Land Use and Wetlands

Local Decision-Making and Opportunities for Improved Wetland Protection

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Wisconsin Lakes Convention Workshop
April 12, 2011

Agenda

Part I: Tools and information to improve public understanding about wetlands.

Part II: Opportunities and tools to improve local wetland protection.

Mission Statement

Wisconsin Wetlands Association is a non-profit organization dedicated to the protection, restoration and enjoyment of wetlands and their associated ecosystems through science-based programs, education and advocacy.


Brian Hansen

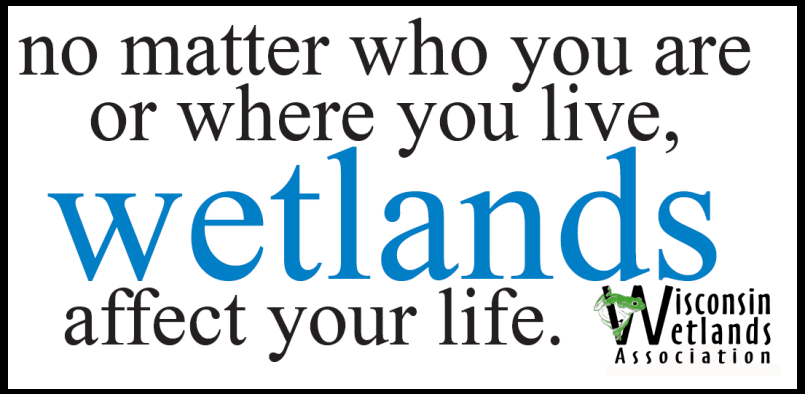
Wisconsin Wetlands Association

no matter who you are
or where you live,

wetlands

affect your life.

Questions we strive to answer and want to help YOU answer too.



What are wetlands?

What do they look like?

Where are they on the landscape?

Why do they matter?

How are they protected?

How can we improve protections?

What are Wetlands?

Where land and water meet, characterized by:

1. Wetland hydrology
2. Wetland (hydric) soils
3. Wetland (hydrophytic) vegetation

What are Wetlands?

"Marsh" "Swamp" "Bog"

"Shorelands" "Lake fringes"

"Shallows" "Sloughs"

"Floodplain forests"

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Kangaroo Lake

Grandma Lake

Lulu Lake

Toy Lake

Communicating About Wetlands

We need to recognize that many of our treasured aquatic resources are wetlands or are dependent upon wetlands.

We can develop commonly used messages that make the connection between lakes, rivers, streams and wetlands for the good of all of these interconnected water resources.

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What do wetlands look like?

Marsh

Wetlands are not just this

** Based on Eggers & Reed / 1997*

Coniferous Bog

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Open Bog

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Coniferous Swamp

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Lowland Hardwood Swamp

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Floodplain Forest

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Alder Thicket

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Shrub Carr

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Fen

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Sedge Meadow

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Low Prairie

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Ephemeral Pond

Spring

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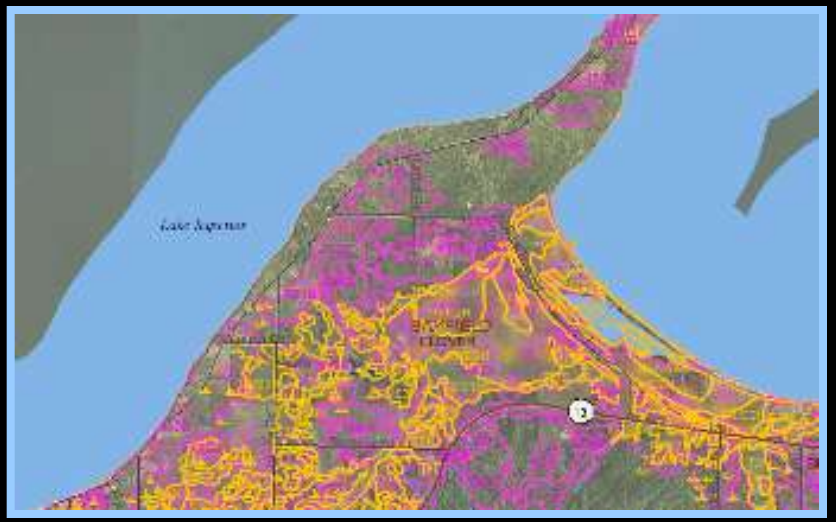
Where are wetlands on the landscape?

- ~ 15% of Wisconsin's land cover
- 80% adjacent to lakes, rivers and streams
- 20% "isolated"
- 75% are privately owned
- Many, **but definitely not all**, appear on Wisconsin Wetland Inventory maps



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Identifying wetlands

Step 1: Review Maps

- WDNR Wetland Indicator maps
- Maps provided by County planning and zoning department web-sites

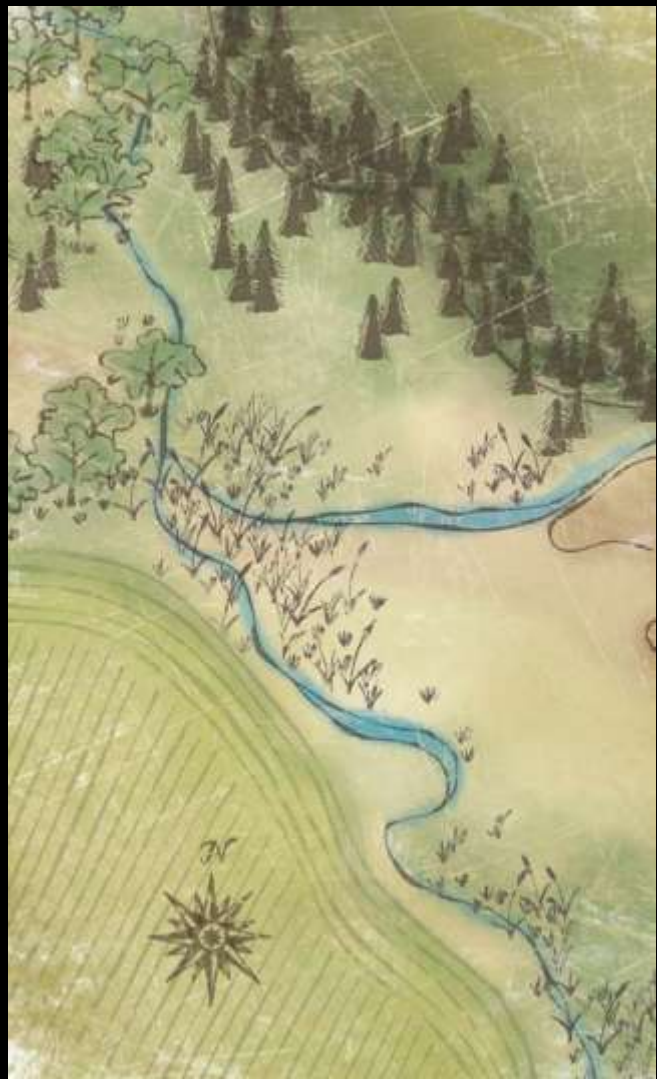
Mapped Wetlands

Potential Wetlands

Identifying wetlands

Step 2: Look for Physical Clues Using WDNR's "Wetland Clues Checklist"

Step 3: Consult a Professional



Why do Wetlands Matter?

Wetlands perform many important “functions” on the landscape and for our communities.

75% of Wisconsin's wildlife species use wetlands during some stage of their lifecycle

Ecotourism is the largest growing sector of our nation's tourism industry . . . $3.8 billion dollars in annual retail sales and 72,000 jobs are associated with WI's hunting, fishing, and other outdoor recreation economy.

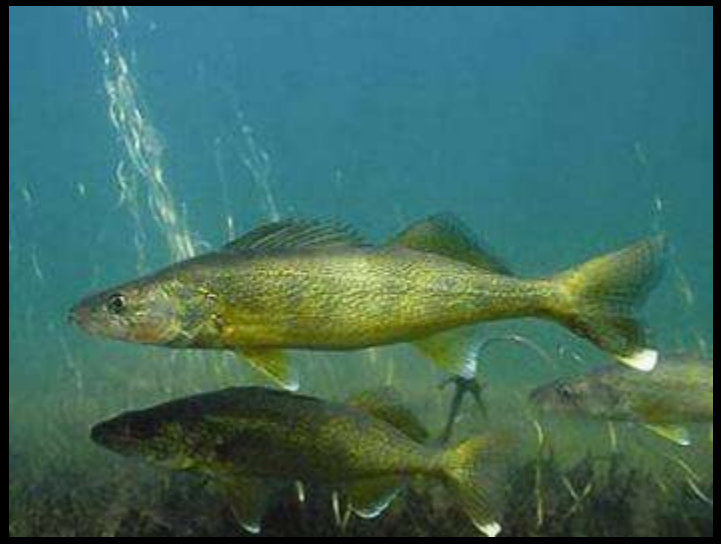

Eric Epstein
Gary Shackelford
Wetlands remove pollution, trap sediments, remove nutrients and break down toxins, helping to maintain clean and healthy waters for streams, rivers and lakes.
Kate Redmond
Andy Clark

Wetlands reduce flooding by soaking up runoff like sponges and storing and slowly releasing floodwaters after storms

Jeff Kraemer

Shoreline Protection

Groundwater connections



Walleye – Eric Engbretson

Fisheries habitat

Why do Wetlands Matter?

Wetland Functions = Public Benefits

(…but these benefits are still poorly understood)

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Wetlands Educational Tools

- Increase public awareness of wetland values
- Motivate citizens to explore and enjoy wetlands
- Generate community pride in local wetland treasures
- Catalyze community involvement in stewardship and protection of local wetland treasures

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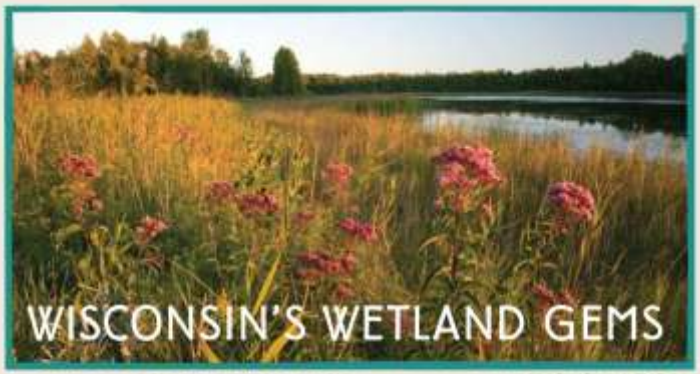
Wetland Gems Program



WETLAND GEMS

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WHAT ARE WETLAND GEMS?

Wetland Gems are high-quality habitats that represent the wetland riches—marshes, swamps, bogs, fens and more—that historically made up nearly a quarter of Wisconsin's landscape. Critically important to Wisconsin's biodiversity, these natural treasures also provide our communities with valuable functions and services as well recreational and educational opportunities. They are landscapes that both preserve the past and inspire for the future.

Wisconsin Wetlands Association's list of 100 Wetland Gems includes 93 sites selected for their ecological value. These sites are distributed throughout the state and include examples of all of Wisconsin's wetland community types. We have dubbed an additional seven Workhorse Wetland Gems, sites that illustrate how wetlands deliver priceless services such as flood attenuation, water quality protection, and fish and wildlife habitat. Look inside for more on the purpose of this project, how sites were selected, ideas for citizen and community involvement, a visitor's guide, and a list and map of the Wetland Gems sites.

Visit our website for more information on this project: www.wisconsinwetlands.org/gems.htm


Green Darner Dragonfly—Ken Tape


Girl Eyeing Dragonfly

100 WISCONSIN WETLAND GEMS

Southeast Coastal Region
SG-1 Chiwaukee Prairie
SG-2 Des Plaines River Floodplain & Marshes
SG-3 Germantown Swamp
SG-4 Renak-Polak Woods
SG-5 Root River Riverine Forest
SG-6 Wammont Bluff Fens

Southeast Region
SE-1 Beulah Bog
SE-2 Cedarburg Bog
SE-3 Cherokee Marsh
SE-4 Horicon Marsh
SE-5 Huiras Lake
SE-6 Lulu Lake
SE-7 Milwaukee River Floodplain Forest
SE-8 Nichols Creek
SE-9 Rush Lake
SE-10 Scuppernong River Area
SE-11 Spruce Lake Bog
SE-12 Sugar River Floodplain Forest
SE-13 Waubesa Wetlands
SE-14 White River Marsh

Central Region
C-1 Bass Lake Fen & Lunch Creek Sedge Meadow
C-2 Bear Bluff Bog
C-3 Black River
C-4 Blue Swamp
C-5 Comstock-Germania Marsh
C-6 Dewey Marsh
C-7 Jay Creek
C-8 Page Creek Marsh
C-9 Quincy Bluff & Solberg Lake
C-10 Suk-Cerney Wetlands
C-11 Summerton Bog

West Region
W-1 Big Swamp
W-2 Fort McCoy
W-3 Kickapoo Valley Reserve
W-4 Lower Chippewa River Delta
W-5 Lower St. Croix River Corridor
W-6 Lower Wisconsin River & Wyalusing State Park
W-7 Oak Ridge Lake
W-8 Snow Bottoms
W-9 Trempealeau River Sedge Meadow
W-10 Upper Mississippi & Trempealeau River National Wildlife Refuges
W-11 Van Loon Bottoms
W-12 Whitman Bottoms

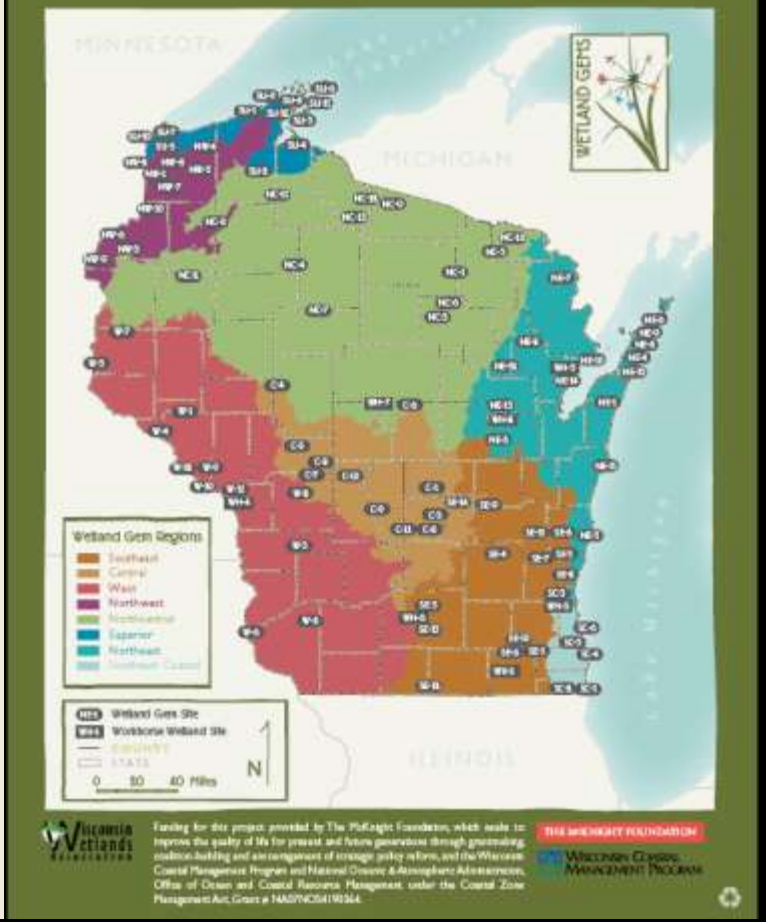
Northeast Region
NE-1 Black Ash Swamp
NE-2 Brazeau Swamp
NE-3 Hortonville Bog
NE-4 Kangaroo Lake
NE-5 Kohler Andrae Dunes
NE-6 Mink River Estuary
NE-7 Miscauno Cedar Swamp
NE-8 Moonlight Bay & Connected Wetlands
NE-9 North Bay
NE-10 Peshtigo River Delta
NE-11 Point Beach & Dunes
NE-12 Rushes Lake
NE-13 Shivering Sands & Connected Wetlands
NE-14 West Shore Green Bay Wetlands
NE-15 Wolf River Bottoms

North Central Region
NC-1 Atkins Lake & Hiles Swamp
NC-2 Bear Lake Sedge Meadow
NC-3 Bogus Swamp
NC-4 Flambeau River State Forest
NC-5 Grandma Lake
NC-6 Hunting River Alders
NC-7 Jump-Mondeaux River Floodplain
NC-8 Kissick Alkaline Bog
NC-9 Rice Creek
NC-10 Savage-Robago Lakes
NC-11 Spider Lake
NC-12 Toy Lake Swamp
NC-13 Turtle-Flambeau-Manitowish Peatlands

Northwest Region
NW-1 Baldon Swamp
NW-2 Black Lake Bog
NW-3 Blomberg Lake
NW-4 Blueberry Swamp
NW-5 Brule Glacial Spillway
NW-6 Crex Meadows & Rice Lake
NW-7 Empire Swamp
NW-8 Erickson Creek Peatlands
NW-9 Fish Lake Meadow
NW-10 St. Croix & Namekagon River Corridor

Superior Region
SU-1 Bark Bay & Lost Creek Bog
SU-2 Bibon Swamp
SU-3 Big Bay
SU-4 Kakagon-Bad River Sloughs
SU-5 Namadji Floodplain Forest
SU-6 Outer Island Sandspit & Lagoon
SU-7 Pokegama-Carnegie Wetlands
SU-8 Red Cliff Raspberry Bay
SU-9 Sand Bay
SU-10 St. Louis River Marshes
SU-11 Stockton Island Tombolo
SU-12 Sultz Swamp

Workhorse Wetlands
WH-1 Turtle Valley Wildlife Area: Wildlife Habitat
WH-2 Spoehr's Marsh: Fishery Habitat
WH-3 MMSD Greenseams Program: Flood Attenuation
WH-4 Halfway Creek Marsh: Water Quality Protection
WH-5 Oconto Marsh: Shoreline Protection
WH-6 Pheasant Branch: Groundwater Connections
WH-7 Mead Wildlife Area: Recreation & Education



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THE MCKNIGHT FOUNDATION

WISCONSIN COASTAL MANAGEMENT PROGRAM

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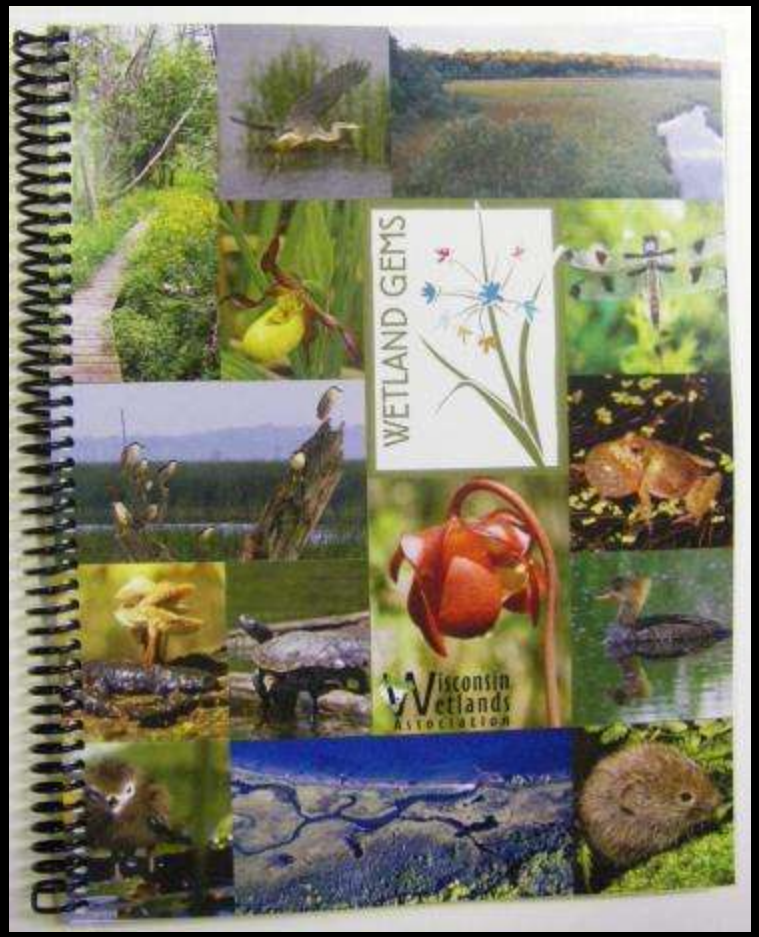
Wetland Gems Program




NORTHEAST - 4

WETLAND GEMS

KANGAROO LAKE

DOOR COUNTY

KANGAROO LAKE WETLAND TYPES

Coniferous swamp, lowland hardwood swamp, sedge meadow, marsh, shrub carr

ECOLOGY & SIGNIFICANCE

FLORA & FAUNA

THREATS

ACCESS

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Wetlands Educational Tools

"Wetlands of Wisconsin"

Wetland Gems Program

www.wisconsinwetlands.org/gems.htm

Local Outreach Program

Goals

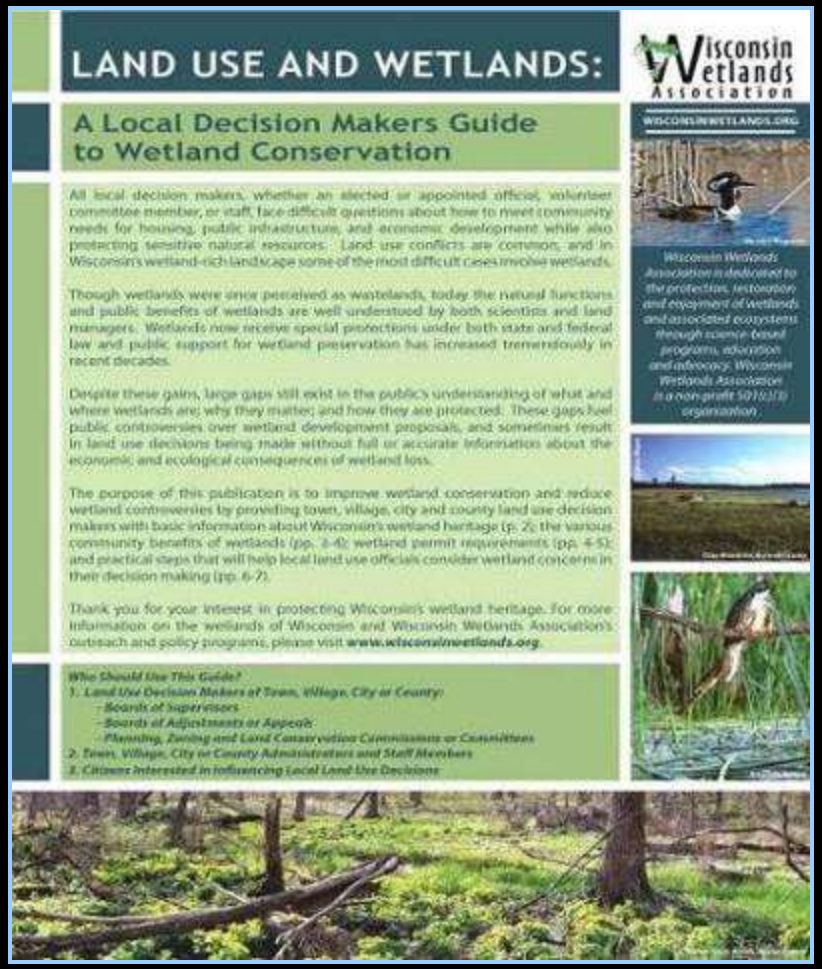
- Improve wetland protections
- Educate local leaders on the public benefits of protecting and restoring wetlands
- Reduce regulatory conflicts and inadvertent wetland fill
- Improve consistency in decision making across local, state and federal jurisdictions
- Improve integration between wetland protection and related programs (e.g. flood risk management)

Local Wetland Protection Challenges

- Limited authority
  (real *and* perceived)
- Expertise
- Capacity
- Inaccurate maps
- *And many more*….

This is where the zoning map was supposed to go!

Local Decision Makers' Guide



- Released in 2009
- 8-page brochure provides basic wetland information
  - Wetland types
  - Common questions about wetland permits
  - Practical steps for improving protection and restoration
  - Tools for wetland ID

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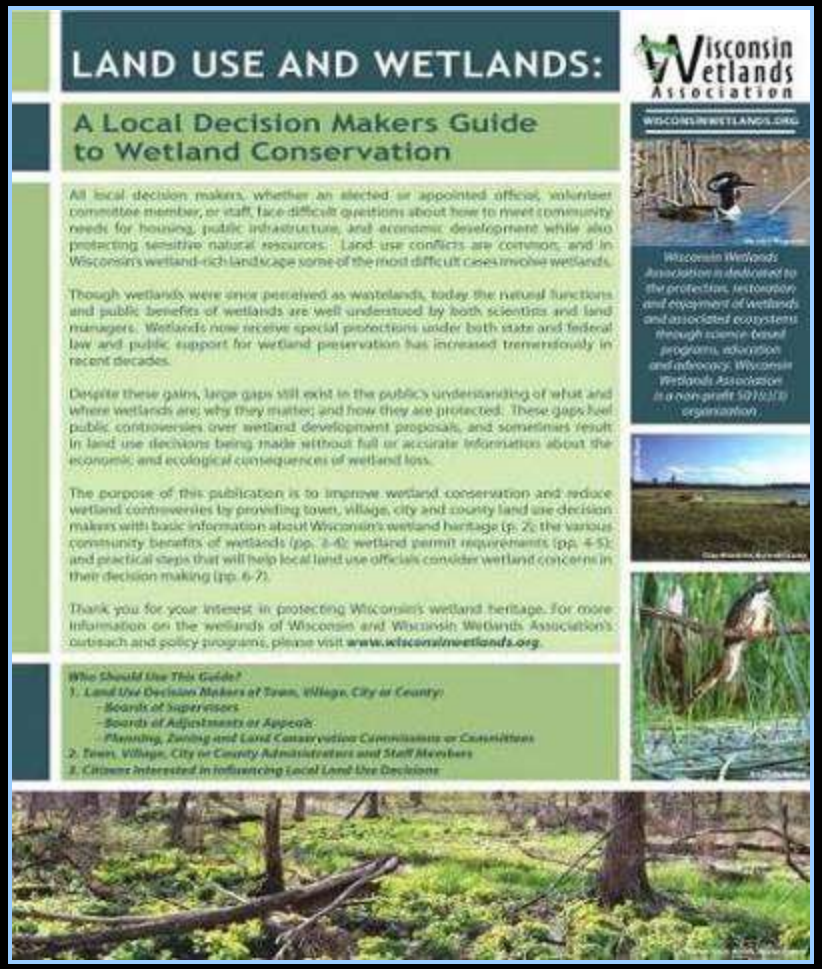
Local Decision Makers' Guide



- Audiences:
  - Town, village, city or county –
  - Boards of Supervisors
  - Boards of Adjustments or Appeals
  - Planning, Zoning, & Land Conservation Commissions or Committees
  - Citizens & other organizations
- Free download online
- Print copies available upon request (no charge)

Mink River Estuary – Door County, Photo – Clint Farlinger

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BREAK UNTIL 10:45am

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Local Outreach Program

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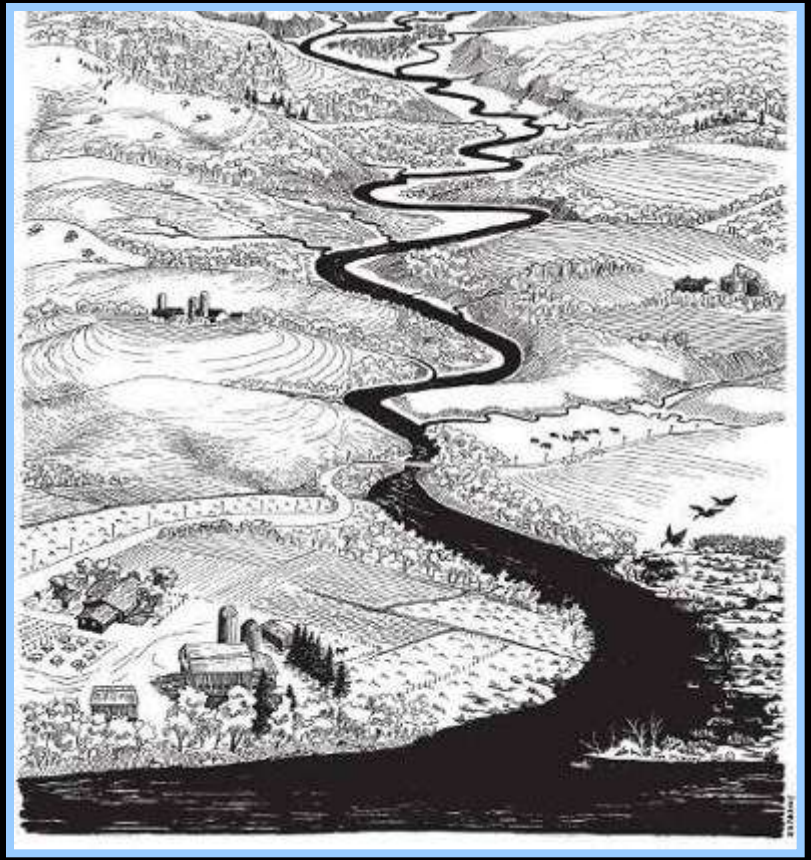
Is Local Protection Necessary?

- Communities are connected by water
- Wetlands perform key water-related services
  - Workhorse wetlands
  - Expensive to replace and can strain budgets
- But what about from a regulatory standpoint?



Principles of Regulatory Protections

1) Discharge of Dredged & Fill Material



2) Wetland Delineation
3) No Significant Adverse Impacts

Principles of Regulatory Protections

4) **Alternatives Analysis**
5) **Sequencing**

Always required:

Avoid → Minimize

In certain situations:

Avoid → Minimize → Mitigate

Principles of Regulatory Protections

6) Compensatory Mitigation

- Does not alleviate an applicant's obligation to FIRST avoid and THEN minimize impacts

7) Public Participation

8) Jurisdiction . . .

Federal Wetland Protection

- Jurisdiction (Section 404 of Clean Water Act) limited to wetlands with *evident* connection to surface waters (e.g. lakes, rivers, streams)
  - SWANCC decision
- Protection against direct impacts
- Unregulated activities
  - Agriculture, forestry
  - Excavation
  - Vegetation removal

State Wetland Protection

- Jurisdiction allows protection of all wetlands regardless of location (and size or type)
- DNR reviews projects for compliance with state wetland water quality standards ("NR 103")
- Same federal regulatory gaps exist at state level

Limits on Federal/State Protection

- Complex jurisdiction depending on federal or state involvement
- Federal / state wetland program always vulnerable to further dismantling
- Several regulatory gaps
- Minimal land use authority
- Case-by-case permitting
  - Limited ability to consider wetland loss and degradation at a watershed or landscape scale

Shoreland Zoning

- February 2012
- What standards stayed the same?
  - Lot sizes
  - Structural setbacks (75 ft.)
  - Vegetated buffers (35 ft.)
- What standards changed?
  - Shoreline buffers
  - Impervious surface limits
  - More flexibility for nonconforming principal structures
  - Shoreland mitigation requirements
- Attend Heidi Kennedy's (DNR Shoreland Policy Coordinator) presentation Wednesday, 2:35-3:15pm for more detail

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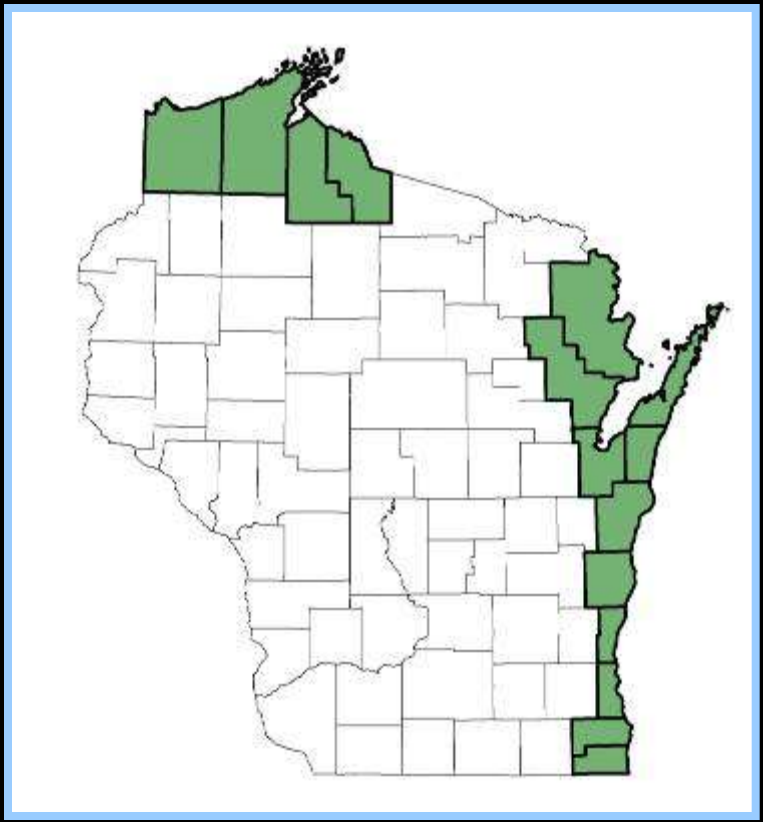
Shoreland-Wetland Zoning

- Basic shoreland-wetland zoning (NR 115) requirements
  - Mapped wetlands, per WI Wetland Inventory, must be zoned in shoreland-wetland district
  - Permitted uses consistent with federal and state wetland regulatory exemptions
    - Other uses considered prohibited
  - No significant adverse impacts

Is Local Protection Necessary?

- YES!
  - No longer can rely exclusively on federal and state wetland protection
  - Local governments have clear authority and are better positioned to control activities in and adjacent to wetlands
  - Need/opportunity to address long-standing challenges

What are Counties Doing?



Coastal County Inventory

- Grant support from WI Coastal Management Program
- Learn how counties already protect wetlands
- Use findings to evaluate the extent to which land use decisions protect or fail to protect wetlands
- See handout for Q&A template

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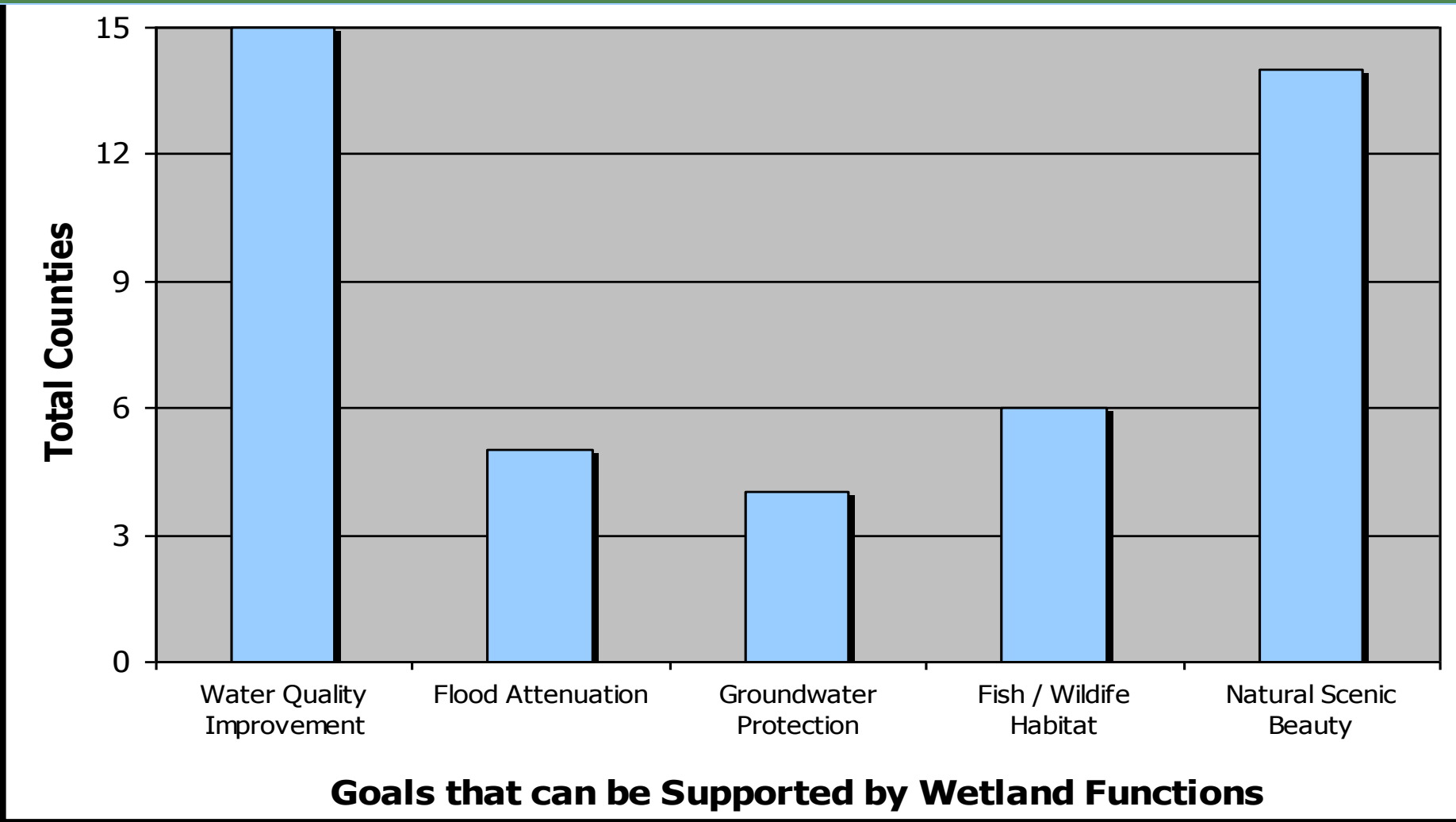
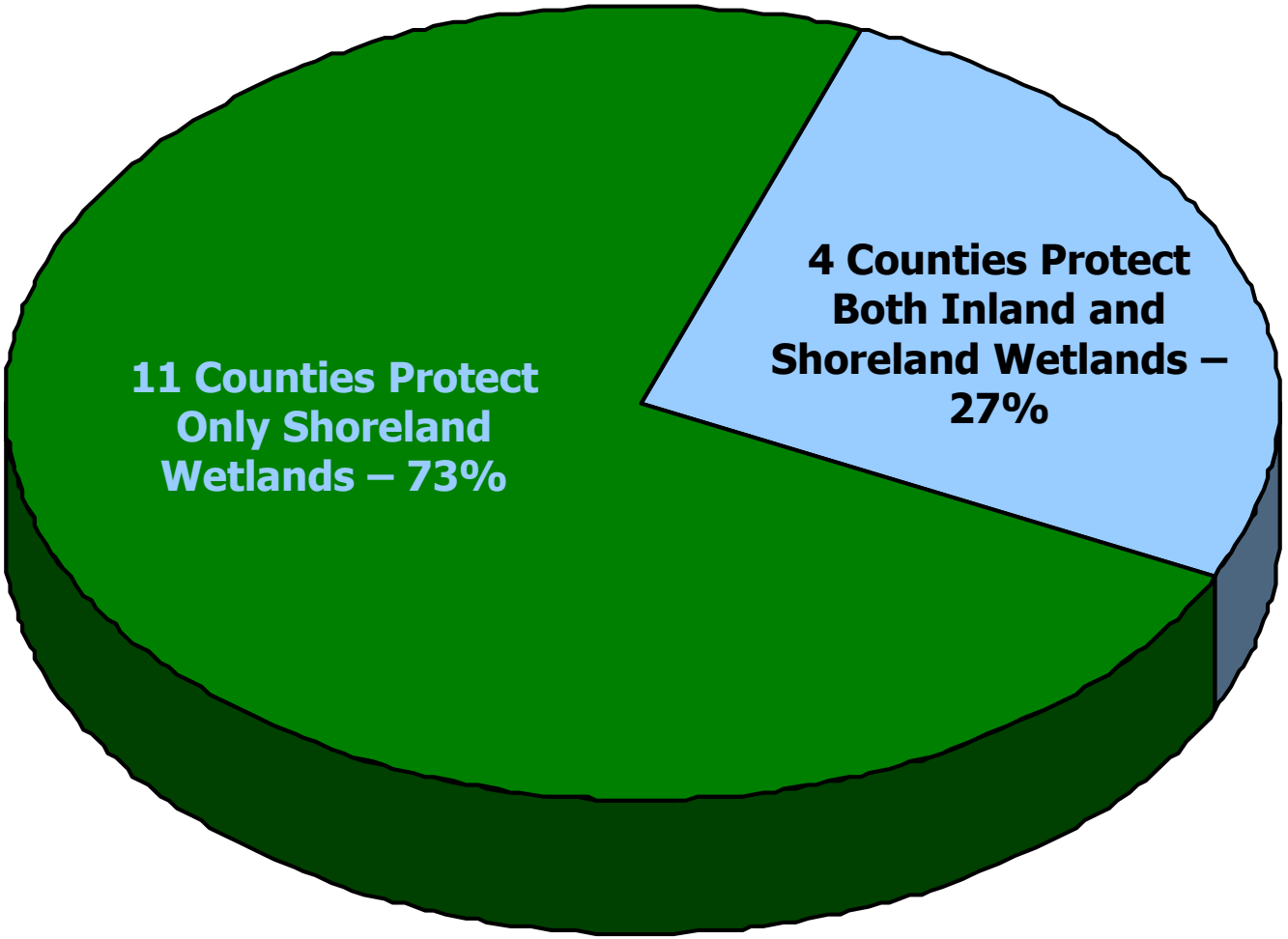
Does the Stated Purpose of Ordinance Explicitly Include Protecting and/or Restoring Wetlands?

County	Explicitly Mentioned	Identified as Means to Realize a Stated Goal	Not Identified
Ashland		X	
Bayfield			x
Brown		X	
Door	x		
Douglas		X	
Iron		X	
Kenosha	x		
Kewaunee		x	
Manitowoc			x
Marinette		x	
Milwaukee			x
Oconto			x
Ozaukee		x	
Racine	x		
Sheboygan			x
Total	3	7	5

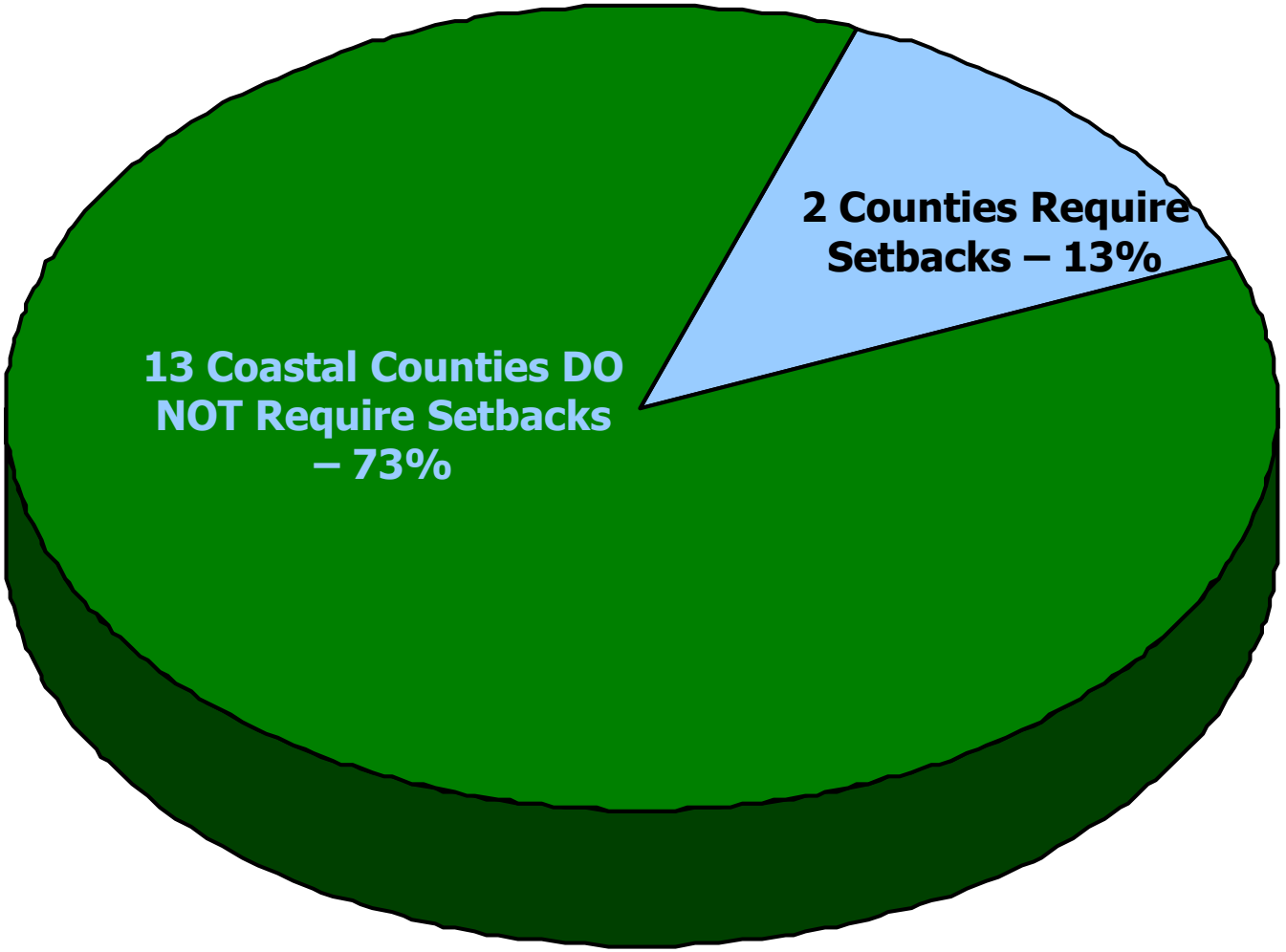
Coastal Counties Identifying Goals that can be Supported by Wetland Conservation



Does the Coastal County Protect Both Shoreland and Inland Wetlands?



Are Wetland Setbacks Required?

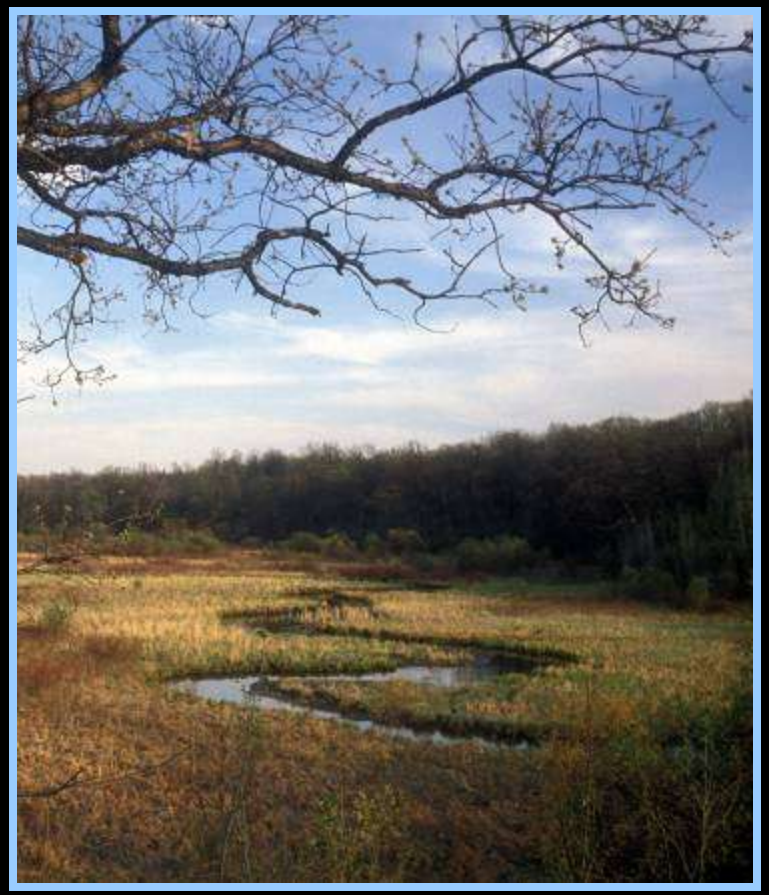


Other Key Findings

- All strictly rely on WWI maps
  - All zoning staff cited this as the single largest barrier to more effective wetland protection
- Bayfield and Oconto Co. have strong programs to deter wetland fill

- Subdivision Ordinances:
  - 4 counties identify wetlands as areas unsuitable for development (or land division)
  - 1 county requires submission of a wetland delineation

Zoning Recommendations



- Based primarily on Coastal County Inventory
  - Trends among 15 coastal counties offered transferable lessons
- Reviewed by
  - WI County Code Administrators
  - WDNR Shoreland Policy Coordinator
  - UWEX Center for Land Use Education

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Project Approach

- Window of opportunity with NR 115 revisions
- Deliberate focus on regulatory side
  - Many non-regulatory (e.g. planning) actions can be taken
- A suite of recommendations are provided as solutions to problems, relevant to local concerns
  - Various options included to allow local government to choose at their discretion
  - Use examples of policies already enacted across WI

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Modify Purpose and Intent Section

Option: Identify wetland protection as a distinct goal

- Examples:
  - Door County – "to preserve wetlands"
  - Kenosha and Racine County – "to obtain the wise use, conservation, development and protection of…wetlands…

Option: Recognize how wetland protection and restoration advances other zoning objectives

Protect All Shoreland Wetlands

Option: Clearly indicate that all wetlands in the intended jurisdiction are protected

i.e. Move away from strict reliance on WI Wetland Inventory maps

Option: Allow the use of best available data to delineate shoreland-wetland (or wetland) districts

- Kenosha County – . . . "shall develop district maps reflecting the best data available," and "the district delineation process shall make use of the most recent version of the Wisconsin Wetland Inventory Maps; and other maps . . ."

Notify about Wetland Laws and Condition Approval on Receipt of Wetland Permits

- **Option:** Comply w/ Notification Law (2009 WI Act 373)
  - Codify notice in ordinance and attach to permit applications: *"You are responsible for complying with state and federal laws concerning construction near or on wetlands . . .*
    - Walworth County – superimposed notice and landowner signature line onto WDNR's *Waking up to Wetlands* brochure

Condition Approval on Receipt of Wetland Permits or Require Local Wetland Permit

- **Option:** Condition local approvals upon receipt of wetland permits.
- **Option:** Require local wetland permit
  - Bayfield County – Class B special use permit for filling of any wetland. Cannot be approved until federal / state wetland permit issued.
  - Brown County – Requires permit for land disturbance > 500 sq. feet within 100 feet of any shoreland wetland.
  - Oconto County – Grading permits subject to NR 103, wetland water quality standards

Designate Wetlands as Unsuitable for Development

- **Option:** Include a definition of buildable areas, developable building site
  - Ashland & Marinette County
- **Option:** Incorporate buildable area standards into minimum lot size requirements
  - Oneida County
- **Option:** Include a statement in shoreland-wetland district that the district is seldom suitable for building sites.

Use Wetland Conservation as a Shoreland Mitigation Option

- **Option:** Establishing wetland structural setbacks or vegetated buffers
- **Option:** Restoring or enhancing the functions of a former or degraded wetland
- **Option:** Recording a conservation easement

Protect Inland Wetlands

Option: Create a wetland district

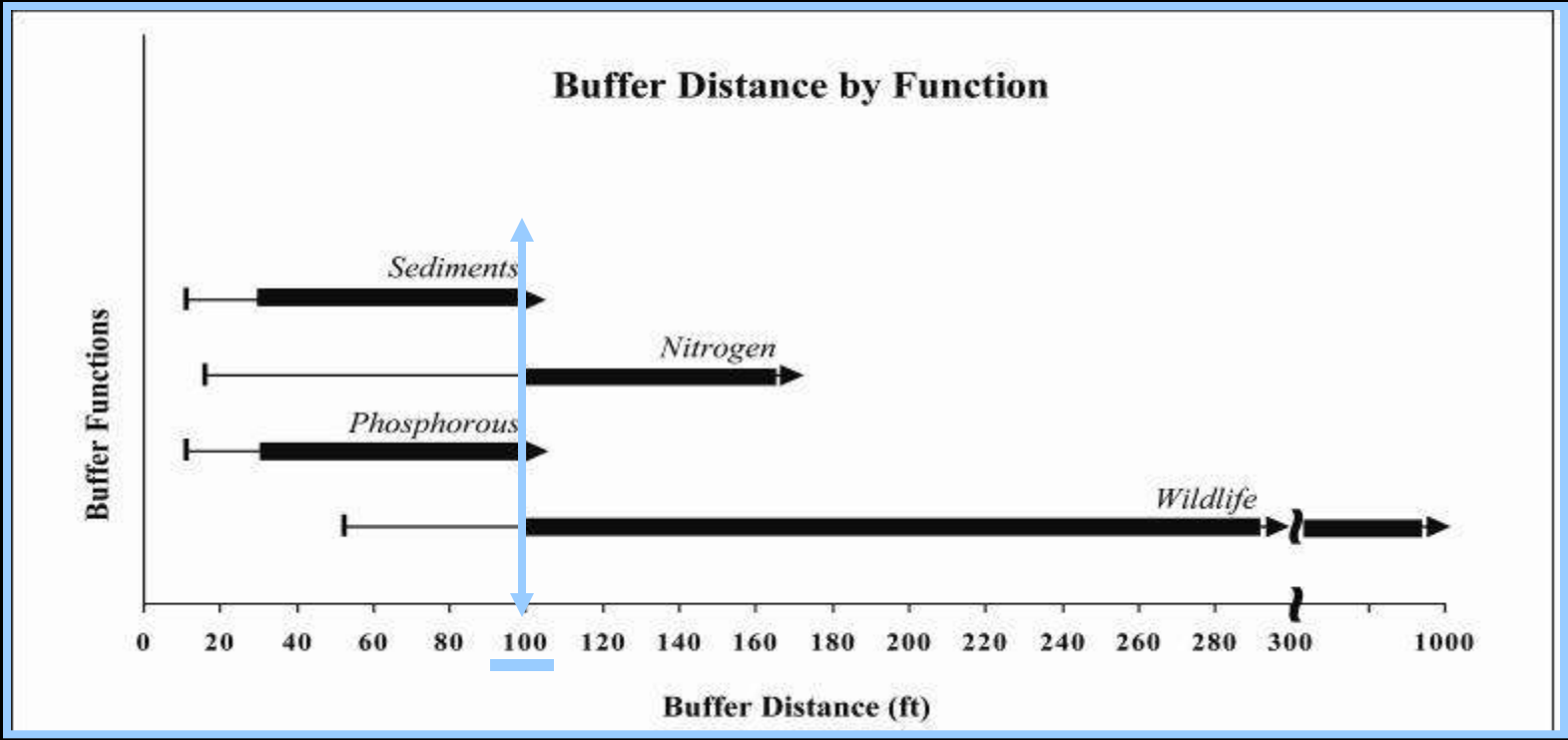
- Door – Wetland (W)
- Kenosha – Lowland Resource Conservancy (C-1)
- Oconto – Conservancy (C)
- Bayfield – Setback requirements for all wetlands

Option: Selectively protect inland wetlands w/ conservancy or other districts

- Use criteria in NR 103 - Area of Special Natural Resource Interest (ASNRI) wetlands

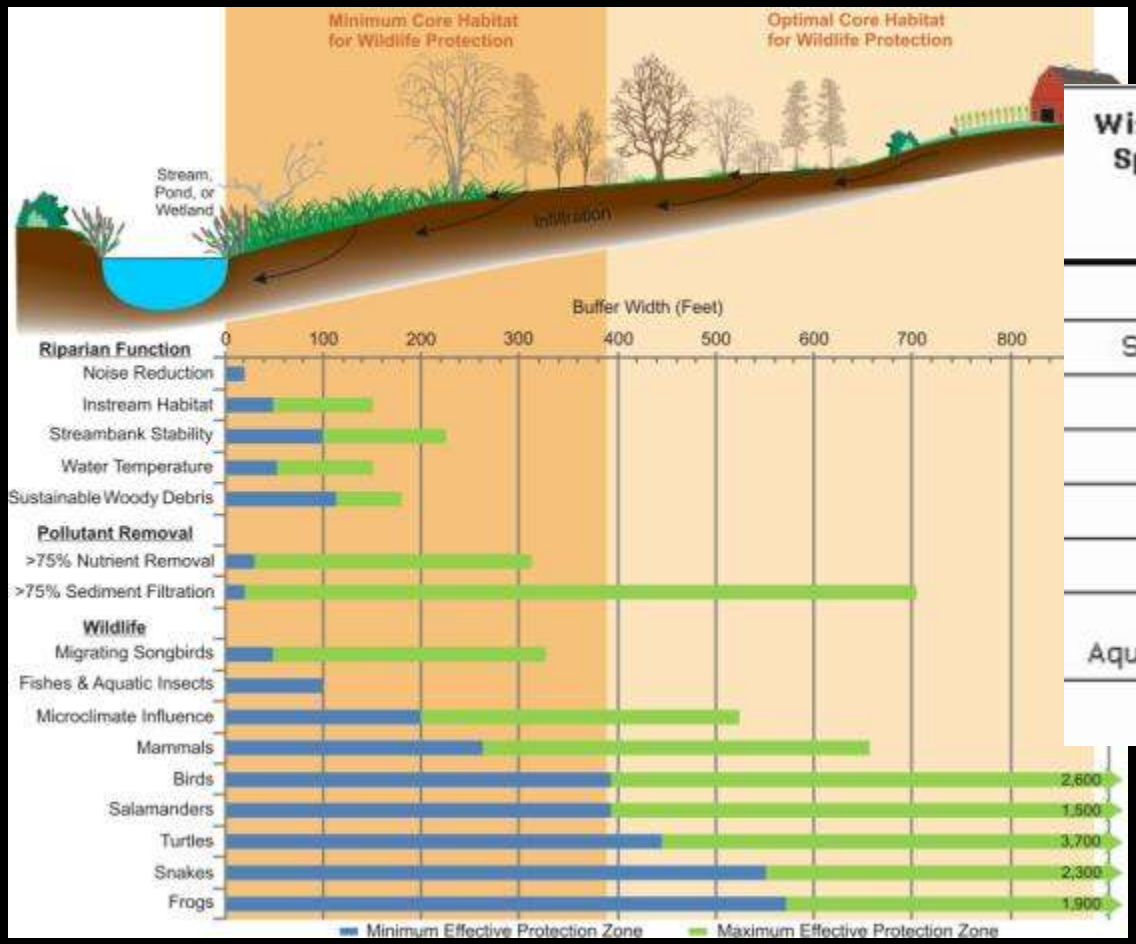
Adopt Setback or Buffer Requirements

Option: Science-based-buffer (or "core-habitat") with natural vegetation preserved and/or restored



From Environmental Law Institute (2008) – Planner's Guide to Wetland Buffers

Adopt Setback or Buffer Requirements



Wisconsin Species	Mimimum Core Habitat (feet)	Optimum Core Habitat (feet)	Number of Studies
Frogs	571	1,043	9
Salamanders	394	705	14
Snakes	551	997	5
Turtles	446	889	27
Birds	394	787	45
Mammals	263	No data	11
Fishes and Aquatic Insects	100	No data	11
Mean	388	885	

From Southeastern Wisconsin Regional Planning Commission (2010) Managing the Water's Edge

Adopt Setback or Buffer Requirements

- **Option:** Structural setback consistent with other state rules
  - NR 115 requires 75 foot setback for lakes, rivers, and streams
  - NR 151 requires protective area distances up to 75 feet depending on wetland type (e.g. fen).

- **Option:** Structural setback that is politically feasible
  - Examples:
    - Bayfield – 25 feet from any mapped wetland 2 acres or larger.
    - Dane – 75 feet from any mapped shoreland or inland wetland
    - Door – 35 feet, except reduced to 10 feet in some res. districts.
    - Kenosha – 35 feet just in Rural Cluster Development district and NR 151 distances whenever stormwater permit required.
    - Polk – 25 feet from mapped shoreland wetlands
    - Waupaca – 25 feet from mapped shoreland wetlands

Other Recommendations

- Adopt “avoid and minimize” standards for indirect wetland impacts
  - Stormwater runoff
  - Hydrologic alterations (grading)
  - Excavation
  - Vegetation removal
- Adopt planned unit development and/or conservation subdivision provisions
- Allow flexibility in provisions that function at cross-purposes to wetland protection
- Adopt provisions that encourage wetland restoration and expedite permit approvals

Going Above & Beyond NR 115

- Wisconsin County Code Administrators (WCCA) NR 115 Guidebook
  - Identifies ways counties can exceed state minimum standards
  - Chapter 6 devoted to wetland protection

Our Next Steps

- Partnerships (e.g. WCCA, Center for Land Use Education, WI Lakes)
  - Promotion of zoning recommendations (e.g. newsletters)
- Looking for interested counties that would consider adopting and implementing recommendations
  - Local or regional presentations / workshops for staff, boards, committees, or organizations
  - WI Coastal Management Program may help fund workshops and ordinance development for coastal counties
    - We *may* be able to secure funding for similar steps in non-coastal counties
- Further research (e.g. inventory of stormwater ordinances) and outreach (e.g. land division / stormwater recommendations)
- *How can we help you?*

How Lake Organizations and Citizens can get Involved

- Share recommendations with city, town, village, or county staff and board / committee members
- Build support for adoption of recommendations
  - Use aforementioned tools in your efforts
  - Invite WWA to attend meetings / hearings pertaining to adoption of local wetland policies
- Provide additional examples of wetland-friendly policies from your counties (see handout)

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Land Use and Wetlands Webpages

www.wisconsinwetlands.org/localgovs.htm

Acknowledgments

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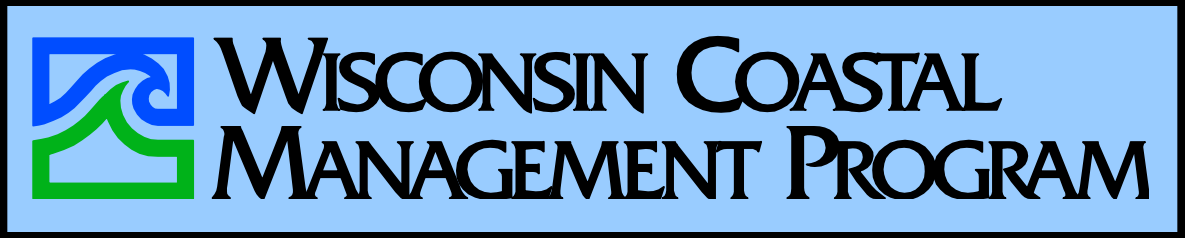

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Thank You

Questions?

Zoning Recommendations, Coastal County Inventory, and Local Decision Makers' Guide available at:

www.wisconsinwetlands.org/localgovs.htm

Contact Information:

Kyle Magyera – 608.250.9971

kyle.magyera@wisconsinwetlands.org

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Discussion Questions

- What wetland-related challenges and barriers exist at the local level?
  - Opportunities?
- What information would be useful to help you or your community identify, protect, and restore wetlands?
- What opportunities do you see for Wisconsin Wetlands Association to help and/or partner with lake organizations or other groups?

Contact Info: Kyle Magyera, 608.250.9971, kyle.magyera@wisconsinwetlands.org
www.wisconsinwetlands.org/localgovs.htm

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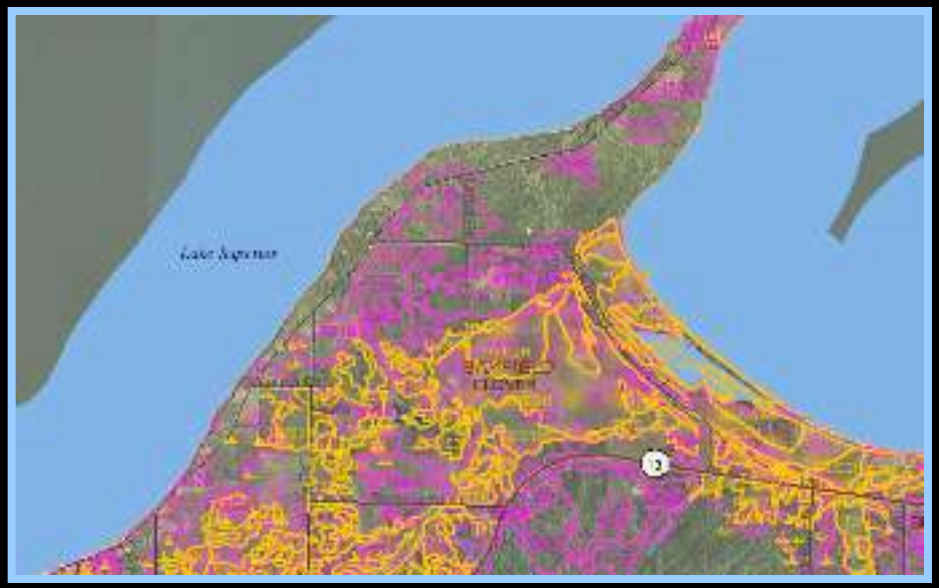
WDNR Wetland Toolkit

- Wetland Indicator maps
- *Waking up to Wetlands brochure*
- Wetland clues checklist



www.dnr.wi.gov/wetlands/locating.html

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