



- **To:** • Leaders promoting healthy lakes in Wisconsin and elsewhere
- **From:** • Bret Shaw, Ph.D., Associate Professor, Life Sciences Communication, UW-Madison & Environmental Communication Specialist, UW-Extension; John Haack, Regional Natural Resources Educator, UW-Extension; Mike Amato, Ph.D., Research Post-doc, ClearWay Minnesota
- **RE:** • Insights to promote natural shorelines among lakeshore property owners
- **Date:** • June 16, 2014

Factors Related to Adoption of Natural Shorelines

This research synthesizes insights derived from the outreach and research experience by the authors related to promoting more natural vegetation among lakeshore property owners to promote habitat and water quality. Key insights include the following:

- *Beliefs in importance of natural shorelines alone do not appear to be directly related to actual behavior in terms of landscaping practices.* Lake property owners may already know about the importance of shoreland habitats but still may have overly manicured shorelines. Most agree that more natural shorelines are important for lake health regardless of how they actually maintain their own land suggesting that changing or activating existing attitudes alone may be necessary but not sufficient to produce behavior change.
- *People are in varying levels of readiness to adopt more natural shorelines.* Similar to other health and environmental behavior change contexts, property owners are at different stages of considering making landscaping changes. Therefore, a 'one-size fits all' outreach strategy may not be as effective as more tailored appeals.
- *Property owners perceive they have more natural shorelines than do their neighbors or biologists.* Two of our studies tested whether self-perception bias, a universal human tendency for overly positive evaluations of one's self and past behavior, is a barrier to the success of those programs. We found strong evidence that self-perception bias affects property owners' evaluations of their shoreline's state, potentially preventing steps for remediation that might otherwise be taken. Taken into context with our other studies, this phenomenon suggests that property owners may agree natural shorelines are important and feel they are already doing better than their neighbors.

- *Understand the specific property owners you are trying to reach.* It is always helpful to learn about the perspectives of property owners living around the specific lakes you are trying to improve because each lake may have unique perspectives and norms. This is also a way to engage with your constituents. With local or regional education campaigns, consider using a survey, in-depth interviews and/or focus groups to better understand their self-interests and concerns. Use what you learn to develop and refine more effective educational messages.

• **Messaging Recommendations**

- *Providing objective feedback mildly increases intention to adopt natural shorelines.* In another one of our studies, paper surveys were mailed to a random sample of 1,000 shoreline property owners in Portage, Marathon, and Waushara counties. All participants were asked to respond to a set of questions about 1) their goals for shoreline maintenance, 2) beliefs predicted to be related to shoreline decisions, and 3) willingness to increase the vegetation on their shoreline. Some participants received a map showing the amount of shoreline vegetation around their lake, some received a worksheet with information about how shoreline vegetation affects lake health, some received both, and some received neither. Participants reported slightly greater willingness to increase their shoreline vegetation if they received the map, the worksheet, or both, compared to participants who received neither.
- *Use outreach messages emphasizing social norms.* Emphasize prescriptive social norms (group-held beliefs about how members “should” behave in a given context) in outreach campaigns to promote natural shorelines. Particularly when people aren’t sure what to do, they look to others when deciding how to act. Examples might be “Your neighbors are protecting your lake. Are you?” or “Join your neighbors in adopting a natural shoreline to protect your lake.” Additionally, consider developing programs that highlight positive descriptive social norms (group-held beliefs about what other members actually do in a given context). Possibly use public lands as examples, and shine a spotlight on good stewards and restored shorelands in lake association meetings, newsletters, local media, the Internet and other venues.
- *Subtle differences in messaging can have significant impacts on property owner response to promotions promoting natural shorelines.* In one of our studies, we tested which of two promotional direct mail strategies would yield the most coupon redemptions for native shoreline plants -- a “\$5 OFF (or free pack)” headline, or the “FREE pack (or \$5 dollars off). There was no functional difference in the messages contained within both coupon versions. Both gave the recipient \$5 worth of native plants. However, a simple inversion of the messaging –focusing on the \$5 free versus the \$5 off almost doubled response to the promotion.

- *Existing norms for natural shorelines of adjacent properties are very important.* The amount of vegetation on a participant's shoreline was more strongly related to the amount of vegetation on neighbors' shorelines than it was to their property management goals or stewardship. This suggests that when possible it may make sense to target outreach efforts at property owners whose neighbors already have more natural shorelines expanding upon areas of the lake where supportive norms already exist.
- *Emphasize stewardship rationale in outreach promoting natural shorelines.* In one of our studies, participants who had strong stewardship beliefs, measured with survey items like "property owners have a responsibility to protect lake health for future generations" and "taking good care of my shoreline is important to me" indicated greater willingness to increase their shoreline vegetation. However, they did not differ from other participants in the amount of vegetation currently on their shorelines. Future research should explore how to convert this self-reported increased willingness to actual behavior.
- *Emphasize that native plants will produce outcomes they want and not those they don't.* Attitudes toward native plants are associated with behavioral intention. Natural resource educators should work to enhance beliefs that native plants will contribute to positive outcomes they personally care about (e.g., habitat for desired wildlife, aesthetics of their property) and refute beliefs that rain gardens will contribute to outcomes they do not want to occur (e.g., blocking their view, looking 'messy', decreased property value).
- *Address property owners' goals for shoreline landscaping preferences.* Our data indicate that some goals are significantly related to the amount of vegetation on their shoreline. Participants who reported that personal benefit goals, such as "*presenting a neatly groomed landscape that does not look messy*" and "*how much I will like the visual look of an option I am considering*" were important to them when considering changes to their shoreline tended to have less vegetation, compared to participants who reported that those goals were less important. Outreach should present restoration solutions that are compatible with personal use and a neat, tidy appearance, emphasizing access corridors and aesthetically pleasing native plants. Earlier focus groups had also indicated that one reason property owners do not adopt more natural shorelines is because they wanted a direct view of the lake from their house. For people with this concern, promote the use of low growing native shrubs and plants that don't block their view of the lake. Additionally, we learned that some property owners were concerned about ticks associated with more natural vegetation – where this is the case, promote mulched pathways and mulched edges as a way to reduce tick exposure.
- *Promote native plants and natural shorelines as way to attract desired wildlife.* Property owners liked the idea of seeing more songbirds on native plants and shrubs. Frogs were also considered to be a sign of a healthy shoreline as longtime property owners remembered when frogs were present or more abundant on their shoreline, and this resonated as a 'canary in the coalmine' for some focus group participants. The benefits of submerged aquatic plants to game fish for spawning and food may be attractive too. Highlight species that are most meaningful to the property owners you work with.

- *Emphasize the benefits of natural shorelines for preventing geese.* Our focus groups revealed that while people like to see Canada geese flying overhead, they do not like them congregating and defecating on their lawns and beaches. Let property owners know that more natural vegetation on their shoreline and less mowed lawn and manufactured beach will prevent unwelcome geese from pooping on their lakeshore.

• Other Considerations

- *Pick your message sources carefully.* Who delivers your message influences how it will be received. For many, it is preferable to choose a source to deliver your message who is similar to your target audience, such as neighbors, friends or lake association members. Property owners are more likely to respond favorably to requests from peers, than to requests from government workers or other perceived “authorities.”
- *A vocal minority of property owners are put-off by efforts to encourage shoreline restoration.* This is well known by professionals and conservationists who have worked on this issue for years. Reactance Theory suggests that one factor may be a perceived threat to autonomy. When individuals feel they are pressured to act in a certain way, they often are motivated to act counter to it. Reactance is greatest when the pressure comes from an authoritative source (e.g., government) or some other untrusted entity viewed as inappropriately interfering with their private property rights. Communication encouraging restoration may evoke the least reactance when it comes from sources who do not have authority over property owners, such as neighbors or volunteers who are not connected to governmental bodies.
- *Multiple strategies over an extended time period may be necessary.* Use approaches that complement each other to influence change. Create long-term lake shoreline owner relationships, as real change toward more natural shorelines takes time.
- *Be patient.* Achieving behavior change in shoreline maintenance requires patience. Anticipate incremental behavior change over time. We worked over five years on a series of outreach efforts and examined changes on shoreland buffers (the area 35 feet above the ordinary high water mark) to measure the effects. We reviewed the original data collected and recorded on data sheets along with photographs taken at the time of the original inspections. Lot-by-lot observations indicated that natural shoreland vegetation on 18% of the 154 parcels examined had acquired additional square feet of unmowed or untrimmed vegetation in the 35-foot shoreland buffer area. Shoreland buffer vegetation on these parcels increased an average of 660 square feet per parcel, ranging from 100 to 1,600 square feet per parcel for a cumulative grand total of 17,921 square feet on Long Lake. Approximately one third of the properties had significantly more emergent vegetation such as bulrushes and sedges suggesting that some property owners did not disturb the exposed lakebed during a drought where these plants were able to re-establish and provide good habitat in shallow water areas. While the changes were modest, similar

behavior change rates in national campaigns such as smoking cessation and reducing obesity rates see incremental declines over time eventually adding up to significant success.

• Acknowledgements

- This research reported on in this document on how to promote natural shorelines among lakeshore property owners was made possible with funding from the UW-Madison Graduate School, the University of Wisconsin Consortium for Extension and Research in Agriculture and Natural Resources and the Wisconsin Department of Natural Resources. The research itself relied heavily on the team at the Wisconsin Lakes Partnership at UW-Stevens Point, and special thanks are given to Nancy Turyk, Eric Olson and Dan McFarland. We also thank Dave Ferris with Burnett County Land and Conservation, Mike Kornman with UW-Extension in Burnett County, and Cheryl Clemens with Harmony Environmental for their ongoing guidance and feedback. Finally, we extend our gratitude to Carroll Schall and Pamela Toshner with the Wisconsin Department of Natural Resources for their support and guidance.

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