

LETTER FROM THE GUEST EDITOR

Letter from the Guest Editor

The Great Lakes hold some 90% surface-water supply in the United States (US) and about one fifth of the fresh surface water on Earth. As a result, the Great Lakes have immense environmental, economic, and cultural significance, especially for the roughly 42 million people who live, work, and recreate in the Great Lakes Basin.

As the world grows thirstier, as our society squeezes to the coast to live and for our livelihoods, and as demand for fresh, clean water increases, stress placed on these natural treasures is likewise increasing:

- Algae, some with highly toxic characteristics, are resurging along some of our most important aquatic playgrounds, such as the Western Basin of Lake Erie (Ohio and Michigan), Saginaw Bay (Michigan), and Green Bay (Wisconsin). Two of these are now reported to suffer from *hypoxia*, giant underwater areas devoid of oxygen so that no living organism can survive.
- Invasive species—more than 180 of them—have entered the Great Lakes, fraying the delicate food web that the region relies on heavily for food, recreational income, and jobs. Though the rate of invasions has slowed, continuing the fight has become more expensive and time consuming.
- Toxic pollution remains in many of our working harbors and rivers, only to recycle through the system and pose an ongoing threat to children, women of childbearing age, and subsistence anglers, not to mention local coastal economies that are struggling to stay vibrant in the face of today's global competition.
- Habitat loss provides secondary, tertiary, and other assaults in the form of—especially when wetlands are lost—degraded water quality, increased flooding, and decreased property values.

- There is the need for accountability, education, and monitoring to ensure this work is being undertaken as planned and on time.

Unfortunately, the Great Lakes and communities that surround them have endured these injuries for more than a century. Fortunately, though, the federal government, states, municipalities, tribes, environmental organizations, businesses, academic community, and many others are doing something about them.

Great Lakes Restoration Initiative

In 2009, President Barack Obama launched the Great Lakes Restoration Initiative to coordinate the federal government's work to accelerate the recovery of the five lakes, connecting channels and their surrounding lands. Fortunately, a growing number of members of Congress from the Great Lakes Region—from both sides of the aisle—continue to support and sustain the initiative, the largest federal Great Lakes-specific investment in US history. Under a five-year action plan (fiscal years 2010–14), 16 federal agencies coordinate to direct investments in five focus areas that address the aforementioned issues and others, such as readying the Great Lakes for the impacts of climate change and using green infrastructure to reduce polluted runoff. In March 2013, the White House announced its commitment to another five-year action plan (covering fiscal years 2015–19) by using the first action plan as a springboard.

Great Lakes Water Quality Agreement

Then, in 2012, the US and Canada updated their road map for putting the coordinated power of two federal governments behind Great Lakes restoration and protection.

Though updated for the first time in a quarter century, one part of the agreement did not require updating: its long-standing

purpose for the nations to “restore and maintain the chemical, physical, and biological integrity of the Waters of the Great Lakes” (GLWQA, 2102). The agreement also calls for the two countries to, among other things:

- Ensure a multigenerational standard of care, allowing our generation to meet current needs, while enhancing the ability of future generations to meet their needs.
- Anticipate and prevent pollution as well as other threats to Great Lakes water quality.
- Continually engage the public and other critical voices from around the region to ensure coordinated implementation.
- Ensure accountability by establishing clear objectives, transparently evaluating the effectiveness of work and reporting on progress.

The agreement contains 10 *annexes*, provisions that cover specific issues:

Annex 1. Areas of Concern—commits the two nations to cleaning up toxic hot spots.

Annex 2. Lakewide Action and Management Plans—provides a mechanism for the nations and their partners to set priorities for the rehabilitation of each lake.

Annex 3. Chemicals of Mutual Concern—requires the two nations to identify contaminants that need coordinated attention.

Annex 4. Nutrients—directs the nations to address runoff that causes harmful algae and other water quality impairments.

Annex 5. Vessel Discharges—identifies ways for agencies to respond to spills and other releases.

Annex 6. Aquatic Invasive Species—provides a pathway for the nations to coordinate the prevention and control of nuisance species.

Annex 7. Habitat—directs the US and Canada to achieve a net increase in habitat.

Annex 8. Groundwater—ensures the two nations study and identify ways to eliminate and reduce the impact of groundwater contamination on the Great Lakes.

Annex 9. Climate Change—capacitizes coastal communities with tools for adapting to the effects of climate change.

Annex 10. Science—ensures the coordination of science to fulfill the purpose and objectives of the agreement.

The federal agencies involved in implementing the Great Lakes Water Quality Agreement and the Great Lakes Restoration Initiative are committed to continually improving our decisions, adapting them based on our best collective knowledge.

This issue of the National Association of Environmental Professionals' *Environmental Practice* is an important platform for just that: adapting our decisions based on the best collective knowledge. Taken together, these articles can help improve our collective knowledge so we can adapt our decisions. Restoring and protecting the larg-

est fresh surface-water ecosystem in the world demands nothing less.

Reference

Great Lakes Water Quality Agreement (GLWQA), 2102, September 7. *Protocol Amending the Agreement between the United States of America and Canada on Great Lakes Water Quality, 1978, as Amended on October 16, 1983, and October 18, 1987*. US Congress, Washington, DC. Available at <http://www.epa.gov/glnpo/glwqa/>.

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