



- **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:** September 24, 2014

Factors Related to Adoption of Natural Shorelines

Wisconsin is fortunate to have approximately 15,000 lakes where we fish, swim, boat, relax and enjoy the beautiful views. Unfortunately, increased shoreland development on many lakes across the state has had a negative impact on wildlife habitat, water quality and natural scenic beauty. This document synthesizes insights derived from the outreach and research experience by the authors and others related to protecting water resources and promoting more natural vegetation among lakeshore property owners to promote wildlife 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.
- *Choose words selectively in promoting natural shorelines.* The words you use in promoting natural shorelines matters. It’s not just what you say but how you say it that can have the greatest impact. Water Words That Work is a consulting firm that specializes in communication strategies for groups working on protecting water resources (www.waterwordsthatwork.com). They recommend using words that imply ownership and inclusivity, such as ‘we,’ “our,” “shared,” and “public.” In many contexts, you should emphasize “water protection” and “preserving water quality” -- people don’t necessarily see the problems now but they recognize need to protect water for the future. They also

recommend linking benefits of water conservation to ‘future generations.’ Another useful memo by Fairbank, Maslin, Maullin, Metz & Associates and Public Opinion Strategies (Metz & Weigel, 2013) commissioned by The Nature Conservancy recommends keeping people in the picture when talking about water issues as a majority say “benefits to people” are the best reasons to conserve nature. Benefits to people include swimming, fishing, boating, watching wildlife and scenic beauty. It is also important to avoid jargon. For example, use words like “land around rivers, lakes and streams”, not “watershed”; “fish and wildlife” rather than “biodiversity”; and “natural areas”, not “ecosystems”.

- *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 will influence how it is 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 in Burnett County. 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 health campaigns such as smoking cessation see incremental change over time eventually adding up to significant success.

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References

- Amato, M.S. (2014). *Environmental risk perception, motivated cognition, and antecedents of behavior: Field studies of cooperation on Wisconsin's shorelands* (Doctoral Dissertation). University of Wisconsin, Madison.
- Amato MS, Shaw BR, & Haack J. (2012). The challenge of self-enhancement bias for educational programs designed to encourage natural shorelines. *Lake and Reservoir Management*, 28:206–211.

- Amato, M.S. Shaw, B.R., Haack, J. & Moore, C. (2013). The influence of self-enhancement bias on perceptions of shoreline buffer quality. Final Report delivered to Wisconsin Department of Natural Resources.
- Amato, M.S. & Shaw, B.R. Property owner decisions about shoreline vegetation. (2013). Final report delivered to the Wisconsin Department of Natural Resources and UW-Extension.
- Amato, M.S., Shaw, B.R., Moore, C.F. (under review) Self-perception bias on property owner evaluations of residential shorelines. *Journal of Environmental Psychology*.
- Amato, M.S., Shaw, B.R., Haack, J., & Moore, C.F. (under review). Shoreline maintenance behaviors and the structure of lake property owners' beliefs. *Lake and Reservoir Management*
- Haack, J. & Shaw, B. B.R. (2013). Shoreland habitat protection social marketing strategies. Final report for 5-year social marketing campaign focused on promoting natural shorelines to protect wildlife habitat and water quality distributed to the Department of Natural Resources and lake protection professionals throughout the state. Available at: <http://blogs.ces.uwex.edu/haack/files/2012/08/Burnett-CBSM-final-report-12-9-13.pdf>
- Metz, D. & Weigel, L. (2013). The language of conservation 2013: Updated recommendations on how to communicate effectively to build support for conservation. Available at: <https://www.conservationgateway.org/Files/Pages/language-conservation-mem.aspx>
- Shaw, B.R., Radler, B., Chenoweth, R., Heiberger, P., & Dearlove, P. (2011). Predicting intent to install a rain garden to protect a local lake: An application of the theory of planned behavior. *Journal of Extension*, 49, 204.
- Shaw, BR, Radler BT, & Haack, J. (2012). Comparing two direct mail strategies to sell native plants in a campaign to promote natural shorelines. *Social Marketing Quarterly*, 18: 274-280.
- Shaw BR, Radler BT, & Haack J. (2011). Exploring the utility of the stages of change model to promote natural shorelines. *Lake and Reservoir Management*, 27, 310-320.