Urban Clusters 2010



U.S. Census Bureau (2010)

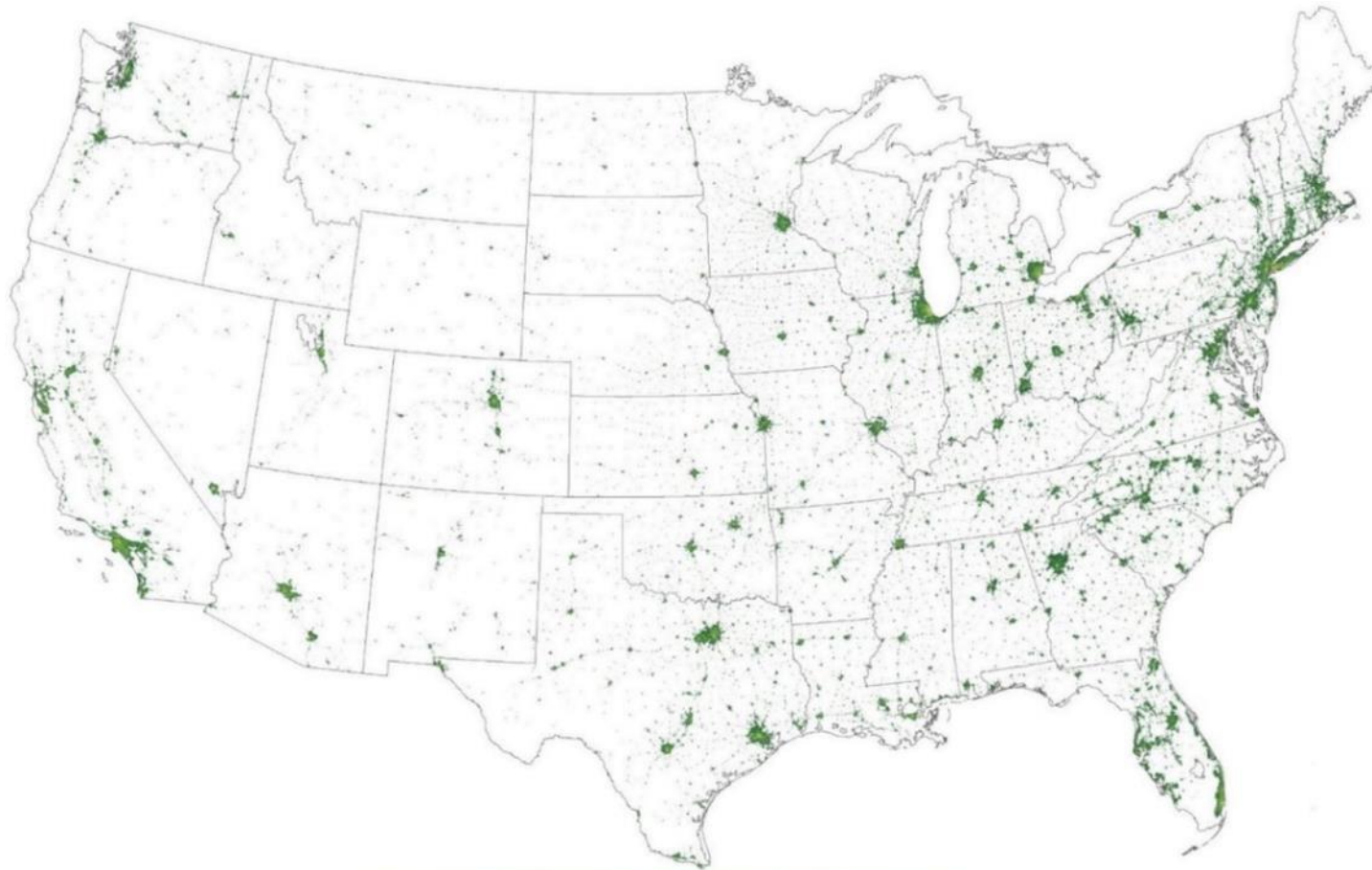
Source: U.S. Census Bureau, 2010 Census Urban Area Delineation Program



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United States land covered by lawn



NASA Earth Observatory
(2005)



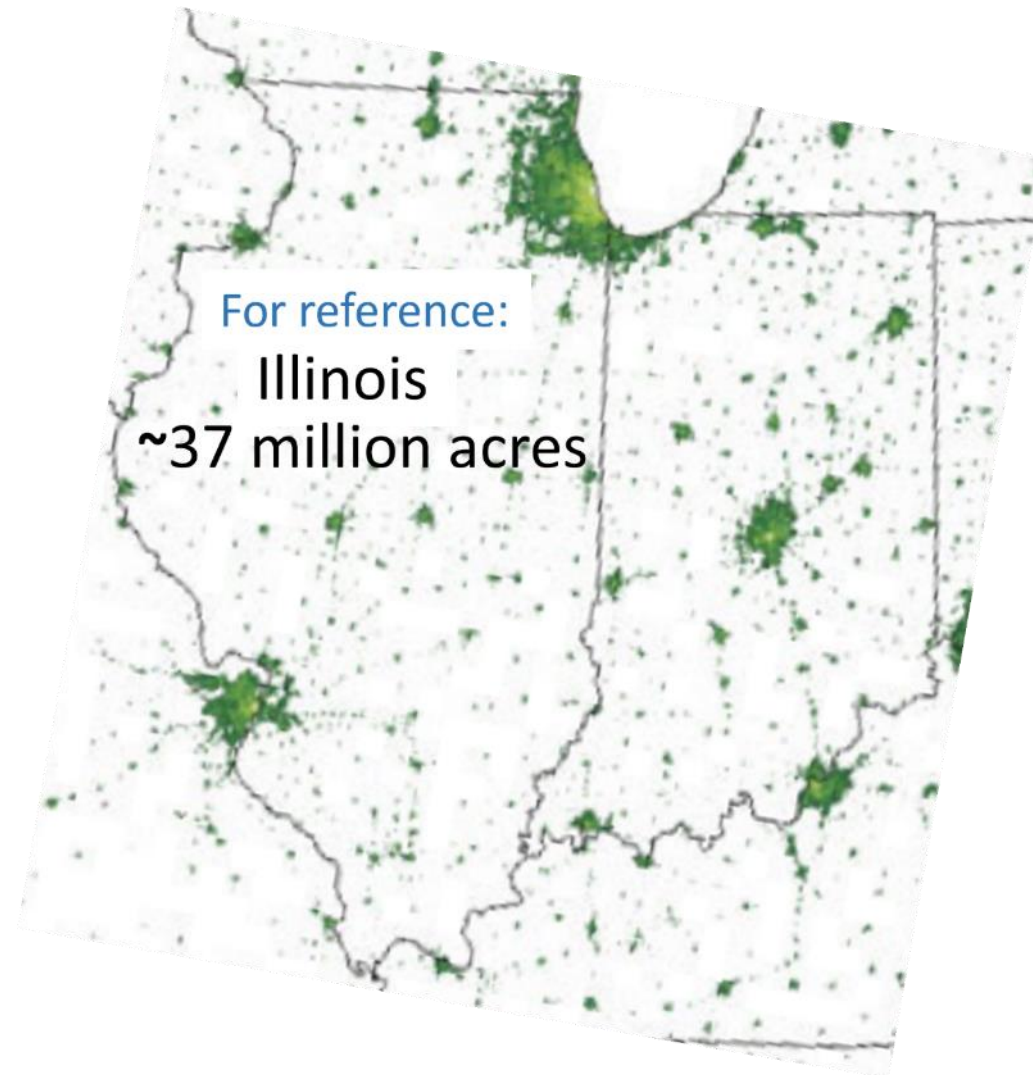
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40 million acres of turfgrass in the U.S.

- Turfgrass covers **3 times** more area than irrigated corn
- Which would make lawns the **largest irrigated crop**

Milesi, C. et al, 2005

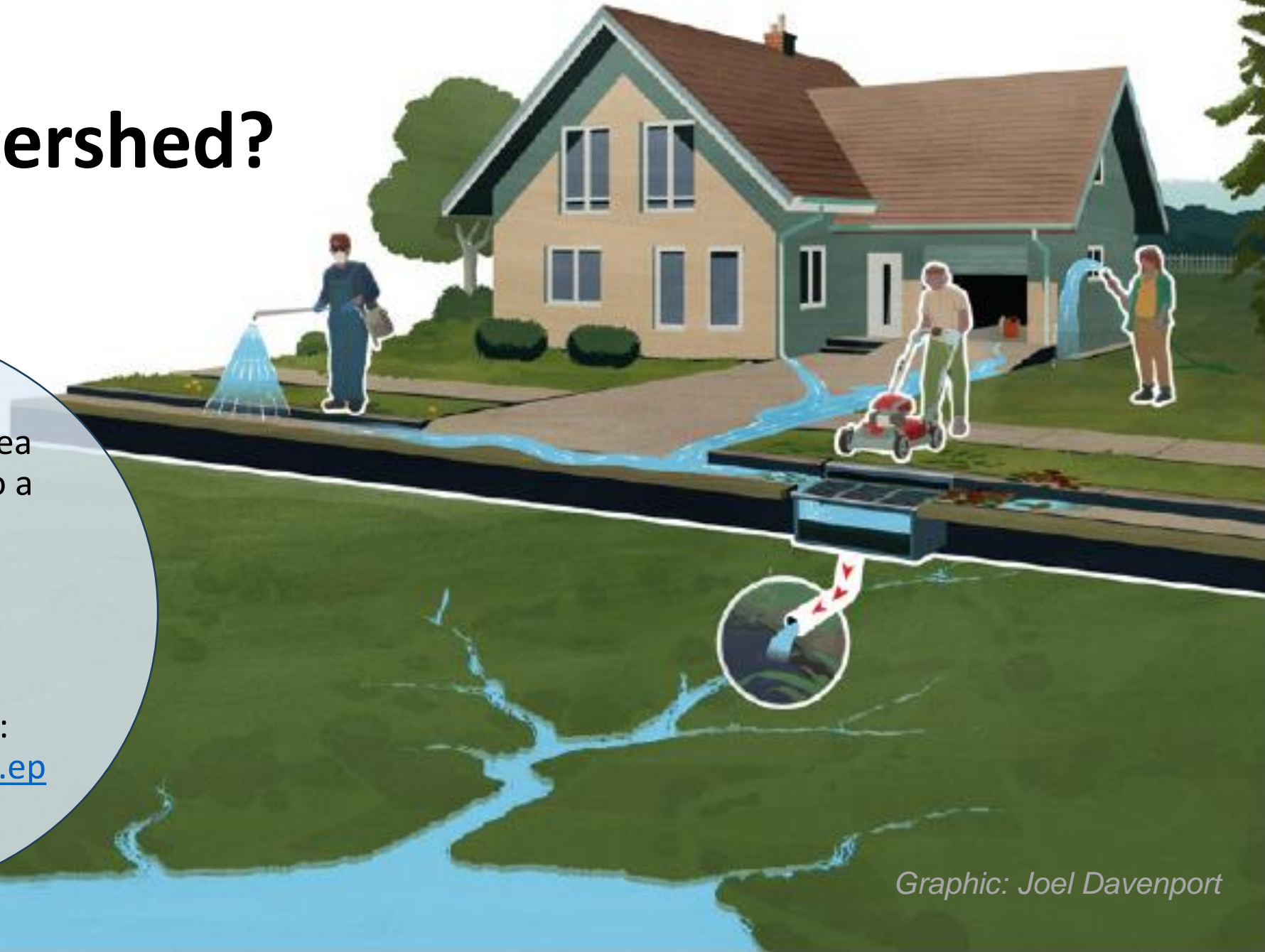


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What is a Watershed?

- A watershed is an area of land that drains to a body of water like a lake, stream, or wetland.
- Find your watershed: <https://mywaterway.epa.gov/>



Graphic: Joel Davenport

United States Watersheds Contributing to the Gulf of Mexico Hypoxic Zone



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Hidden Costs of Lawn Care

average upkeep for residential lawns

Water

- Typical suburban lawn uses **10,000 gallons** of irrigation water per year
- Residential lawns consume **2.5 billion gallons** per year

Energy

- **580 million gallons** of gasoline used in lawnmowers
- **270,000 BTUs** to produce a 100 lb bag of 6-6-6 fertilizer

Pesticides

67 million pounds of synthetic pesticides on residential lawns each year
Homeowners use **3 times more** pesticide per acre than farmers

Fertilizer

3 million tons per year applied to residential lawns

Vickers, A., 2006

Perry, L. 2006

Bormann F.H. et al, 1993

Wilson and Boehland, 2009



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Pesticides

“a pesticide by any other name...”

Grub Control	:	Insecticide
Broadleaf, dandelion spray	:	herbicide
Weed and Feed	:	herbicide (combined with fertilizer)
Fungal Control	:	fungicide



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What is Natural Lawn Care?

focusing on sustainable solutions

Natural

- soil care is foundation
- natural, organic products (*when needed*)
- treats problems, not symptoms

Conventional

- one-size-fits-all approach
- focus on applying products to all lawns
- treats symptoms for short-term fixes



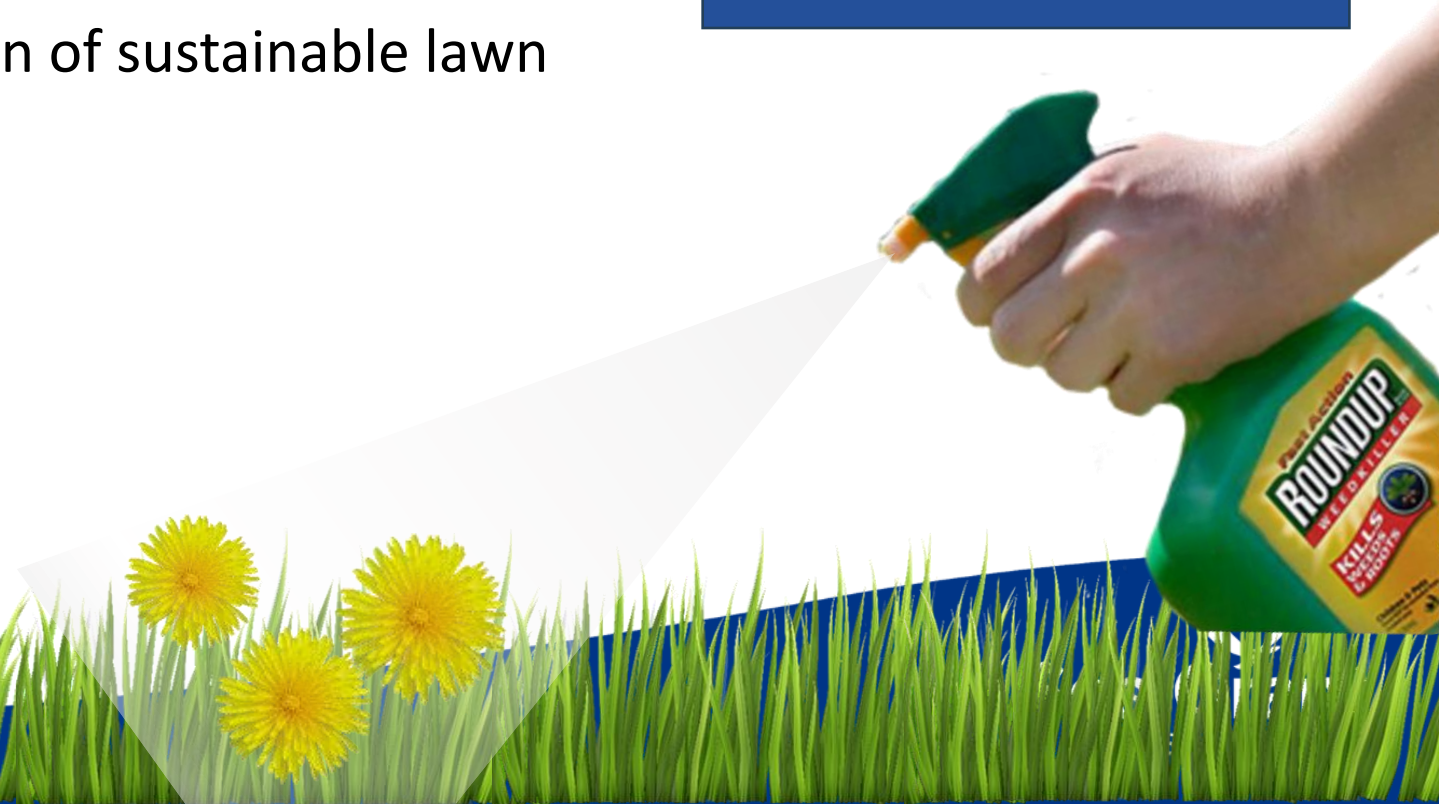
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Lawn to Lake: Goals

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.



Watershed Perspective

- What you do on the **land**...
 - Apply fertilizer and pesticides
 - Water your lawn and garden
 - Plant choice

- Has effects on **watershed**...
 - Nutrient and chemical runoff
 - Consumes water
 - Maintenance needs, storm water infiltration, etc.

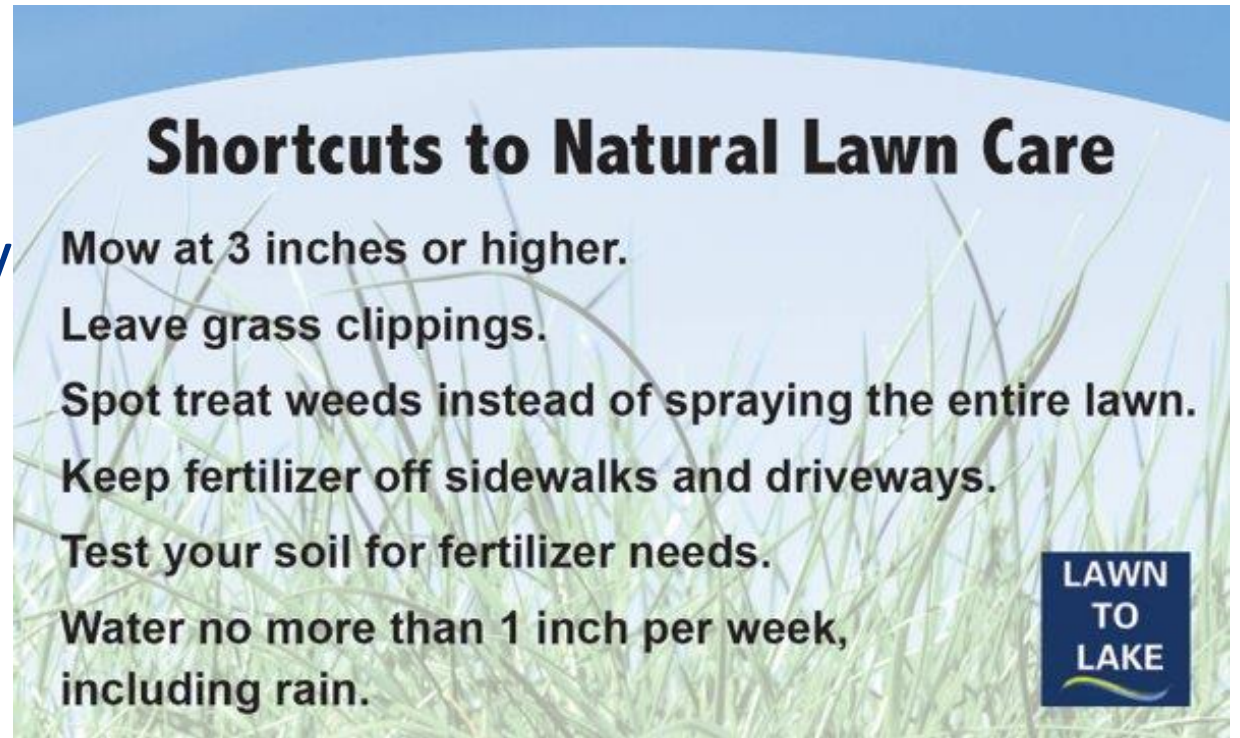


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Natural Lawn Care Principles

1. Right plant, right place
2. Fertilize appropriately
3. Manage lawn pests responsibly
4. Water efficiently
5. Compost
6. Attract wildlife
7. Reduce storm water runoff



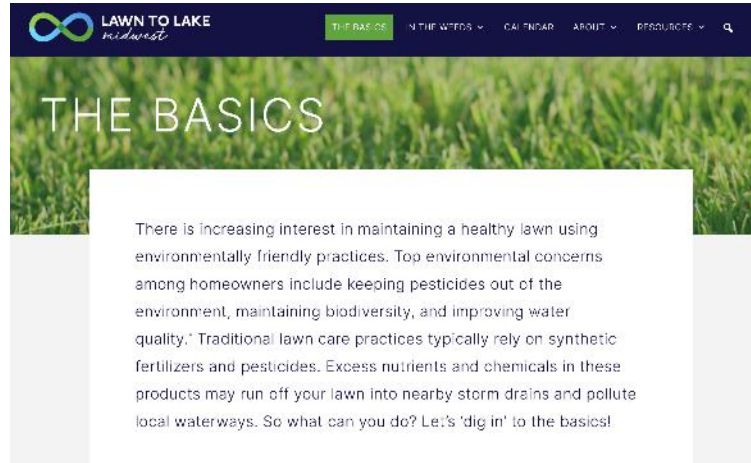
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Outreach Products - Website

lawntolakemidwest.org/

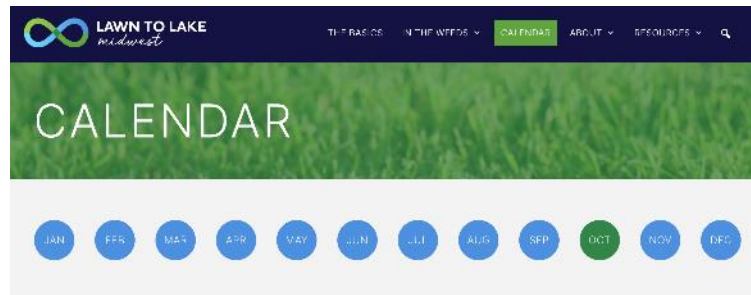
THE BASICS



IN THE WEEDS

The Basics covered, but now what? Take the next step and get "in the weeds" of natural lawn care with more sustainable landscaping practices that will reduce the risk of polluted runoff and protect local waterways.'" data-bbox="406 187 733 508"/>

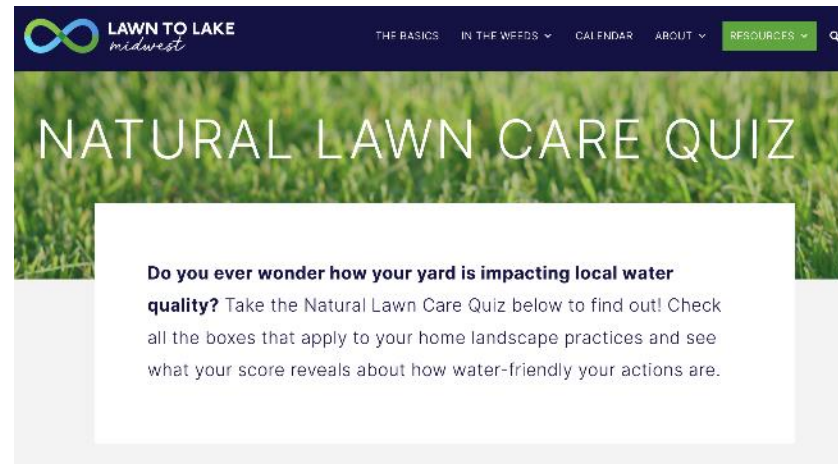
CALENDAR



A healthy lawn all year long.

Wrap up the growing season with October's list of natural lawn care practices.

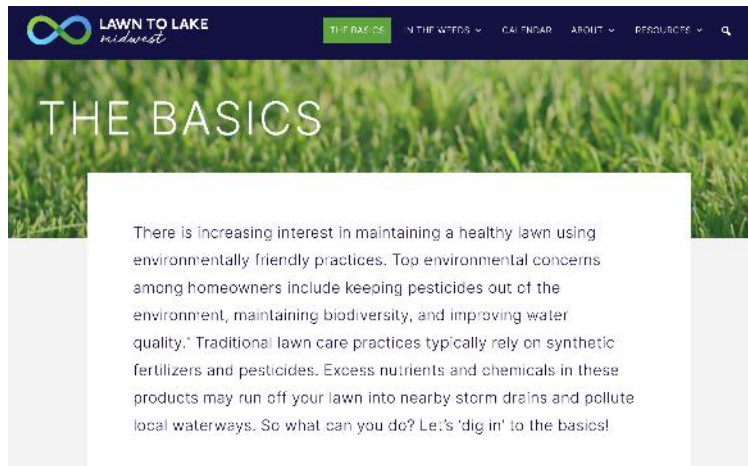
LAWN CARE QUIZ



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THE BASICS



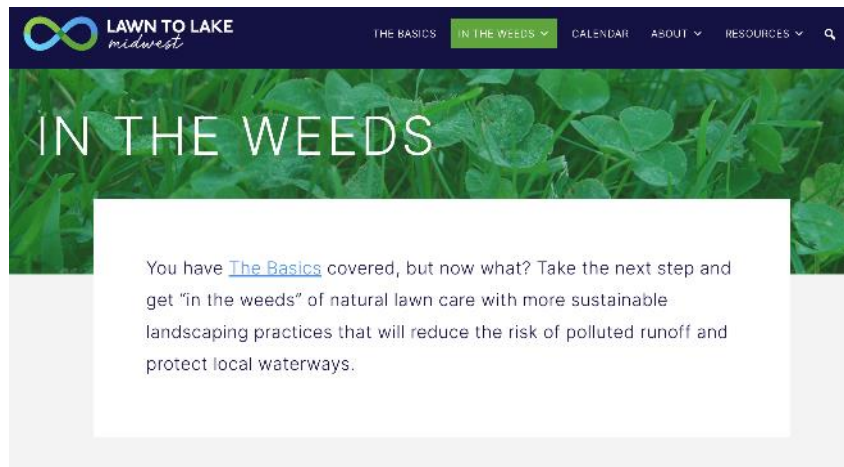
Mow High
Leave Grass Clippings
Water Efficiently
Soil Testing
Fertilize in the Fall
Use Fewer Chemicals
Core Aerate



Outreach Products - Website

lawntolakemidwest.org/

IN THE WEEDS

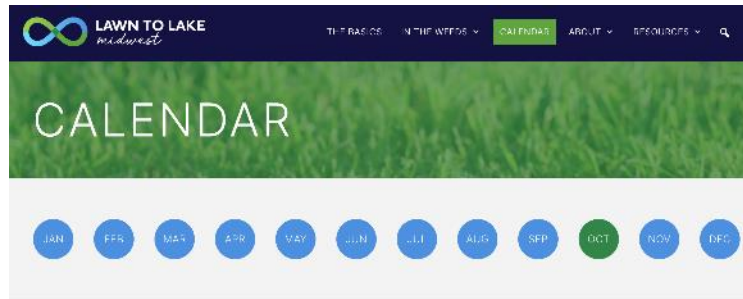


Build Healthy Soil
Right Plant, Right Place
Fertilize Appropriately
Manage Pests Responsibly
Use Water Efficiently

Outreach Products - Website

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CALENDAR



A healthy lawn all year long.

Wrap up the growing season with October's list of natural lawn care practices.

Changes with monthly tips as a quick guide for natural lawn care tips throughout the year



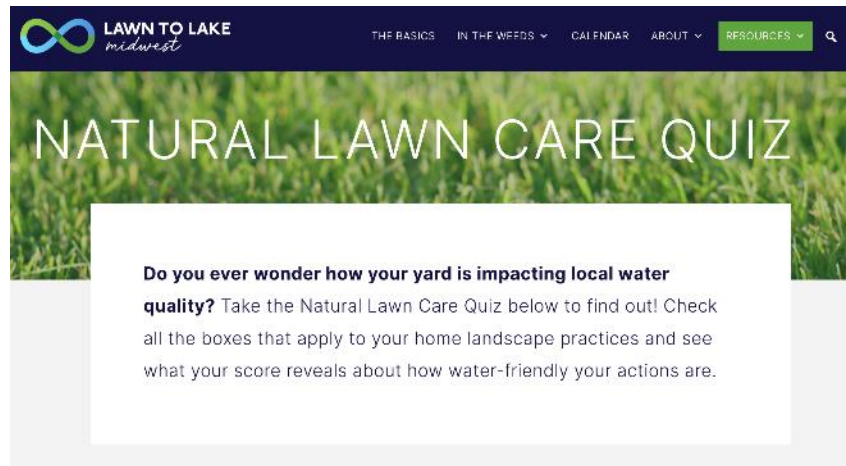
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LAWN CARE QUIZ



Soil Health
Water Management
Landscape Design
Maintenance Practices



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FERTILIZER CALCULATOR

The screenshot shows the top navigation bar of the Lawn to Lake Midwest website. It features the organization's logo on the left, followed by a menu with items: 'THE BASICS', 'IN THE WEEDS' (highlighted in green), 'CALENDAR', 'ABOUT', and 'RESOURCES'. A search icon is located on the far right. Below this is a secondary green navigation bar with five dropdown menu items: 'Build Healthy Soil', 'Right Plant, Right Place', 'Fertilize Appropriately' (highlighted), 'Manage Pests Responsibly', and 'Use Water Efficiently'.

Fertilizer Calculator

How much fertilizer should you apply based on the square footage of your lawn and your soil test results? Use the Lawn to Lake Fertilizer Calculator below to find out.

The screenshot shows the 'CALCULATOR' form. It has a blue header with the word 'CALCULATOR' in white. Below the header, there are two columns of input fields. The first column is labeled 'lbs N/1000 ft² (Required)' and includes a text box with the instruction 'Most areas recommend a ratio of 1 lbs N/1000 ft².' The second column is labeled '% N (Required)' and includes a text box with the instruction 'Fertilizer with an N-P-K ratio of 22-0-15 is 22% N.' Below these two columns is a question: 'Do you know the size of your yard in acres or square feet? (Required)'. There are two radio button options: 'Acres' and 'Square Feet'.



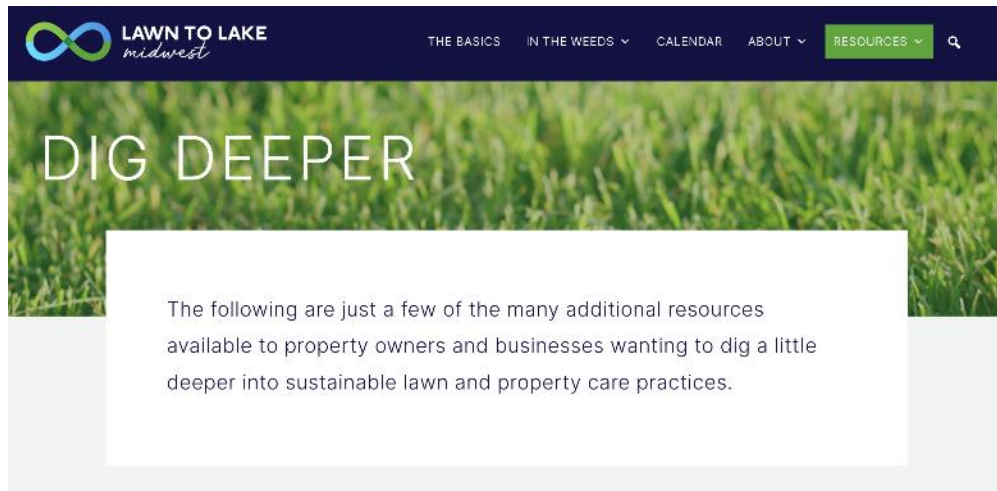
Outreach Products - Website

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RESOURCES, PUBLICATIONS, & FAQs

80 different resources organized into sections:

Build Healthy Soil
Right Plant, Right Place
Fertilize Appropriately
Manage Lawn Pests Responsibly
Water Efficiently



Outreach Products – Videos

Mow High

Work with Nature:
Mow 3" or higher to
shade out weeds
and promote deep,
healthy roots.



Leave Grass Clippings

Work with Nature:
Leave grass
clippings to return
nutrients to your
lawn naturally.



Soil Test

Work with Nature:
A soil test will help
you understand
what nutrients are
present or lacking.



Water Efficiently

Work with Nature:
Water once every 4
weeks with 1/2 inch
of water to keep
grass crowns
hydrated.

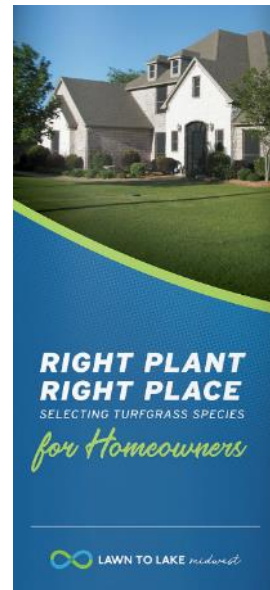


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Outreach Products

Brochures, Fact Sheets, & Guide Books



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THANK YOU!

QUESTIONS?



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Round Robin Member Updates (time permitting)

Members provide a 1- to 3-minute update on current programs or projects



Next Steps

Eliana Brown, University of Illinois Extension



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Thank you



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