Pollution Prevention with Lawn to Lake

Urban Stormwater Working Group (USWG) meeting update
May 12, 2020

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Illinois-Indiana Sea Grant

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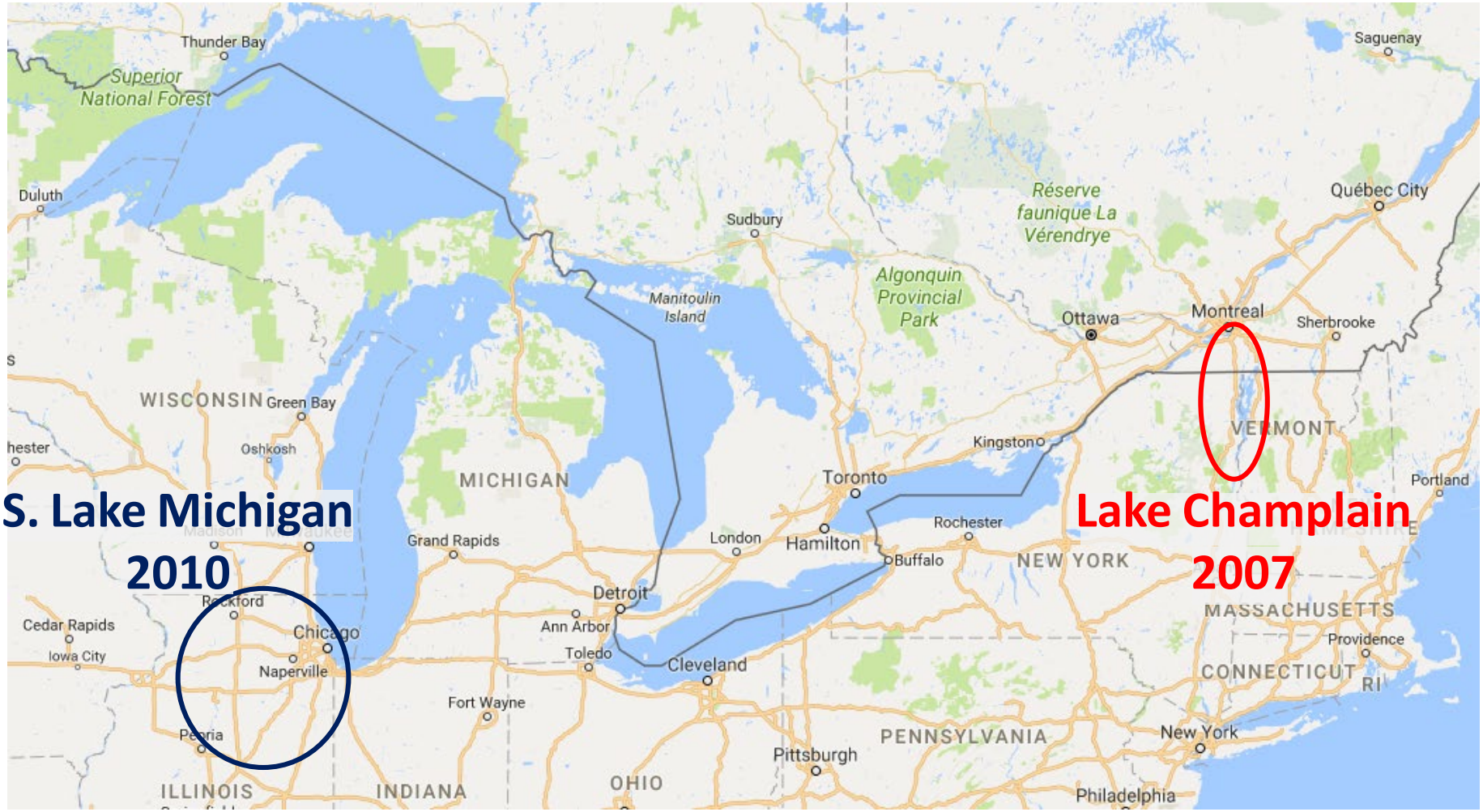
History of Lawn to Lake



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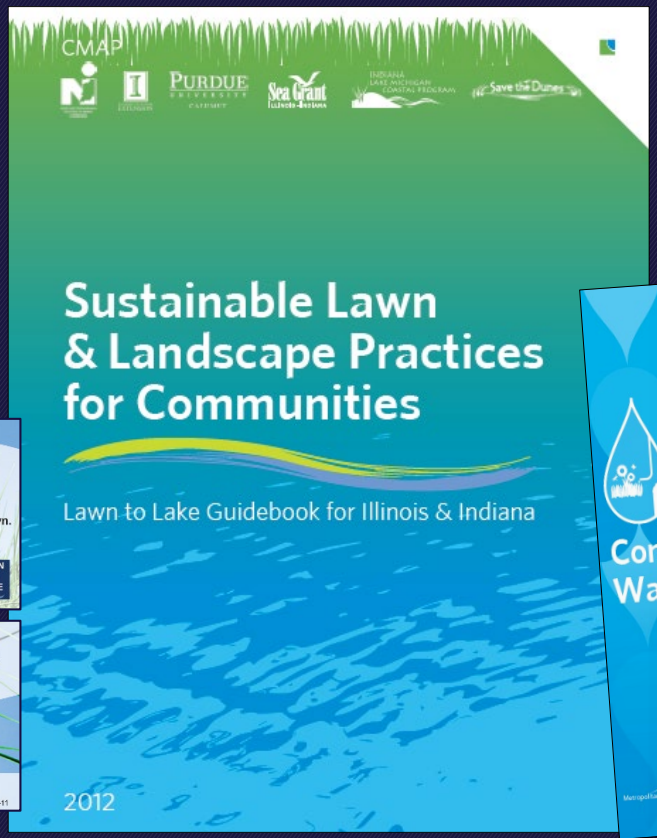
Program Goals

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.


LAWN TO LAKE
What's in Your Watershed?
What is a Watershed?
Integrated Pest Management (IPM
Prevent
Control
Right Plants for the Right Place
Make smart plant choices to save water and time for a thriving garden.
When the right plants are matched to the right environment, they grow stronger roots and are healthier. Healthy plants require less watering, reduce or eliminate the need for pesticides, and are more resilient to disease and harsh weather.
Shortcuts to Natural Lawn Care
Mow at 3 inches or higher.
Leave grass clippings.
Spot treat weeds instead of spraying the entire lawn.
Keep fertilizer off sidewalks and driveways.
Test your soil for fertilizer needs.
Water no more than 1 inch per week, including rain.
LAWN TO LAKE
Mow at 3 inches or higher.
lawntogreatlakes.org


CMAP
PURDUE
Sea Grant
Save the Dunes
Sustainable Lawn & Landscape Practices for Communities
Lawn to Lake Guidebook for Illinois & Indiana
2012


Conserving Water Outdoors
NORTHWEST WATER PLANNING ALLIANCE
Seed or Sod? Establishing a New Lawn
NORTHWEST WATER PLANNING ALLIANCE

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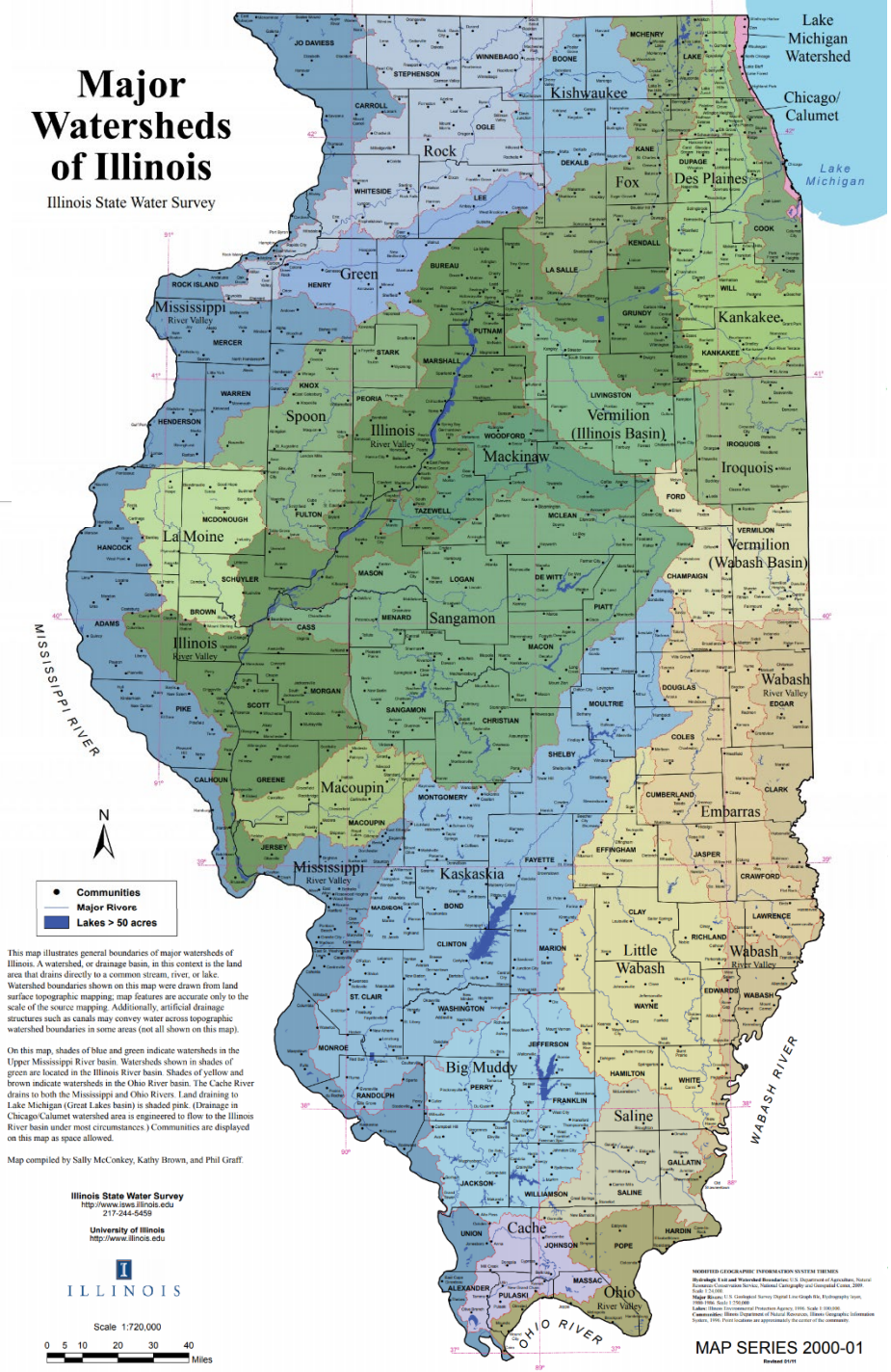

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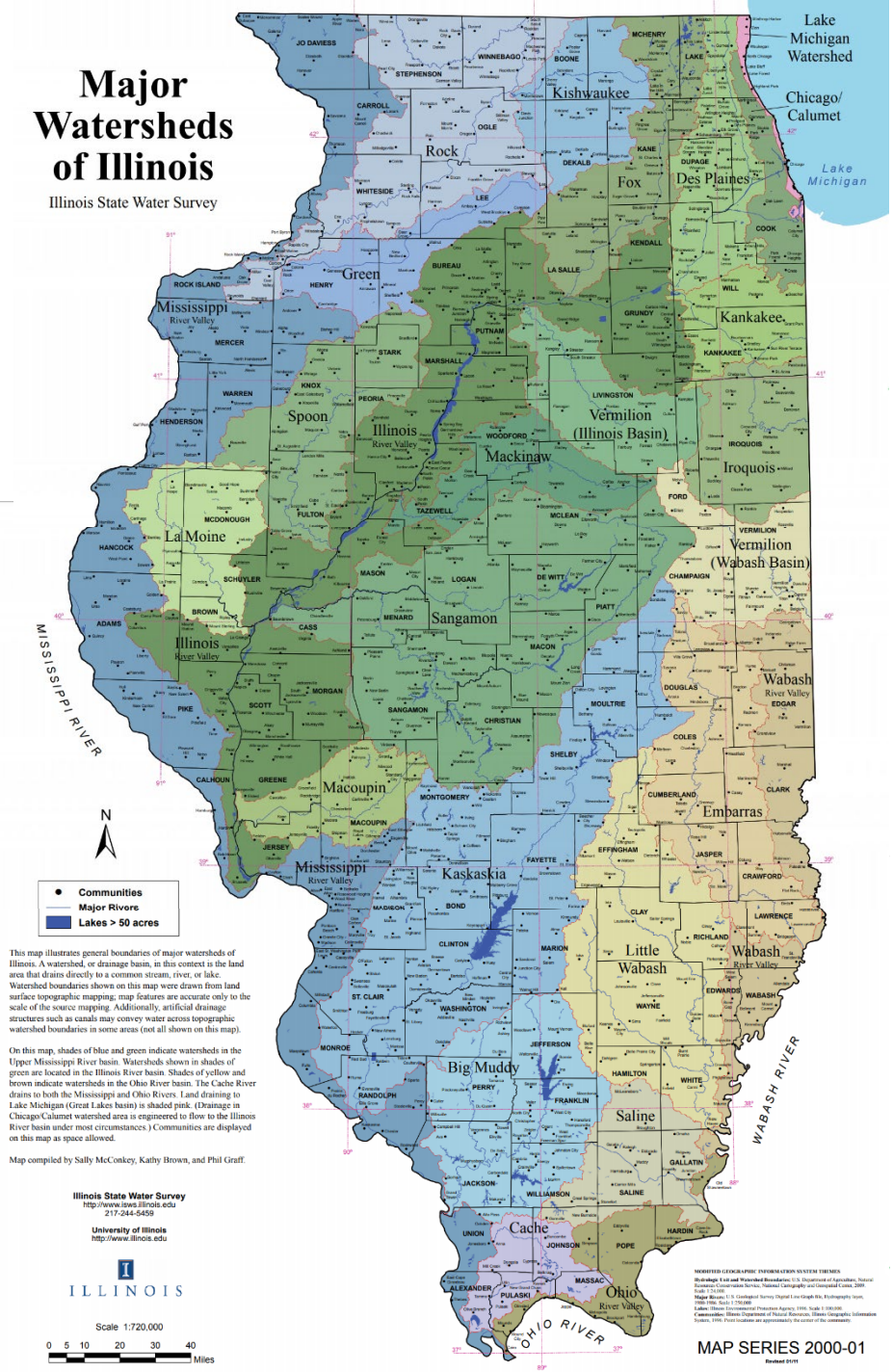
Major Watersheds of Illinois

Illinois State Water Survey



This map illustrates general boundaries of major watersheds of Illinois. A watershed, or drainage basin, in this context is the land area that drains directly to a common stream, river, or lake. Watershed boundaries shown on this map were drawn from land surface topographic mapping; map features are accurate only to the scale of the source mapping. Additionally, artificial drainage structures such as canals may convey water across topographic watershed boundaries in some areas (not all shown on this map).

On this map, shades of blue and green indicate watersheds in the Upper Mississippi River basin. Watersheds shown in shades of green are located in the Illinois River basin. Shades of yellow and brown indicate watersheds in the Ohio River basin. The Cache River drains to both the Mississippi and Ohio Rivers. Land draining to Lake Michigan (Great Lakes basin) is shaded pink. (Drainage in Chicago/Calumet watershed area is engineered to flow to the Illinois River basin under most circumstances.) Communities are displayed on this map as space allowed.

Map compiled by Sally McConkey, Kathy Brown, and Phil Graff.

Illinois State Water Survey
http://www.isws.illinois.edu
217-244-5459

University of Illinois
http://www.illinois.edu

ILLINOIS

MODIFIED GEOGRAPHIC INFORMATION SYSTEM THEMES

Hydrologic Unit and Watershed Boundaries: U.S. Department of Agriculture, Natural Resources Conservation Service, National Cartography and Geospatial Center, 2009. Scale 1:24,000.

Major Rivers: U.S. Geological Survey Digital Line Graph file, Hydrography layer, 1980s-1990s. Scale 1:100,000.

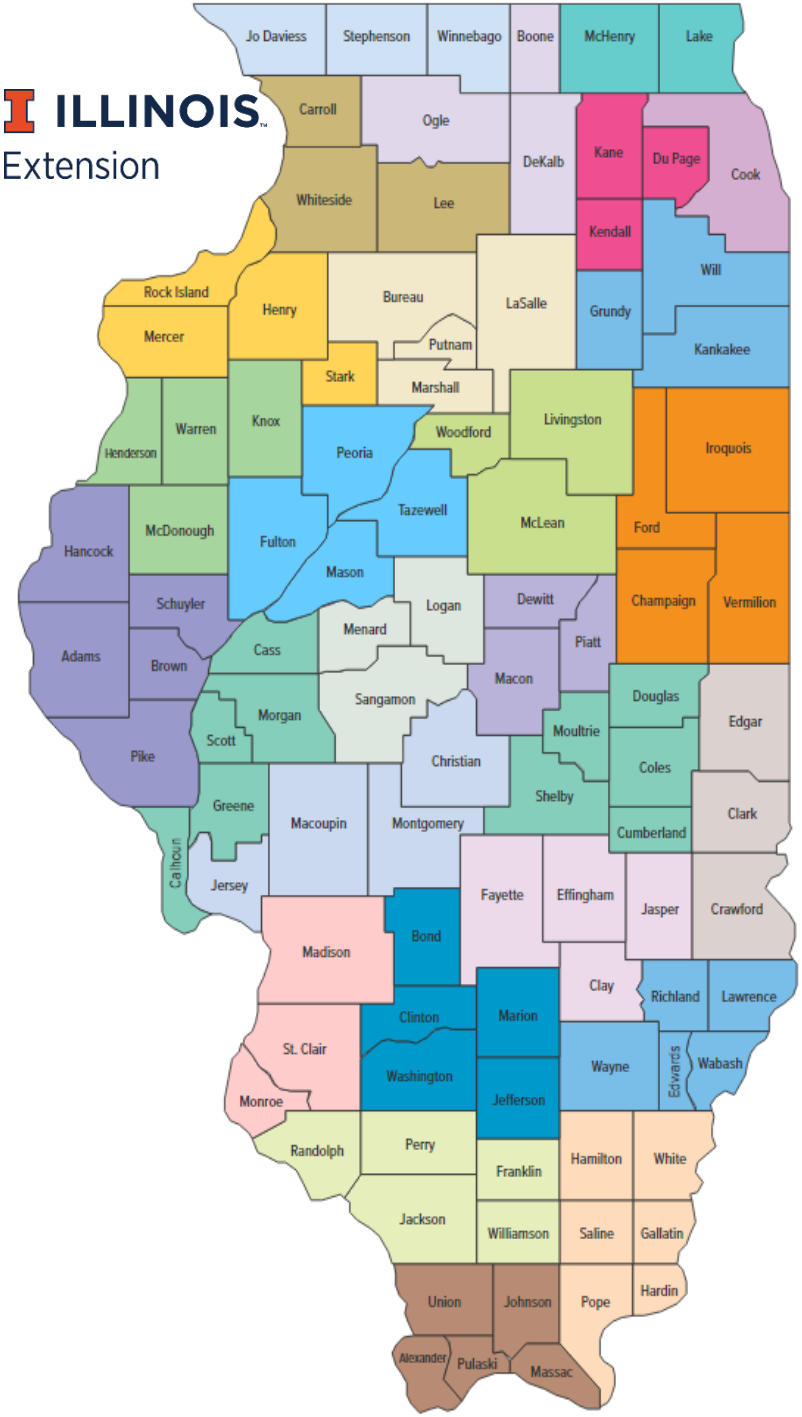
Lakes: Illinois Environmental Protection Agency, 1998. Scale 1:100,000.

Counties: Illinois Department of Natural Resources, Illinois Geographic Information System, 1998. Point locations are approximately the center of the community.

MAP SERIES 2000-01

Revised 01/01

ILLINOIS Extension



Current Project

Targeting Natural Lawn Care Communications to Homeowners in Illinois

Interdisciplinary Collaborations in Extension Grant

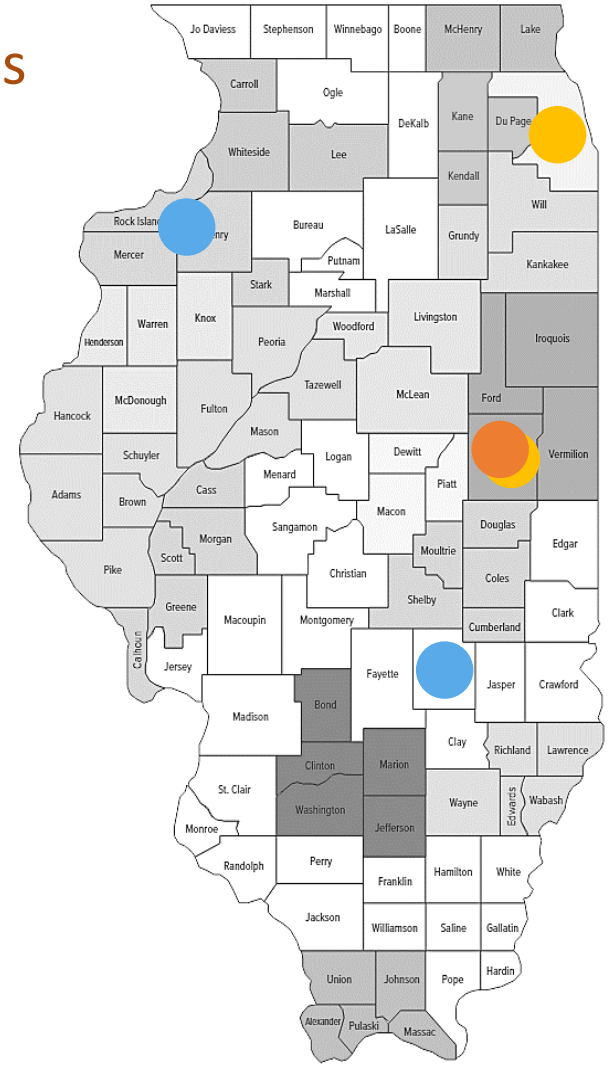
- Illinois-Indiana Sea Grant

+

- Agricultural Communications Program

+

- UIE Watershed Outreach Associates

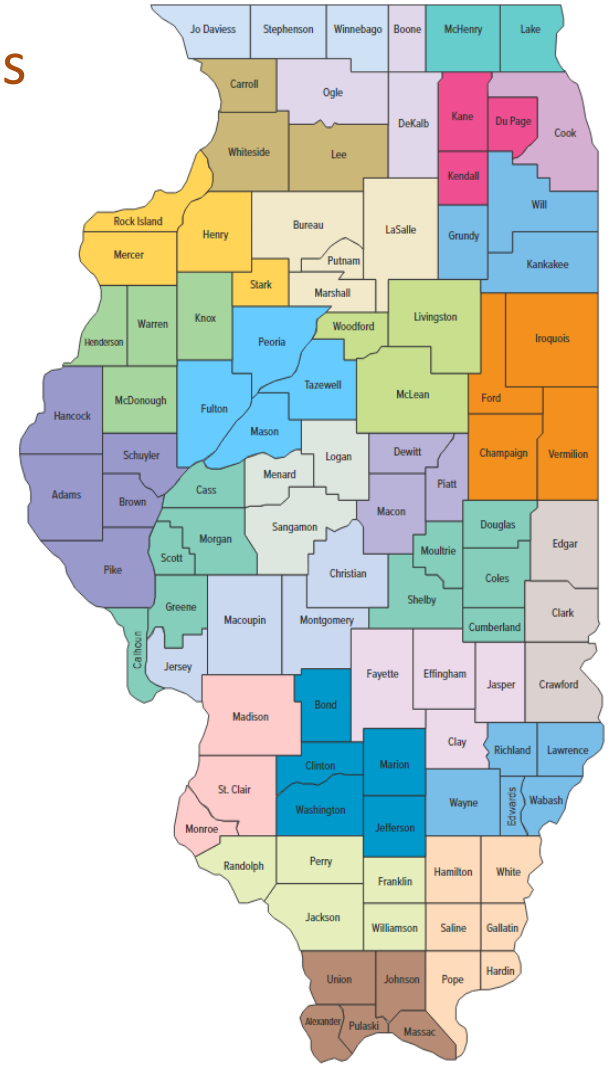


Current Project

Targeting Natural Lawn Care Communications to Homeowners in Illinois

Interdisciplinary Collaborations in Extension Grant

1. Survey Illinois residents
2. Develop Communications materials
3. Conduct Focus Groups
4. Revise and finalize communications materials



Survey Results

- 841 respondents; 799 (95%) 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 advance degrees
  - 80% between 35-74 years old
    - 167 between 55-64 years old

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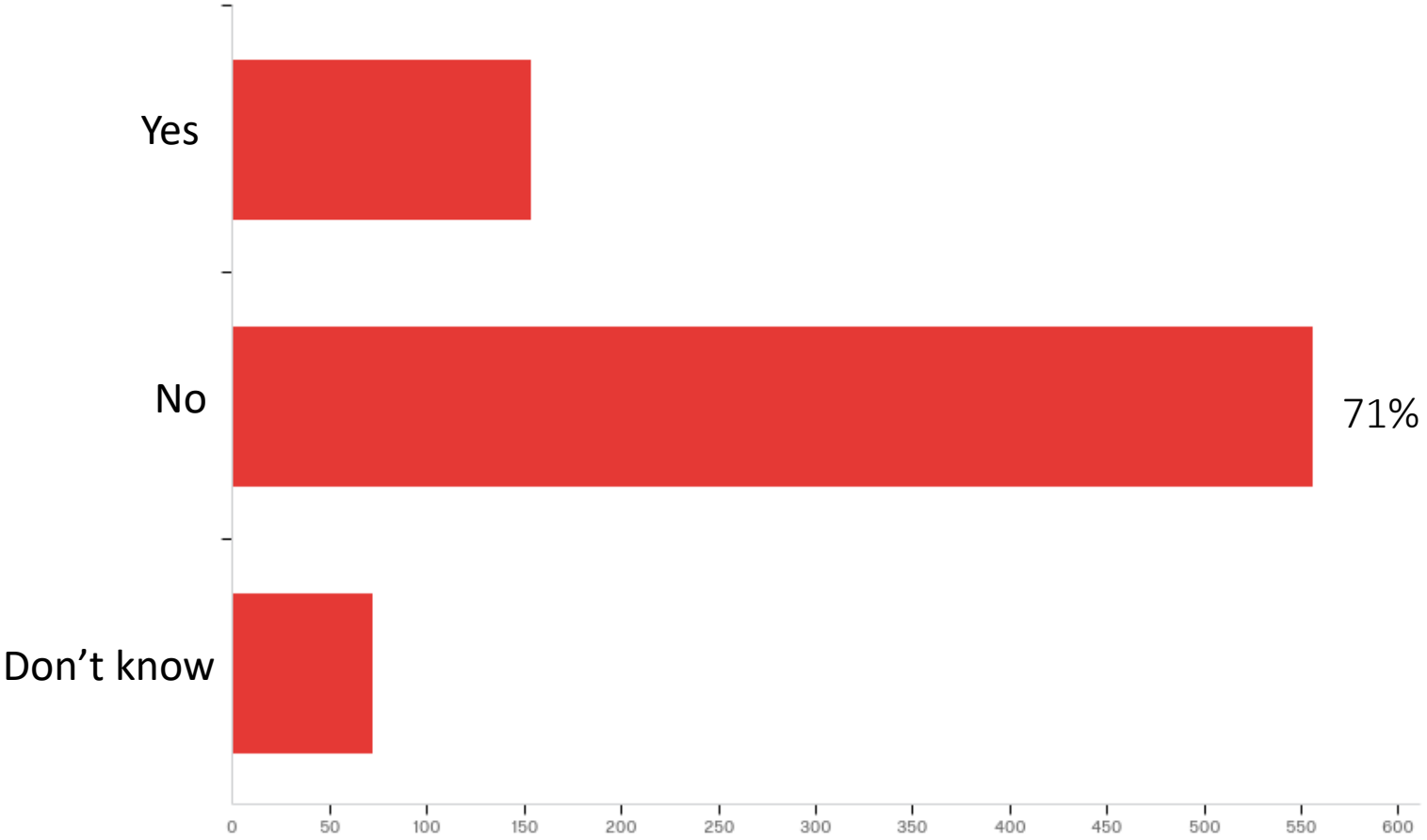
Has your soil ever been tested?



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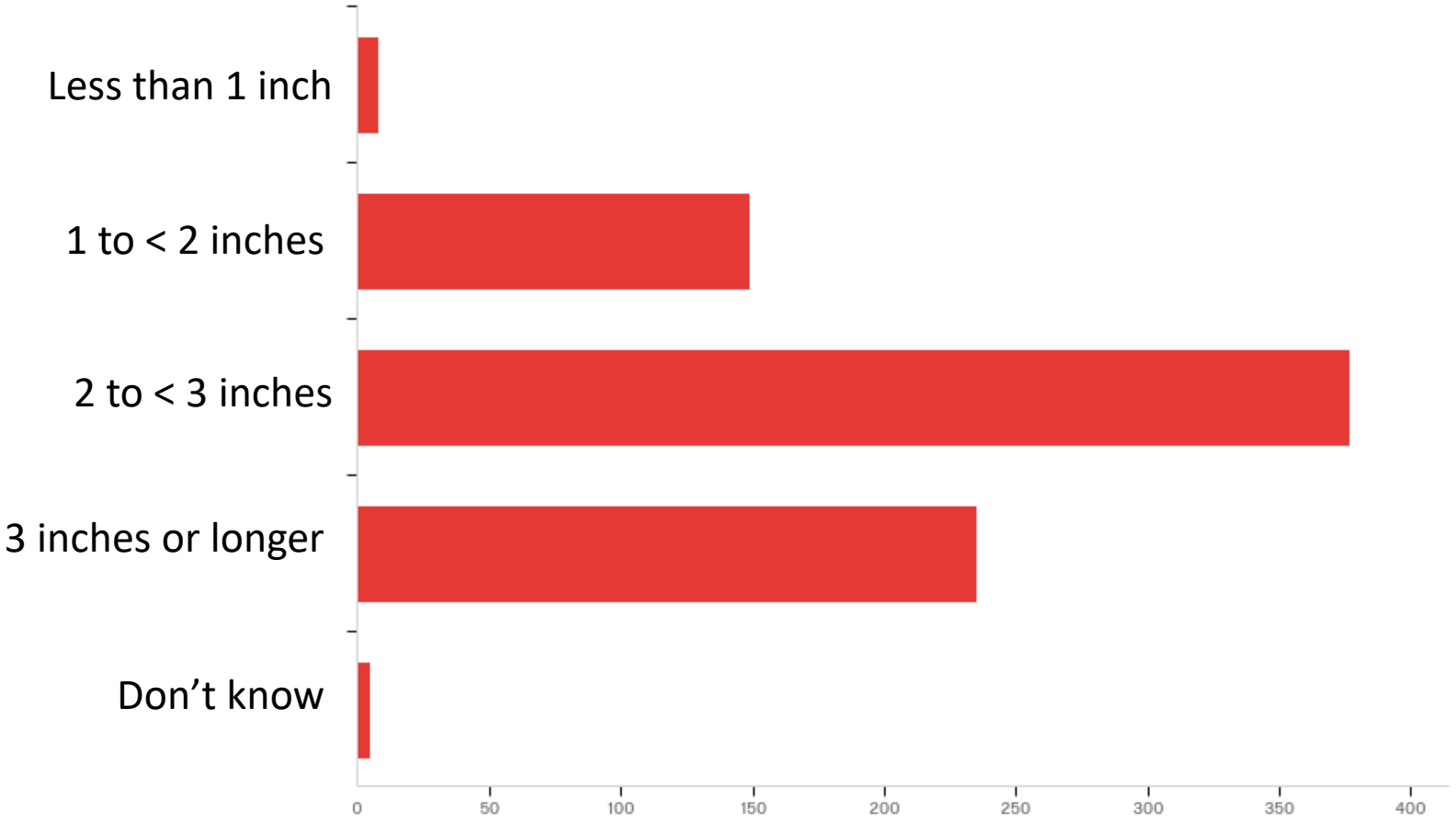
Typically, how long is your grass after it has been cut?



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Do you already follow the lawn care practices below? If not, would you be willing to do them in the future?

#	Question	ALREADY do this	YES, willing to do in the future	NO, not willing to do in the future	Unsure/ Don't know	Total
1	Choose plant or grass species that best fit yard conditions (e.g., sunlight, drainage)	54.44% (417)	34.20% (262)	2.61% (20)	8.75% (67)	766
2	Design landscape to reduce unnecessary grass area	43.28% (325)	36.62% (275)	8.79% (66)	11.32% (85)	751

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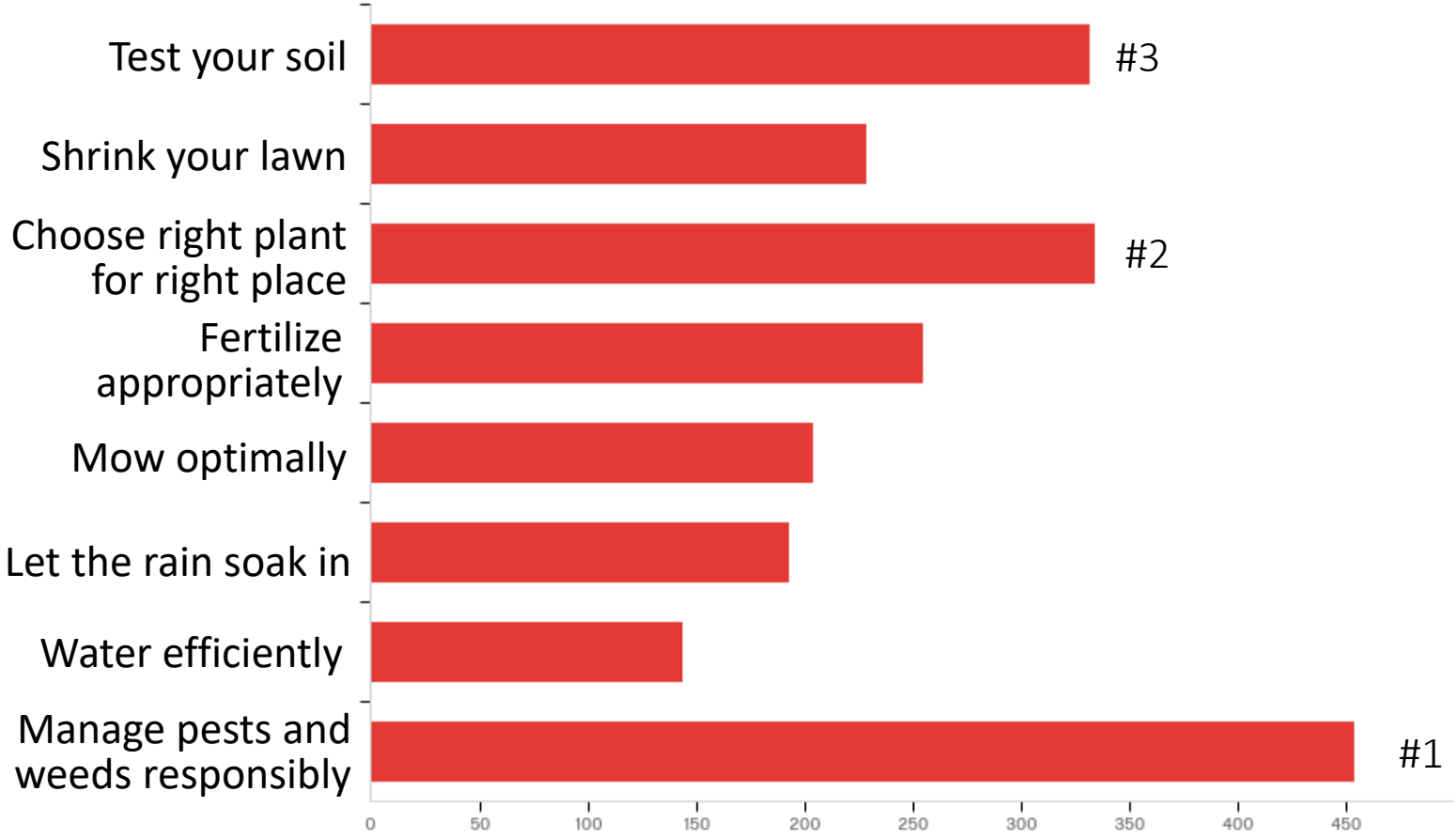
Which of these environment-friendly lawn care practices would you like to learn more about? Select all that apply.



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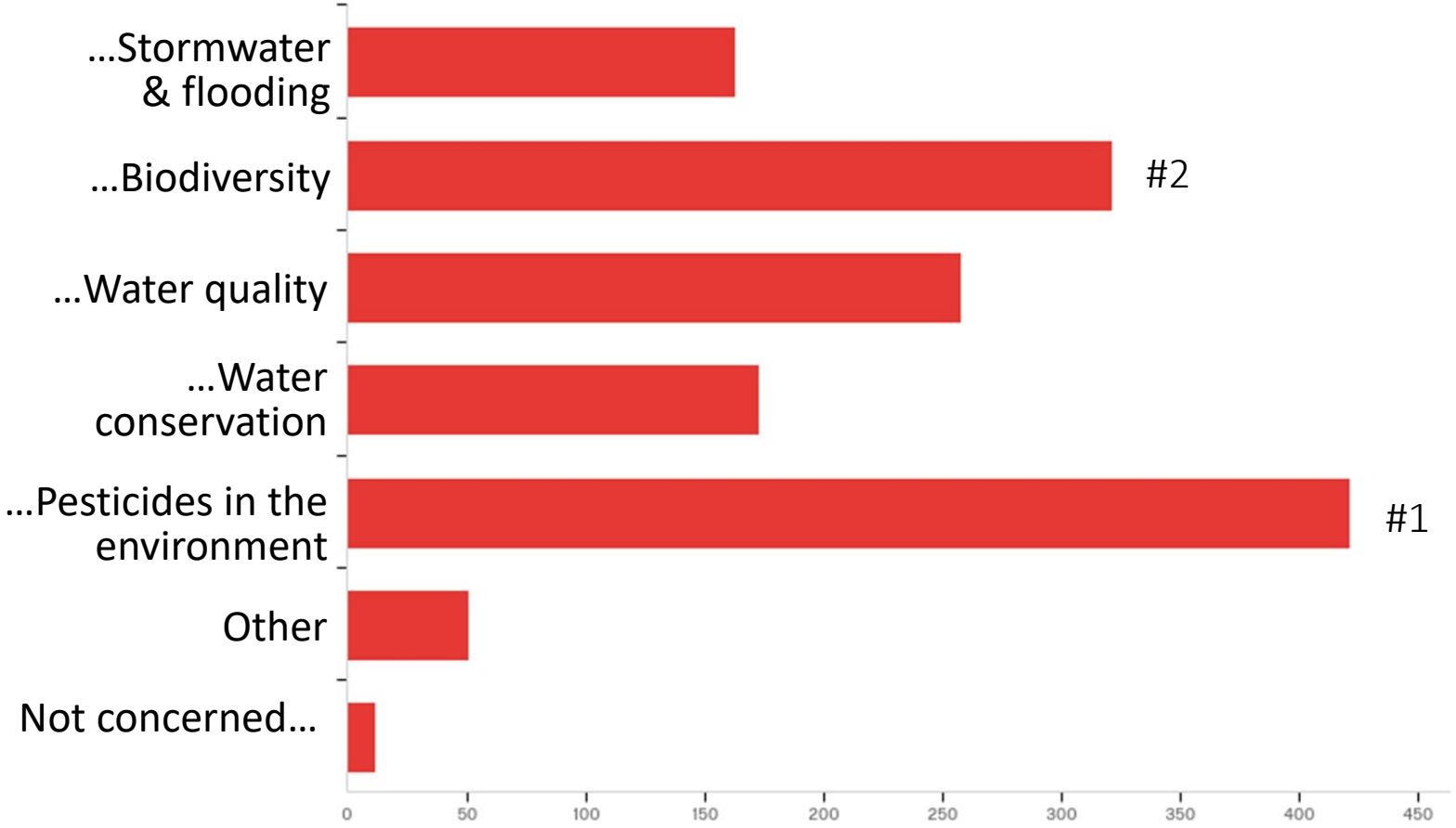
What are your major concerns related to the environment in general? Select your top two concerns.



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What are your current and preferred sources of lawn care information?

Current

1. Internet research (15%)
2. University Extension experts (9%)
3. Family, friends, neighbors, and/or colleagues (8%)
4. Newspaper or magazine articles (8%)
5. Product packaging (7%)

Preferred

1. Internet research (13%)
2. University Extension experts (11%)
3. Brochures or factsheets (11%)
4. Guidebook or manual (8%)
5. Family, friends, neighbors, and/or colleagues (6%)

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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.

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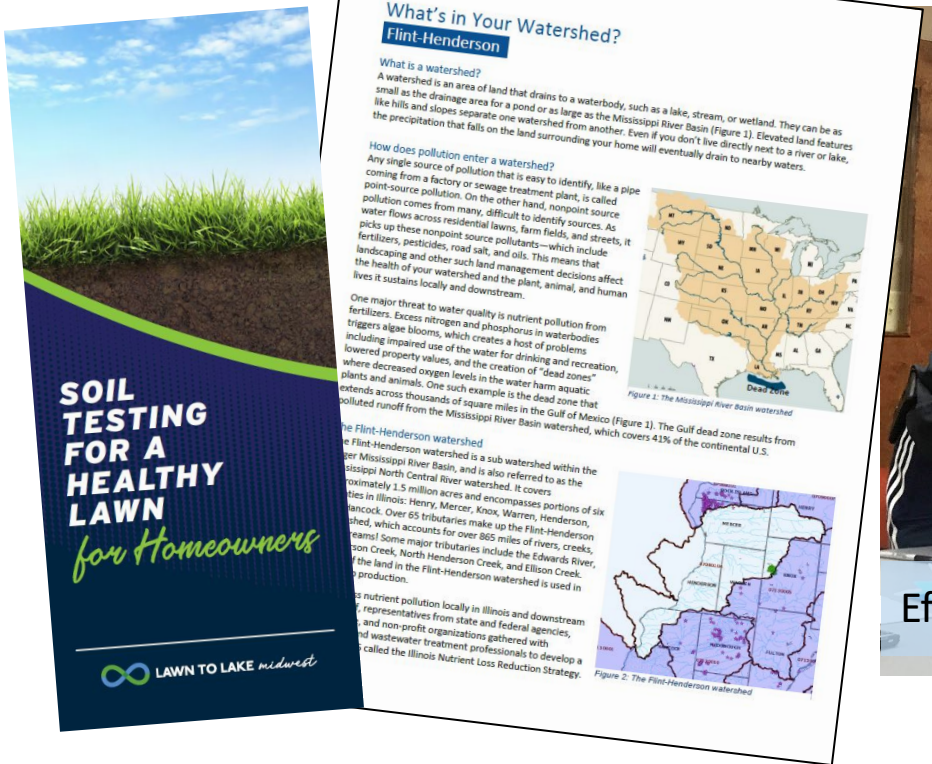
Focus Groups

- January 9, 2020: Effingham
- January 16, 2020: Rock Island
- January 23, 2020: Lake


Rock Island Focus Group



What's in Your Watershed?
Flint-Henderson

What is a watershed?
A watershed is an area of land that drains to a waterbody, such as a lake, stream, or wetland. They can be as small as the drainage area for a pond or as large as the Mississippi River Basin (Figure 1). Elevated land features like hills and slopes separate one watershed from another. Even if you don't live directly next to a river or lake, the precipitation that falls on the land surrounding your home will eventually drain to nearby waters.

How does pollution enter a watershed?
Any single source of pollution that is easy to identify, like a pipe coming from a factory or sewage treatment plant, is called point-source pollution. On the other hand, nonpoint source pollution comes from many, difficult to identify sources. As water flows across residential lawns, farm fields, and streets, it picks up these nonpoint source pollutants—which include fertilizers, pesticides, road salt, and oils. This means that landscaping and other such land management decisions affect the health of your watershed and the plant, animal, and human lives it sustains locally and downstream.

One major threat to water quality is nutrient pollution from fertilizers. Excess nitrogen and phosphorus in waterbodies triggers algae blooms, which creates a host of problems including impaired use of the water for drinking and recreation, lowered property values, and the creation of "dead zones" where decreased oxygen levels in the water harm aquatic plants and animals. One such example is the dead zone that extends across thousands of square miles in the Gulf of Mexico (Figure 1). The Gulf dead zone results from polluted runoff from the Mississippi River Basin watershed, which covers 41% of the continental U.S.

Figure 1: The Mississippi River Basin watershed

The Flint-Henderson watershed
The Flint-Henderson watershed is a sub watershed within the greater Mississippi River Basin, and is also referred to as the Mississippi North Central River watershed. It covers approximately 1.5 million acres and encompasses portions of six counties in Illinois: Henry, Mercer, Knox, Warren, Henderson, and Hancock. Over 65 tributaries make up the Flint-Henderson watershed, which accounts for over 865 miles of rivers, creeks, and streams! Some major tributaries include the Edwards River, Wilson Creek, North Henderson Creek, and Ellison Creek. Most of the land in the Flint-Henderson watershed is used in crop production.

Figure 2: The Flint-Henderson watershed

...s nutrient pollution locally in Illinois and downstream ..., representatives from state and federal agencies, ... and non-profit organizations gathered with ...nd wastewater treatment professionals to develop a ... called the Illinois Nutrient Loss Reduction Strategy.


Effingham Focus Group

Coming Soon…

- Outreach Materials
  - Brochures:
    - Soil Health/Testing
    - Right Plant Right Place
    - IPM
  - Factsheets: *"What's in your watershed?"*
  - Website & updated, digital Guidebook
  - Library Displays
- ~~3 NLC Workshops in April 2020~~
  3 NLC Webinars April/May 2020
  - 1 Collaboration with Cook County Extension & Conservation@Home
  - 2 Everyday Environment UIE webinar series
- **Connecting with other UIE staff/units!**

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lawntolakemidwest.org

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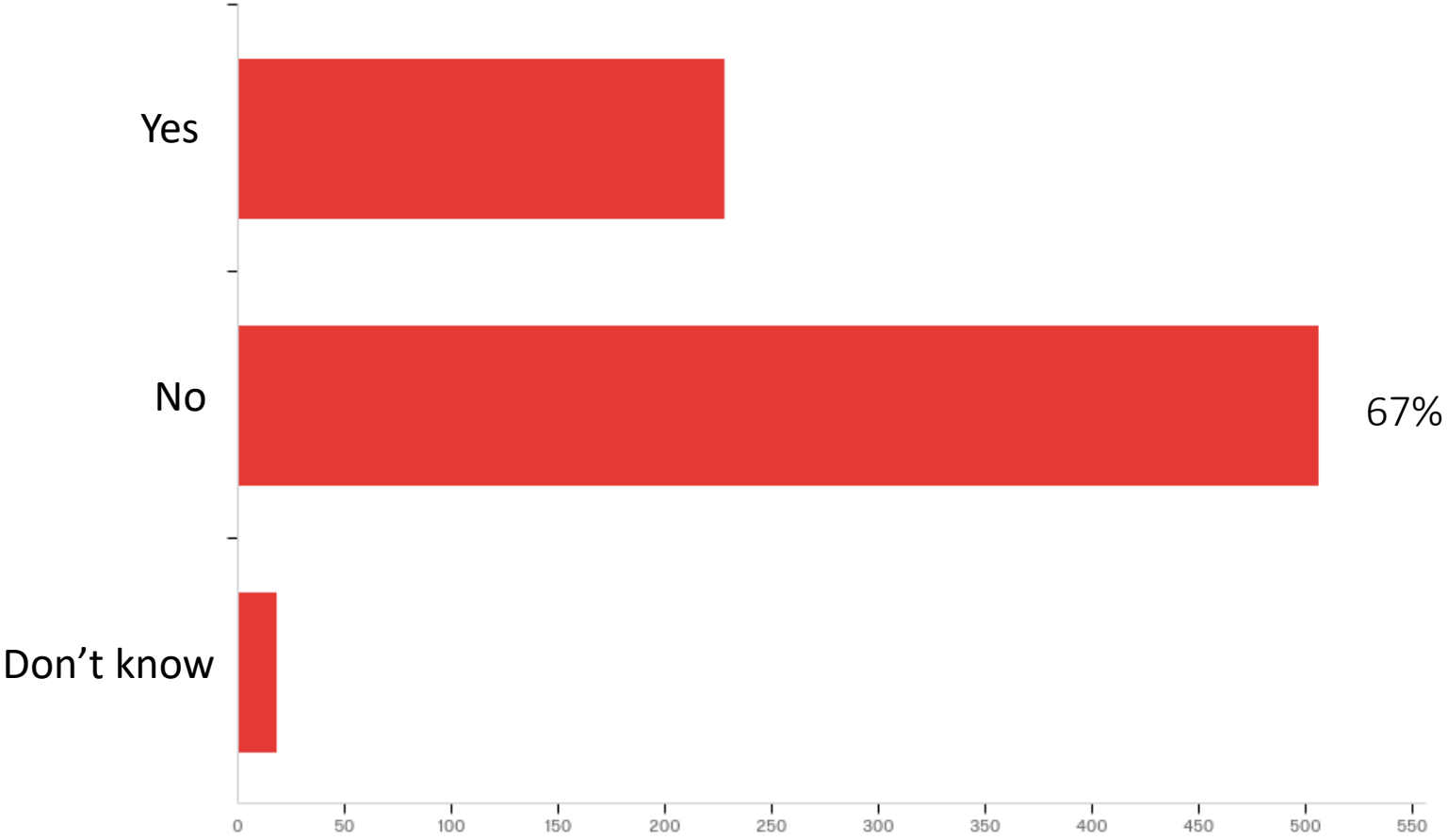
Do you use a combined pesticide and fertilizer (e.g., weed and feed) on your lawn?



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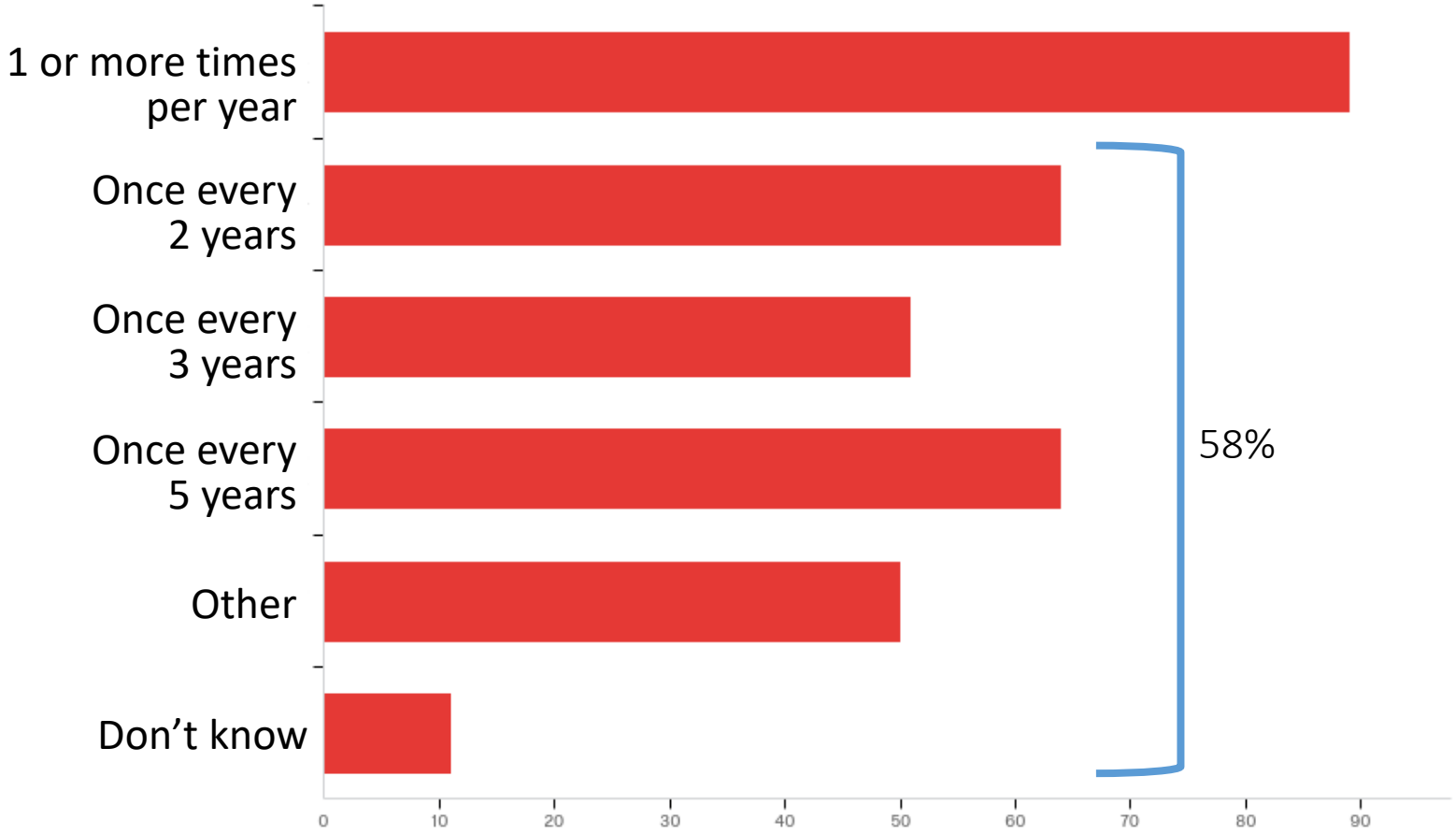
Of the 54% of respondents who have aerated their lawns…

How often is your lawn aerated?



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