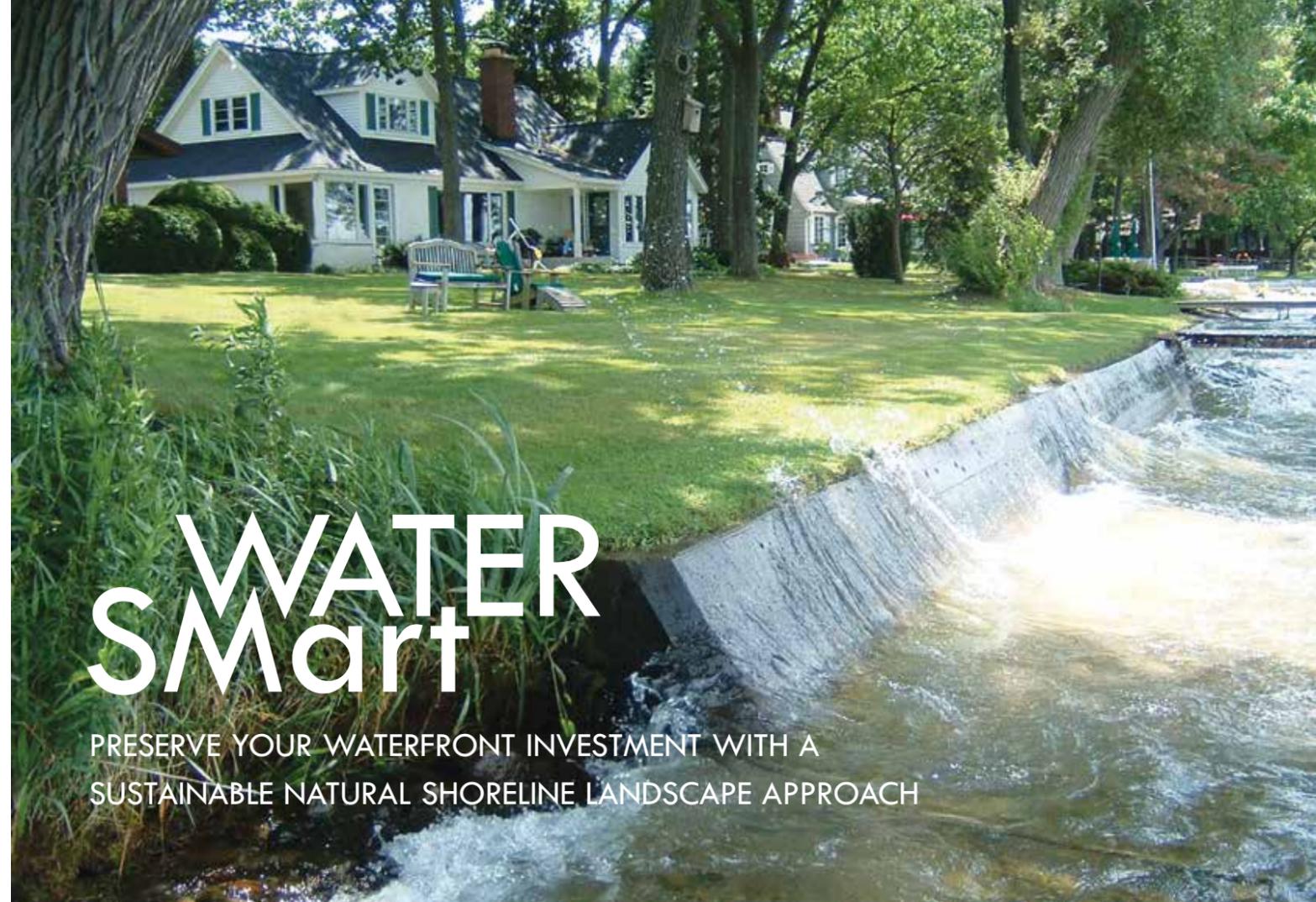


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# WATER Smart

PRESERVE YOUR WATERFRONT INVESTMENT WITH A SUSTAINABLE NATURAL SHORELINE LANDSCAPE APPROACH

WRITER | MARK POLINKO  
PHOTOS BY | JANE HERBERT

What makes



very beautiful?

statement pieces that WOW!!!!

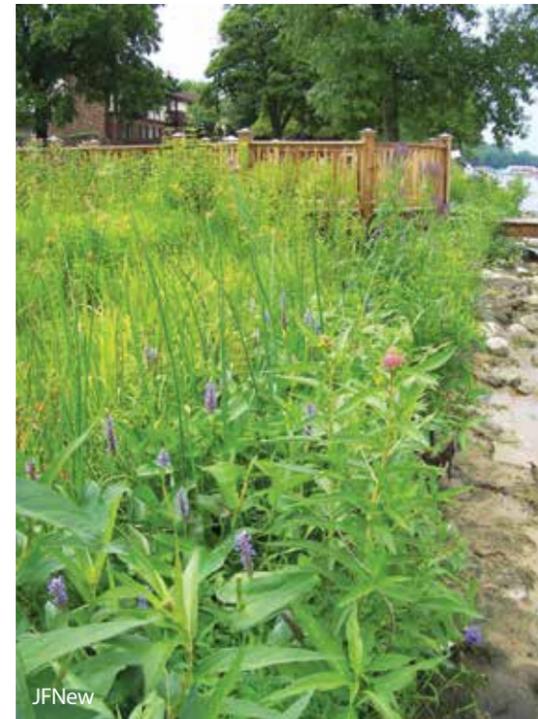




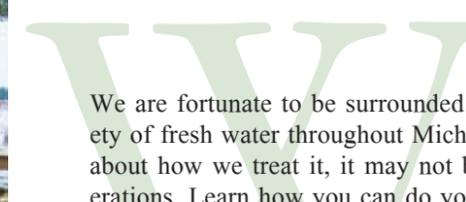
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We are fortunate to be surrounded by an abundance and variety of fresh water throughout Michigan, but if we're not smart about how we treat it, it may not be abundant for future generations. Learn how you can do your part to protect our lakes, streams, rivers and Great Lakes, through a series of articles by Mark Polinko, a Certified Natural Shoreline Professional, on how to stay "Water Smart."

Surrounded by the Great Lakes with 3,125 miles of fresh water shoreline, 11,000 inland lakes and more than 36,000 miles of streams, in Michigan you are never more than six miles from a water body. The magnetism of our pristine blue waters and the natural beauty of these waterways draw each of us to want property on our favorite lake or stream. Our waterfront cottages are our

ABOVE: Wave energy flanking off seawall causes soil erosion of adjacent property. LEFT: A Native green buffer planting with a boardwalk connecting the lawn to lake edge.



BEFORE: Steep slope with formal lawn  
AFTER: Steep slope with green buffer area between lawn and lake edge

escape, and they have become the place for generations of great family memories. Unfortunately, our desire to impart a conventional, suburban, landscape design philosophy, along with intense development and activity along the shorelines, has contributed to the poor health of some of our lakes. The key to the health and preservation of our waterways and shorelines is to understand the flaws in our previous landscape practices and to adapt a more sustainable landscape approach – one that is in balance with the natural habitat of our lakes and streams.

It is important to understand the role that our natural shoreline habitat plays in the health of our waterways. The shorelines of Michigan lakes and streams are home to 87 species of birds and 19 species of mammals. The near-shore area provides critical habitat for 65 species of fish native to Michigan with an equally diverse variety of upland plants and aquatic plants. Because the shoreline serves as the heartbeat and pulse of our lakes, the edge and transition zone that connects the upland area of your property to the lakes is both dynamic and fragile. A natural shoreline of trees, native shrubs and perennials provide shade, habitat for wildlife, and a root structure that stabilizes the soils and reduces erosion. The aquatic plants within the shores of our lakes serve a similar role to buffer the erosive wave energy that occurs along our shorelines.

Extensive research and documentation has been done comparing the health of engineered systems on developed lakes to those with a more sustainable natural shoreline philosophy. Some common practices have proven detrimental to the health of our lakes. For example, as attractive as a formal bluegrass lawn may be in a suburban environment, the problems associated with the practice of planting a bluegrass lawn to the water's edge far outweigh its beauty when one considers the health of our lakes and streams. A bluegrass lawn does not have the deep root structure of native woody plants and perennials. It is not able to control the erosive forces of wave action whether by natural forces or heavy water craft usage on the lake.

Not only our own lawn, but lawn areas adjacent to our lakes have also been major contributors to high concentrations of phosphorus, which contribute to increased algae-blooms and a reduction in the clarity of many of our highly developed lakes. With no buffer planting between our lakes and formally maintained lawns areas, run-off from a rain event may carry residual herbicides and pesticides, as well as other pollutants, such as salts and petroleum products, and deposit them in our lakes and waterways. These problems are almost non-existent on waterways with natural shorelines.

Additionally, many property owners on developed lakes use sea walls with the intent to protect the shoreline from erosion. Unfortunately, these hardened edges actually have a greater negative impact on our lakes. A sea wall perpetuates the need to reinforce the unprotected neighboring properties from the wave energy that batters the shoreline where the wall terminates. While a sea wall may preserve the upper portions of the lake edge, if not properly reinforced, the impact of the wave energy below the waterline does just the opposite – scouring the lake bottom, displacing soil and aquatic plant material. While hardened structures disrupt the natural habitat and become a barrier to the wildlife that lives there, a natural shoreline possesses a diverse mix of aquatic and upland plants, diffuses wave energy, buffers the shoreline from erosion, and allows wildlife to live in harmony at the lake edge.

It is rare to find an undeveloped lake that requires management of its aquatic plants. It brings to mind a quote from Sir Winston Churchill, “Those who fail to learn from history are doomed to repeat it.” This applies to the health and preservation of our lakes and waterways as well. Having seen the error of our ways, the pendulum has shifted in a positive direction as property owners are becoming more familiar with good stewardship and sustainable natural shoreline practices. The future of the lakes and waterways we love will depend on each of us making it our responsibility to promote good stewardship practices.

**GOOD STEWARDSHIP PRACTICES:**

- Think GREEN and consider a “buffer planting zone” adjacent to the shoreline
- Consider using native trees, shrubs and perennials within a “buffer planting zone”
- Use phosphorus free fertilizers (i.e. Nitrogen-Phosphorous-Potassium 27-0-4)
- Use phosphorus-free soaps and detergents
- Refrain from over irrigating lawn and planting areas
- Control soil erosion and sedimentation
- Dispose of pet waste properly
- Dispose of hazardous chemicals appropriately

You can become a better steward of your waterfront property by consulting with your local conservation district, watershed council, or certified natural shoreline professional. They will passionately guide you in the steps you can take to improve the natural habitat of your shoreline. The fresh waters of our lakes and streams are the thread that weaves generations of sportsmen, naturalists, and artists together in mind and heart. What a great heritage for those of us who enjoy the beautiful shorelines of Michigan. □



**Mark Polinko**

Mark Polinko is a registered Landscape Architect and Certified Natural Shoreline Professional with over 30 years of design and building experience. He specializes in the design and management of corporate, commercial and private residential projects. He resides in Northern Michigan.



Natural shorelines support a rich diversity of wildlife and plants (Illustration: Progressive AE)



Wave energy transferred downward off a seawall scours the near shore floor of the lake, disturbing the soil and aquatic plants. (Illustration: Progressive AE)

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