University of Wisconsin-Stevens Point College of Natural Resources



Inland Lakes & Rivers

We're asking for your help! This survey, which we expect should take about 20 minutes to complete, is an important step to help in the development of new management plans for lakes in your community. Please share your experiences with and priorities for area lakes, along with some demographic information to help us understand who responded. The survey is being conducted as a partnership between UW-Stevens Point, UW-Extension, Oconto County Lakes & Waterways Association, and the Oconto County Land Conservation Department -- so please contribute to this effort by completing the survey and returning it in the enclosed envelope!

Here are a few important notes about this study:

- Remember all results will be kept confidential, we're just looking for your important perspective about how to ٠ better manage Oconto County lakes and their surrounding watersheds.
- · All responses will be treated as anonymous and records used to contact respondents containing identifying information will be destroyed prior to the research team reviewing data.
- Please skip any questions that make you feel uncomfortable or that you don't know how to answer. ٠
- We do not anticipate any potential for risk or harm due to participation in this study; however, if you have any complaints about your treatment as a participant in this study please contact Dr. Debbie Palmer, IRB Chair at (715) 346-3953, e-mail at irbchair@uwsp.edu, or mail at University of Wisconsin-Stevens Point, Science Building D240, Stevens Point Wisconsin 54481.

While your participation is voluntary your input can help bring local voices into these important efforts to enhance lakes in Oconto County! If you have any questions or comments about this project you may contact us using the information provided below.

Thank you for your time and we're looking forward to hearing from you!

Ryan Haney, Research Assistant	Dr. Aaron Thompson, Associate Professor	
Center for Watershed Science and Education	University of Wisconsin-Stevens Point	
University of Wisconsin-Stevens Point	E-mail: aaron.thompson@uwsp.edu Phone:	
E-mail: ryan.haney@uwsp.edu; Phone: 715.346.2497	715.346.2278	

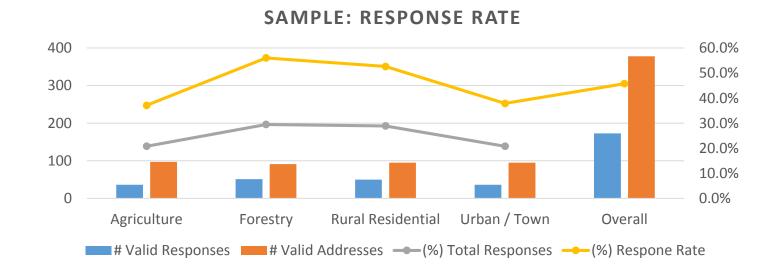
Survey Results December 14, 2017

Aaron Thompson, Ph.D.

Associate Professor, Human Dimensions of Natural Resource Management; Natural Resource Planning Specialist, UW-Extension Center for Land Use Education College of Natural Resources University of Wisconsin - Stevens Point TNR Addition 207 Stevens Point, WI 54481 Phone: 715.346.2278 *E-mail*: aaron.thompson@uwsp.edu

Survey Demographics

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Sample:

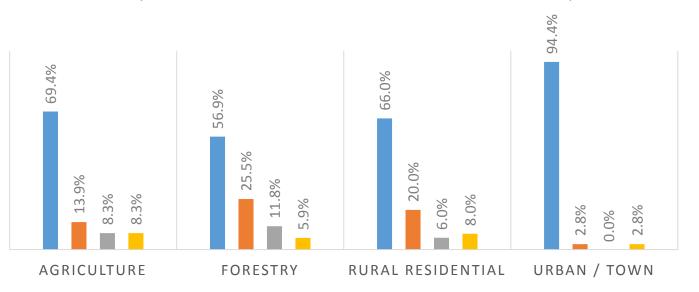
- Landowners selected from Wisconsin statewide parcel layer
- 400 respondents with equal representation from:
 - Agricultural Landowners
 - Non-Industrial Forestry / Recreational Forest Landowners
 - Rural Residential
 - Urban / Town
- Mail Survey with 5 Contacts
- Overall Response Rate: 45.8%
 - Slightly higher participation rate from forestry and rural residential landowners than agriculture or urban / town

DISTINGUISHING	DEMOGRAPHICS &	ATTITUDES &	
VARIABLE	SAMPLE DESCRIPTION	APPLICATION	



SAMPLE: PROPERTY DESCRIPTION

■ Primary Home ■ Vacation Home ■ Recreation Land ■ Other / Not Reported



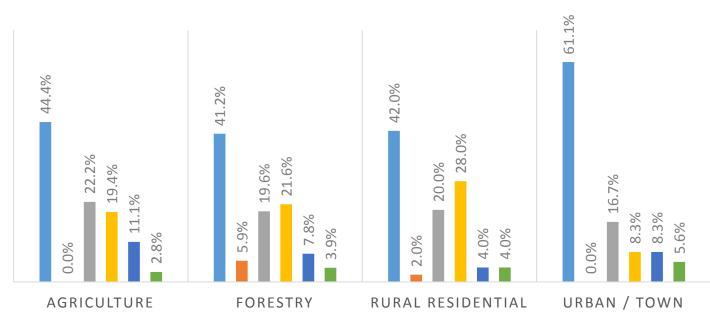
Results:

- Majority (56.9% 94.4%) of respondents reported that their land in Oconto County is their primary residence.
- Highest rates of vacation home or recreational land reported by forestry and rural residential landowners.



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SAMPLE: PROPERTY DESCRIPTION



- No-my property is not located on or near water
- Yes-my property is located on or near Green Bay

Yes-my property is located on or near a river

- Yes-my property is located on or near an inland lake (not Green Bay)
- Yes-my property is located on or near wetlands
- Not Reported

Results:

- Majority of survey respondents reported that their property is not located on or near water.
- 20-28% of non-urban respondents reported living on or near an inland lake in Oconto County.

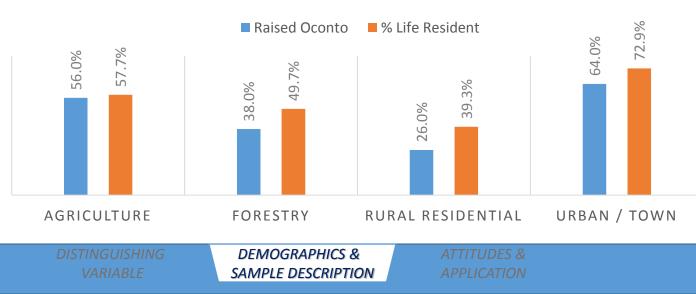
DISTINGUISHING VARIABLE

DEMOGRAPHICS & SAMPLE DESCRIPTIO ATTITUDES &

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DEM: AGE & YEARS IN OCONTO

DEM: OCONTO EXPERIENCE

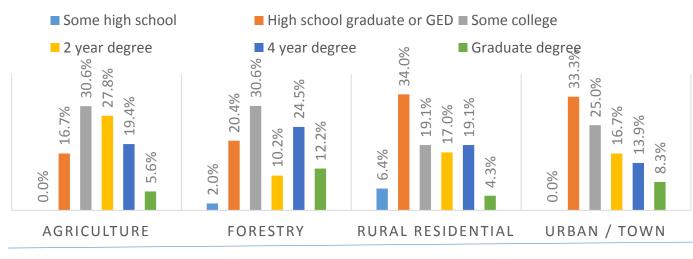


Demographic Results:

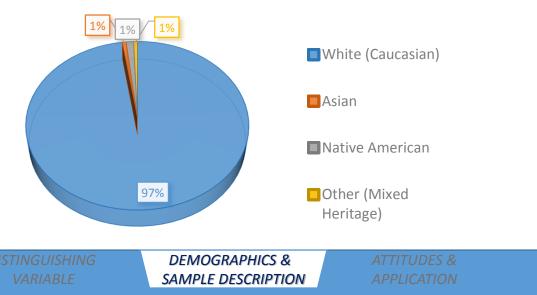
- Average respondent age is consistent across groups, with urban / town respondents being slightly younger on average.
- Years of residence in Oconto County is also consistently high with averages ranging from 24-42 years.
- Agricultural and urban / town residents are more likely to have grown up in Oconto County, which also corresponds with higher % of life spent here.
- % of life spent in Oconto County on average is high (>39%) for all groups, showing significant length of residence from all respondents.

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DEM: EDUCATION



DEM: SAMPLE ETHNICITY



Results:

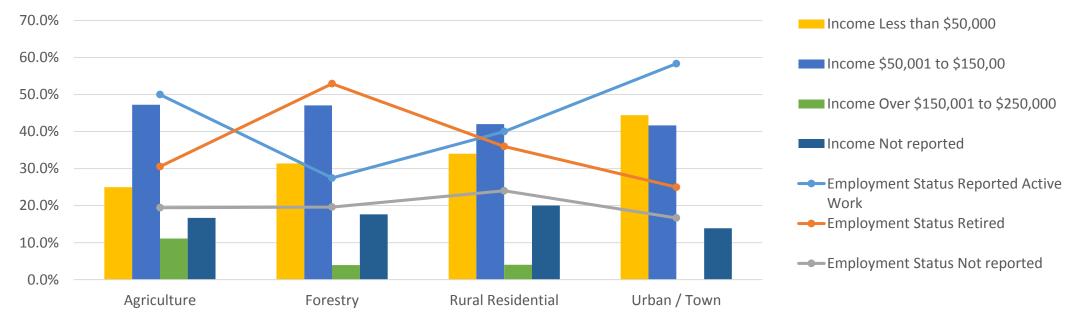
- Education levels vary significantly within each of the groups.
- No statistically significant differences were identified between groups.

• 97% of respondents identify as white (Caucasian).



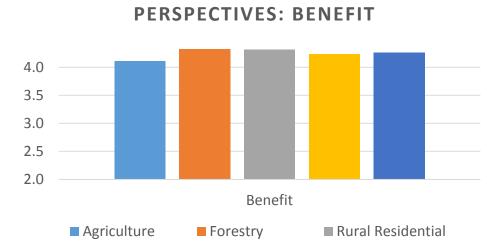
DEM: INCOME & EMPLOYMENT STATUS

DEMOGRAPHICS & SAMPLE DESCRIPTION



- Income levels are fairly consistent among non-urban respondents, slightly lower among urban / town.
- Forest landowners reported higher rate of retirement (>50%).





Attitudinal Rating Scale

- Construction: Average score 8 items
- Selection: Factor Analysis Techniques
- Reliability score = .866 (very high)

Overall

Ratings:

Urban / Town

- Strongly Agree = 5
- Agree = 4
- Neutral = 3
- Disagree = 2
- Strongly Disagree = 1

Results:

- Community members reported an extremely high average rating (agree to strongly agree) that lakes and rivers are important and that an active responses is necessary to protect these resources in Oconto County.
- No statistically significant differences identified between groups.

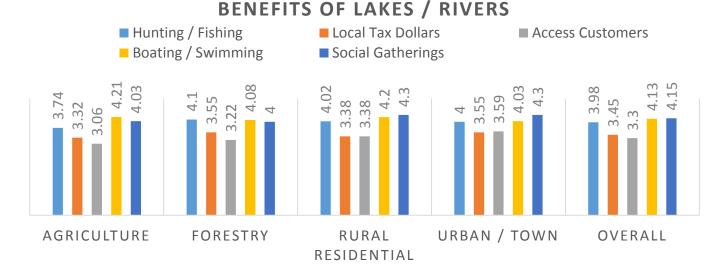
- The scenic and natural beauty of Oconto County lakes and rivers contributes to our community's ability to attract new residents and employers.
 - Oconto County lakes add to the beauty of the community and its surroundings.
- It is important for community members to take an active role in determining the future of Oconto County lakes.
- Local funding to revitalize Oconto County lakes is a great investment in our future.
- Some regulations on the lakes are necessary to protect the enjoyment for all users.
- Lakes help to make Oconto County a good place to live and recreate.
- The lakes contribute to the economy of Oconto County.
- The lakes are important because they support tourism in our community.

DISTINGUISHING VARIABLE DEMOGRAPHICS & SAMPLE DESCRIPTION

ATTITUDES & APPLICATION

Perspectives about Lakes

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I personally benefit from ... access to fishing or hunting opportunities on Oconto County lakes and rivers.

... local tax dollars generated by shoreline development on Oconto County lakes and rivers.

 \dots access to customers for local products who are attracted to the area by amenities around Oconto County lakes and rivers.

... opportunities for water-based recreation, such as boating or swimming, on Oconto County lakes and rivers.

... places for friends, family, or other groups to gather and enjoy leisure time together around Oconto County lakes and rivers.

- Ratings:
 - Strongly Agree = 5
 - Agree = 4
 - Neutral = 3
 - Disagree = 2
 - Strongly Disagree = 1

Results:

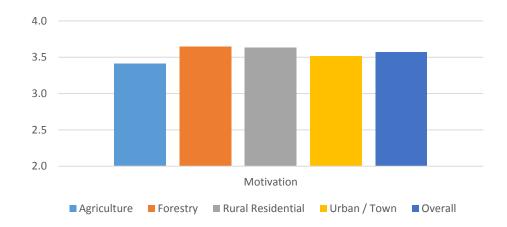
- Consistent with the findings of the community perspective attitude scale for benefits (previous slide) we see strong agreement with all of the potential benefits of lakes and rivers in Oconto County.
- No statistically significant differences were identified between groups.

DISTINGUISHING VARIABLE

DEMOGRAPHICS & AMPLE DESCRIPTION

ATTITUDES & APPLICATION

PERSPECTIVES: MOTIVATION



Attitudinal Rating Scale

- Construction: Average score 6 items
- Selection: Factor Analysis Techniques
- Reliability score = .801 (very high)
- Ratings:
 - Strongly Agree = 5
 - Agree = 4
 - Neutral = 3
 - Disagree = 2
 - Strongly Disagree = 1

DISTINGUISHING VARIABLE

ATTITUDES & APPLICATION

Results:

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- Consensus exists across all groups that people are motivated (for habitat, recreation, tradition, & sense of place) to protect Oconto County's lakes and water resources.
- No statistically significant differences identified between groups.

- Providing better habitat for fish and wildlife motivates me to support efforts to improve Oconto County lakes.
- Oconto County lakes are a good place for doing the types of activities I enjoy.
- Providing better opportunities for recreation motivates me to support efforts to improve water quality in Oconto County lakes.
- Oconto County lakes have meaning to me because it gives our community a sense of place.
 - Spending time on Oconto County lakes is a tradition that keeps me coming back.

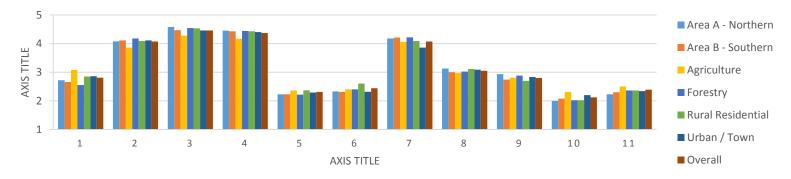


ATTITUDES & APPLICATION

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COMMUNITY PERSPECTIVES #1-#11



- Ratings:
 - Strongly Agree = 5
 - Agree = 4
 - Neutral = 3
 - Disagree = 2
 - Strongly Disagree = 1

SURVEY QUESTION CODING

Respondents strongly agree Respondents disagree

- 1. Most people are aware of how to prevent the spread of aquatic invasive species.
 - 2. The scenic and natural beauty of Oconto County lakes and rivers contributes to our community's ab...
 - 3. Oconto County lakes add to the beauty of the community and its surroundings.
- 4. It is important for community members to take an active role in determining the future of Oconto...
- 5. I choose to spend my time elsewhere because of the lack of facilities at the Oconto County lakes.
- 6. Being able to use a large motor on my boat is an important part of my recreation on the lakes.
 - 7. Providing better habitat for fish and wildlife motivates me to support efforts to improve Oconto...
- 8. Competition for areas to recreate (such as fishing, boating, jet skiing, biking, etc.) makes it d...
- When recreating on Oconto County lakes, my enjoyment is frequently disrupted by other users.
- 10. I feel unsafe when walking or spending time in the parks along the lakes.
- 11. My property is not located on a lake shore, so the way I manage it has little influence on the he...

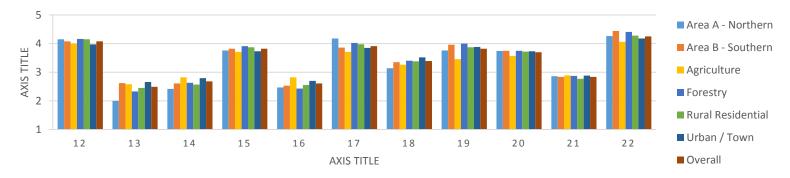


ATTITUDES & APPLICATION

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COMMUNITY PERSPECTIVES #12-#22



• Ratings:

- Strongly Agree = 5
- Agree = 4
- Neutral = 3
- Disagree = 2
- Strongly Disagree = 1

SURVEY QUESTION CODING

Respondents strongly agree Respondents disagree

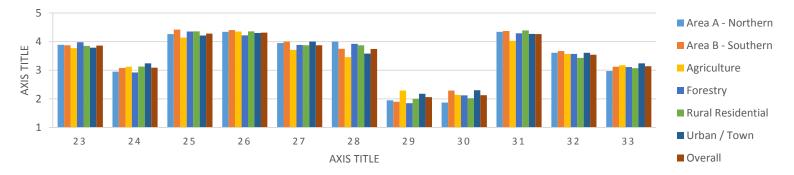
- 12. Local funding to revitalize Oconto County lakes is a great investment in our future.
 - 13. I like outdoor activities, but I don't recreate on Oconto County lakes.
- 14. An increase in unsafe recreation by boaters, such as driving too close to the shoreline and piers...
- 15. I feel comfortable knowing where no wake zones are in a lake.
- 16. Oconto County lakes are dirty and seem to be getting worse.
- 17. Oconto County lakes are a good place for doing the types of activities I enjoy.
- Oconto County lakes build community by creating a bond between people living on the lakes and tho...
- 19. Aquatic invasive species (AIS) negatively impact the economic value of Oconto County lakes.
- 20. The parks on Oconto County lakes remain some of the most beautiful spots in the county.
- 21. The condition of most Oconto County lakes shows that local government is not taking responsibility.
- 22. Some regulations on the lakes are necessary to protect the enjoyment for all users.



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COMMUNITY PERSPECTIVES #12-#22



- Ratings:
 - Strongly Agree = 5
 - Agree = 4
 - Neutral = 3
 - Disagree = 2
 - Strongly Disagree = 1

SURVEY QUESTION CODING

Respondents strongly agree Respondents disagree

23. Providing better opportunities for recreation motivates me to support efforts to improve water qu...

24. Most boaters maintain a speed on Oconto County lakes that allows everyone to feel safe recreating.

25. Lakes help to make Oconto County a good place to live and recreate.

26. The lakes contribute to the economy of Oconto County.

27. Oconto County lakes have meaning to me because it gives our community a sense of place.

28. Spending time on Oconto County lakes is a tradition that keeps me coming back.

- 29. The waves created by fast boats have little effect on the shorelines of Oconto County lakes.
 - 30. I don't feel safe eating fish from Oconto County lakes.
 - 31. The lakes are important because they support tourism in our community.
 - 32. I feel that aquatic invasive species (AIS) area problem in Oconto County.

33. The highway department does a good job at reducing impacts from roads on Oconto County lakes.

ATTITUDES & APPLICATION



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Vegetation along stream banks helps improve water quality

Paint, solvents, or used motor oil may be disposed of safely into a storm sewer.

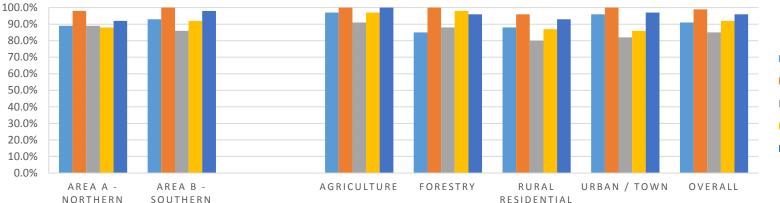
Grass clippings, garden trimmings and fallen leaves can be a source of water pollution.

All fertilizers/chemicals applied to lawns stay within the yard.

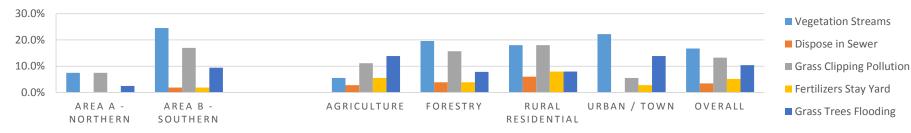
Areas of grass, trees, and wetlands around streams can absorb flood waters and reduce flooding damage.

- Vegetation Streams
- Dispose in Sewer
- Grass Clipping Pollution
- Fertilizers Stay Yard
- Grass Trees Flooding





ENVIRONMENTAL KNOWLEDGE: PERCENT NON-RESPONSE



Results:

• Responses from all groups provided correct answers to basic environmental knowledge questions more than 80% of the time.



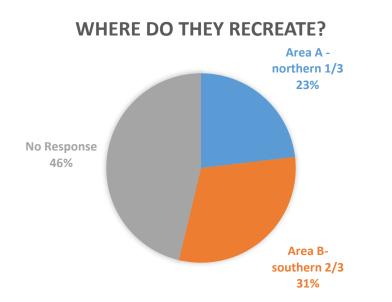
College of Natural Resources

Tell Us About Your Lake Experience

The following questions seek information about how you use Oconto County's inland lakes and rivers (NOT Lake Michigan or Green Bay) and the surrounding shoreline.

> To begin we are asking you to give us a general idea of the part of the Oconto County where you most often spend time recreating on area lakes and rivers, such as the area closely associated with the national forest (labeled here as "A") or the southern portion of the county (labeled here as "B"), to help us better understand different priorities based on where you choose to recreate. Remember if any questions make you uncomfortable feel free to skip to the next question.



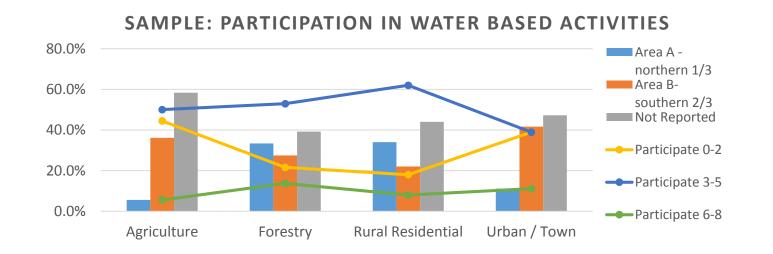


Results:

The sample is evenly split between those who reported recreating • inn the northern and southern zones. However, 46% did not provide a response to this question.

DISTINGUISHING VARIABLE





Results:

- Bar graphs show distribution of where different landowner types recreate in Oconto County (Northern 1/3 versus Southern 2/3 based on provided map).
- Line graph shows reported levels of participation in 8 water-based recreation activities included in the survey.
 - These results indicate that a vast majority of respondents participate in 3-5 different water-based activities. Note that this is slightly lower for urban residents who are just as likely to participate in 0-2.

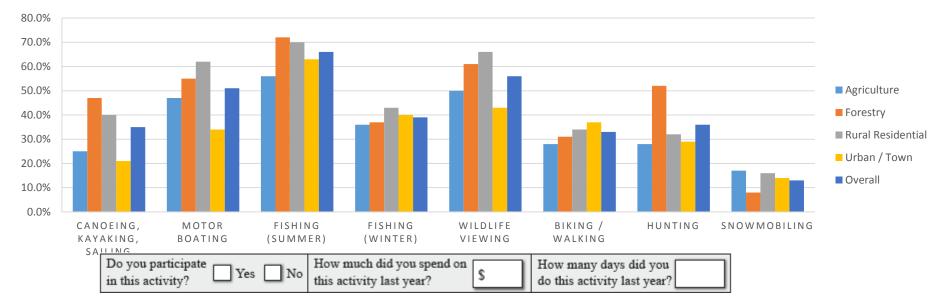
DISTINGUISHING	
VARIABLE	

DEMOGRAPHICS & SAMPLE DESCRIPTIC ATTITUDES &

Recreation



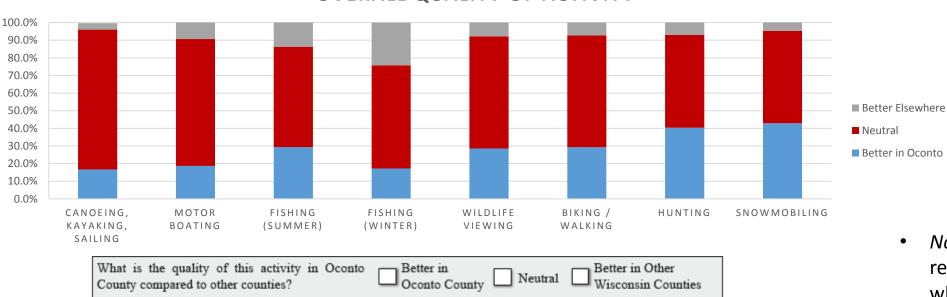
ACTIVITY PARTICIPATION RATE



Results:

- Highest participation activities include: Fishing (Summer), Wildlife Viewing, and Motor Boating.
- Significant variation (lower levels of participation) reported between urban / town residents and other groups for canoeing, motor boating, wildlife viewing.
- Significantly higher rate of participation in hunting reported for forest landowners.





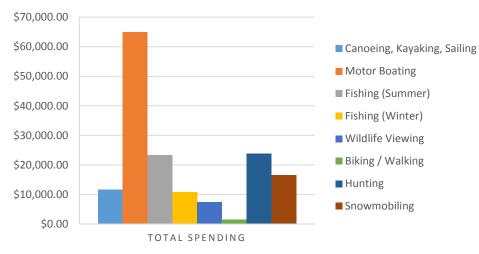
OVERALL QUALITY OF ACTIVITY

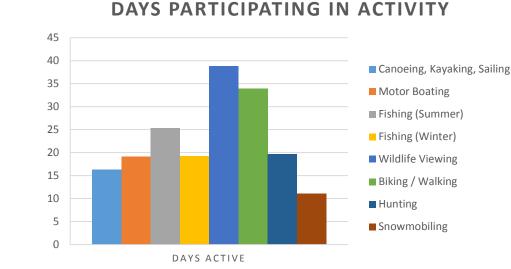
- ٠ Oconto" ratings.
- Ice Fishing had the highest reported level of "better elsewhere" ٠ among all activities.
- Results: Hunting and Snowmobiling had highest reported levels of "better in

ATTITUDES & APPLICATION *Note:* Only includes responses from those who indicated that they participate in each activity.

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TOTAL SPENDING ANNUALLY

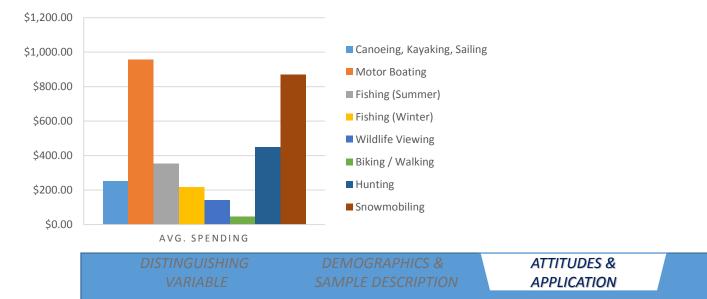




responses from those who indicated that they participate in each activity.

Note: Only includes

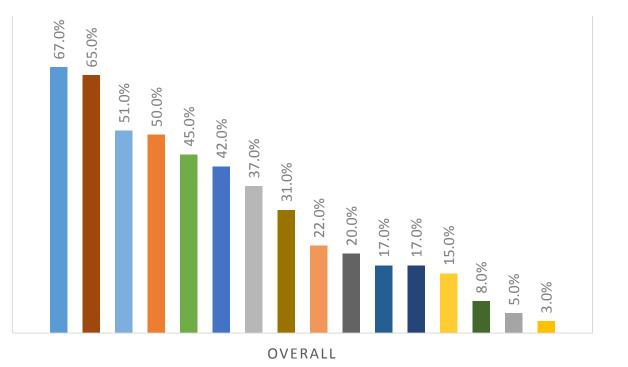
AVG SPENDING ANNUALLY



- Wildlife viewing and biking / walking reported as highest average number of days participating in an activity.
- Total reported outdoor recreation spending from respondents is \$159,777 annually, or an average of \$957 per person annually.

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AMENITIES: DEMAND FOR SERVICES





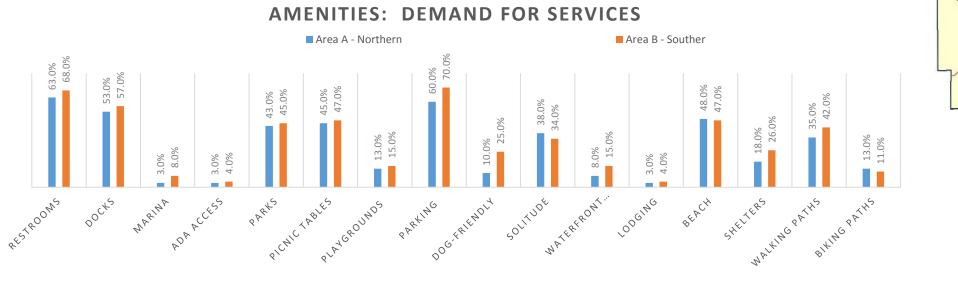
Results:

Highest demand for • amenities includes restrooms, docks, parking, parks, and picnic areas.

ATTITUDES & APPLICATION



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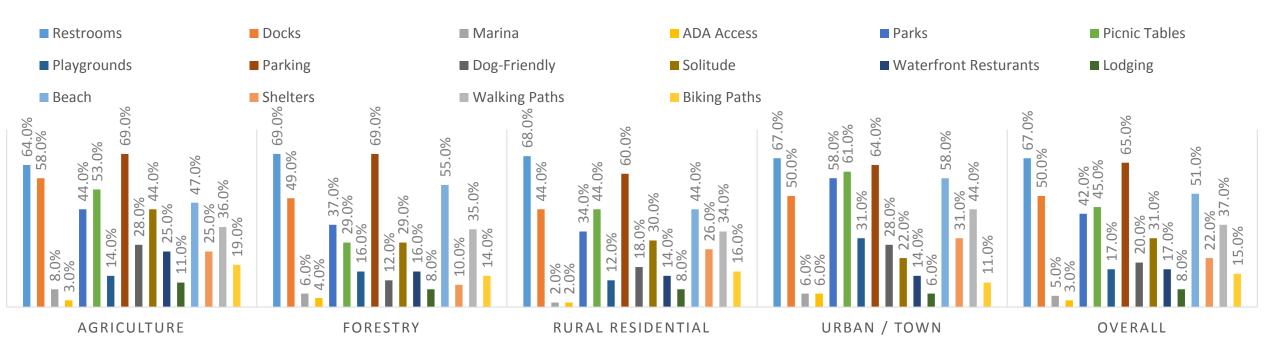


Results:

• No statistically significant differences were identified between groups based on where they reported recreating.

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AMENITIES: DEMAND FOR SERVICES



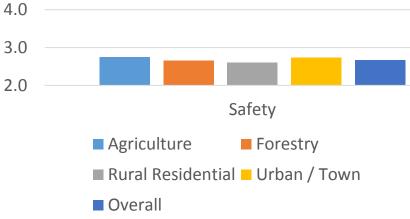
Results:

• No statistically significant differences were identified between groups differentiated by landowner type.



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PERSPECTIVES: NOT SAFE



Attitudinal Rating Scale

- Construction: Average score 6 items
- Selection: Factor Analysis Techniques
- Reliability score = .724 (moderately high)
- Ratings:
 - Strongly Agree = 5
 - Agree = 4
 - Neutral = 3
 - Disagree = 2
 - Strongly Disagree = 1

DISTINGUISHING VARIABLE

Results:

ATTITUDES & APPLICATION

- No evidence suggesting that Oconto County landowners (from any group) see major problems on area lakes –
 - all mean scores suggest an average rating of neutral to disagree for these statements.
- No statistically significant differences identified between groups.

- Competition for areas to recreate (such as fishing, boating, jet skiing, biking, etc.) makes it difficult to enjoy recreating on Oconto County lakes.
- When recreating on Oconto County lakes, my enjoyment is frequently disrupted by other users.
 - I feel unsafe when walking or spending time in the parks along the lakes.
- An increase in unsafe recreation by boaters, such as driving too close to the shoreline and piers, has led to me spending less time on Oconto County lakes.
- Oconto County lakes are dirty and seem to be getting worse.
- The condition of most Oconto County lakes shows that local government is not taking responsibility.

Communication

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<section-header>ACICULTURE DE CORDINCE OF INFORMATION

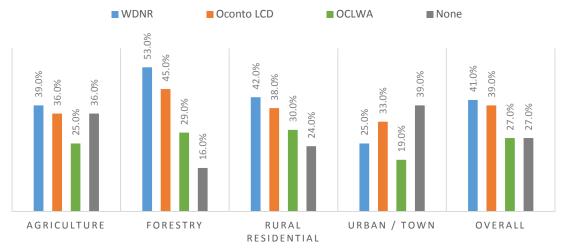
Results:

- High levels of trust reported for all groups (lowest average ranking is 3.1, which represents a neutral rating).
- Moderate variation within groups, such as agricultural landowners reporting higher willingness to work with Oconto County Land Conservation Department and UW-Extension.

- Ratings:
 - Very Likely= 5
 - Likely = 4
 - Neutral = 3
 - Unlikely = 2
 - Very Unlikely = 1

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SEEKING HELP LAND MANAGEMENT



Who would you seek help from to improve the way you manage your land for the benefit of Oconto County's inland lakes and rivers? (Check all that apply)

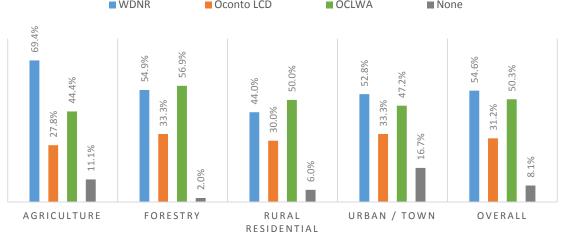
WI Department of Natural Resources	Oconto County Land Conservation Department	Oconto County Lakes & Waterways Association
Other Please describe here:		
None I'm not interested in re	eceiving land management help.	

Results:

- Similar to the trust ratings (previous slide); however, the "none" category ratings demonstrate that there are pockets of resistance toward soliciting advice on how to mange their own land for the benefit of Oconto County Lakes and Rivers.
 - (Note: Some of these landowners may not believe actions taken on their land can have an impact, which is often the case for urban / town residents).
- As an example 39% of urban / town respondents reported that they are not interested in consulting with anyone about these types of changes.



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Which group should take the lead on prevention of aquatic invasive species (AIS) about Oconto County's inland lakes and rivers? (Check all that apply)

WI Department of Natural Resources	Oconto County Land Conservation Department	Oconto County Lakes & Waterways Association
Other Please describe here:		
None It's not necessary to h	ave a local group lead an AIS preventio	m effort.

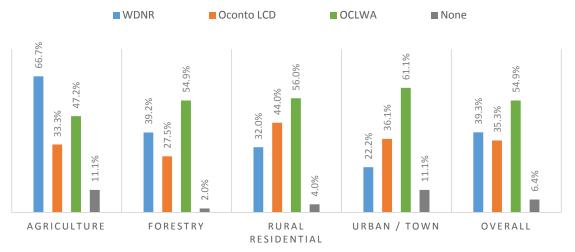
WDNR Oconto LCD OCLWA None

- Agriculture: Distinct in their view of WDNR as the primary lead for AIS prevention.
- All groups consistently identify both WDNR and OCLWA as the most likely lead.



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PROVIDING INFO LAKES & RIVERS



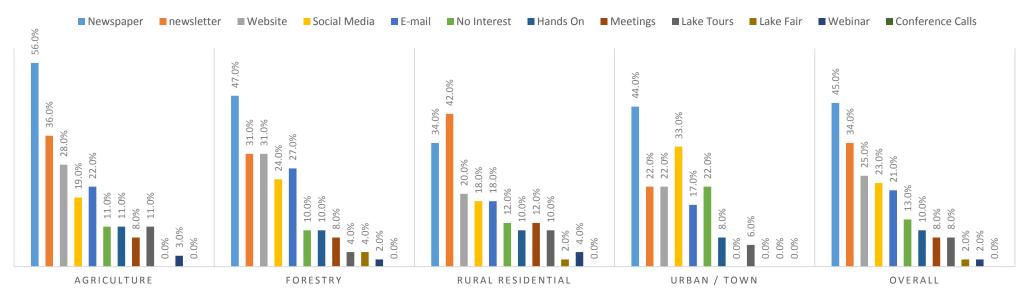
Which group should take the lead on providing information to the public about Oconto County's inland lakes and rivers? (Check all that apply)

WI Department of Natural Resources	Oconto County Land Conservation Department	Oconto County Lakes & Waterways Association
Other Please describe here:		
None It's not necessary to I	have a local group providing lake-relate	d information to the public.

- Agriculture: Again present a higher level of endorsement for WDNR leadership on providing information on lakes and rivers.
- OCLWA stands out as the most often supported group to lead these efforts.



COMMUNICATION OPTIONS



- Most commonly noted communication media included newspaper, website, newsletters, social media, and e-mail.
- No statistically significant differences were identified between groups.

DISTINGUISHING	DEMOGRAPHICS &	ATTITUDES &	
VARIABLE	SAMPLE DESCRIPTION	APPLICATION	