WHAT DO STAKEHOLDERS OF SOUTHEAST MICHIGAN COASTAL WILDLIFE MANAGEMENT AREAS WANT FOR ITS MANAGEMENT?


Photo: John Yates

Why?

Changing socio-demographics of the United States and changing demographics of wildlife-related recreationalists have implications for wildlife conservation and state wildlife management agencies in the United States. There are positive and negative interactions between different uses/users that could be explored for maintaining current and historic uses, while exploring expanding the base of wildlife stakeholders. However, baseline information is needed.

Objectives

- Compare hunting and non-hunting stakeholders, including:
    - Outdoor recreation participation and specialization (e.g., participation type, participation amount, and activity centrality).
    - Identity strength.
    - Knowledge of and use of wildlife management areas (WMAs).
    - Sociodemographics.
- Compare hunting and non-hunting stakeholders' attitudes and preferences about current and future wildlife and recreation management at WMAs.
- Consider the range of possible interactions of stakeholders, both positive and negative, for different uses or users.
- Provide insights for diversifying recreation on WMAs that serve a broader set of stakeholders, and hopefully grow the number of stakeholders who politically and financially support WMAs.

Background

The study area included five state-owned WMAs and one federally owned wildlife management area (WMA) located in southeastern Michigan from Lake Huron's Saginaw Bay region south to western Lake Erie (Figure 1). While the five state-owned lands are managed primarily for wetlands conservation for waterfowl and waterfowl hunting, these lands provide ample non-hunting-related wildlife recreation opportunities. The federally owned lands are primarily managed for wildlife habitat for migratory birds. Three of the state WMAs are in top birdwatching areas in Michigan. State and federal investment in infrastructure for wetland and habitat management occurs to achieve WMA objectives. Results from a 2018 visitor-use study revealed that angling is the most dominant use after waterfowl hunting in autumn, and 82% of respondents come from within a 50-mile radius, which is represented by a 31-county area in Central and Southeast Michigan.

Methods

- In 2019, responses from Internet and mail-back surveys sent to randomly selected samples of waterfowl hunters (n = 316; 14.8% response rate), birdwatchers (n = 1,133; 24.0% response rate), anglers (n = 254; 10.2% response rate), and community members (n = 84; 2.8% response rate) from the 31 counties in Central and Southeastern Michigan proximate to the 6 wildlife management areas (WMAs) of this project were used for this research.
- The Cornell Lab of Ornithology provided the birdwatcher sampling frame from its list of registered eBird users who reported bird sightings in the 31-county area and were Michigan residents.
- The 2018 Michigan resident waterfowl hunting license purchasers from the 31-county area, and registrants of the managed waterfowl hunts at the study sites were the sampling frame for waterfowl hunters.
- For anglers, the sampling frame was purchasers of the 2018 Michigan resident fishing license from the 31-county area.
- Waterfowl hunter and angler lists were compared to each other and duplicates removed.
- For community members, a randomly selected sample of non-seasonal currently occupied residences within a 50-mile radius of one of the study sites was purchased from Dynata, Inc.

Figure 1. Lake Huron's Saginaw Bay region south to western Lake Erie

- Data from the four groups were merged and they were treated as 4 distinct groups in analyses, which included Chi-squared and ANOVA tests.
- The Michigan State University Institutional Review Board approved this study (Project 00003031) on August 9, 2019.

Results

Sociodemographics

Variable	Birdwatchers	Community members	Waterfowl hunters	Anglers
Average age	57 years	55 years	49 years	48 years
Male	39%	58%	96%	75%
White	98%	83%	98%	95%
Education (≥associate or bachelor's degree)	83%	73%	59%	50%
Income < $50,000	23%	17%	15%	24%

Recreation participation and specialization

- Over 95% of respondents participated in at least one nature-based activity in the past 12 months.
- At least 95% of birdwatchers, waterfowl hunters, and anglers reported participating in their respective activity in the past 12 months.
- Notably, respondents from all four groups reported at least 62% participation in the past 12 months for three activities: backyard/at home nature activities, non-motorized outdoor recreation activities, and other nature-based activities.
- Average number of trips in the past 12 months for their activity: birdwatchers (26), anglers (17), and waterfowl hunters (14), though we are unable to compare across groups because birdwatching does not have season restrictions, but angling and waterfowl hunting do.
- [1]Mean centrality of activity (how central the activity is to their life) was highest for waterfowl hunters (M = 3.54), followed by anglers (M = 3.24), and birdwatchers (M = 3.15).

Identity strength and use of public and private lands for recreation

- [2]Waterfowl hunters had the highest mean score for strength of identity for their recreation type (M=4.12), followed by birdwatchers (M=4.01) and anglers (M=3.26).
- [2]Strength of identity as a conservationist was higher for birdwatchers (M=4.08) and waterfowl hunters (M=4.01) as compared to anglers (M=3.46) and community members (M=3.41).

	Birdwatchers	Community members	Waterfowl hunters	Anglers
Member of ≥1 conservation organization	73%	27%	70%	29%
Mostly use public lands for recreation	39%	n/a	65%	n/a
Mostly use private lands for recreation	33%	n/a	16%	n/a
Knowledge of ≥1 WMA	83%	71%	97%	71%
Visited ≥1 WMA in past 12 months	54%	50%	84%	54%

Attitudes and preferences of wildlife and recreation management

- Overall, wildlife habitat and wetland protection objectives were important across all respondents.
- All four groups placed higher importance on wildlife-related objectives than recreation-related objectives, though both were relatively high.
- When asked specifically about wildlife habitat and species management at the one of the WMAs respondents were most familiar with, waterfowl hunters placed more importance on game species management and hunting recreation management and birdwatchers more importance on non-game species management and non-hunting recreation management.
- Community members and birdwatchers had higher agreement with the statement that management should be for providing habitats for a large variety of wildlife species compared to few specific species.
- Birdwatchers had highest agreement with the statement that they experience little disturbance from other recreational users.
- All groups reported similarly high levels of perceived safety and security when participating in their activities at WMAs.
- Waterfowl hunters agreed most with the statement that current management provides a diversity of opportunities for wildlife-related recreation, while birdwatchers had the lowest agreement.
- Differences exist between waterfowl hunters and birdwatchers about wildlife species, habitat, and recreation management, and preferences for changes to management.
- Waterfowl hunters preferred current management practices (e.g., waterfowl hunting should be prioritized over other wildlife-related recreation, a diversity of habitats is not important to enjoy waterfowl hunting, and an appropriate balance of hunting and non-hunting recreation already exists).
- Waterfowl hunters generally have less desire for changes to management compared to birdwatchers.
- All four groups agreed that invasive plant species management should increase, as well as refuge areas.
- Waterfowl hunters had lowest support for increasing parking lots and bicycle access.

Footnotes:

[1] Mean scores rated on a scale of 1-5 (1=strongly disagree, 2=somewhat disagree, 3=neither disagree nor agree, 4=somewhat agree, 5=strongly agree)

[2] Mean scores rated on a scale of 1-5 (1=not at all, 2=slightly, 3=moderately, 4=strongly, 5=very strongly)

Discussion

While there is potential for conflict, ample opportunity for common ground exists, such as:

Conflict	Common Ground
Waterfowl hunters and birdwatchers more specialized and identity driven.	Waterfowl hunters and birdwatchers are both identity driven as conservationists.
Waterfowl hunters are more dependent on public lands than birdwatchers.	Waterfowl hunters and birdwatchers are both likely to join conservation related clubs and organizations.
Waterfowl hunters place emphasis on game species management and hunting recreation opportunities, hence supporting current WMA practices.	People who are familiar with and visited WMAs viewed them as a community asset.
Birdwatchers place emphasis on non-game species management and non-hunting recreation management, hence supporting management of threatened and endangered habitat for a diversity of wildlife species.	Both waterfowl hunters and birdwatchers place importance on wildlife-related objectives, invasive plant management, and refuge areas.
Waterfowl hunters had less support for other types of non-hunting recreation on WMAs whereas birdwatchers preferred more non-hunting access.	Clarify the primary purpose of the WMA lands throughout engagement processes because while there is no statistical difference between the two groups, both waterfowl hunters and birdwatchers agreed that hunters' opinions for WMAs are more strongly considered.

Adapted from original research: Avers, B.A. (2022). Exploring stakeholders' support for and stewardship of Michigan's coastal wildlife management areas. [Doctoral dissertation, Michigan State University]

Key findings

- Birdwatchers and waterfowl hunters were more specialized, committed, and willing to devote personal time to conservation-related activities than anglers and community members.
- While waterfowl hunters and birdwatchers differed in some responses, the two groups had some similar responses, indicating there may be much room for agreement.
- Take a complementary use approach to exploring mutual goals and common ground.
- A "Friends" group approach may be a way to start building social relationships and group norms among wildlife management area (WMA) users.
- All WMAs are different, so site-specific uniqueness, local communities, and leadership should all be considered when developing tailored goals and objectives.

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