Great Lakes Commission
des Grands Lacs

the Advisor

The newsletter of the Great Lakes Commission

CLEANING UP THE Areas of Concern

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Director's Update

AOC CLEANUPS MAKE WAY FOR ECONOMIC REVITALIZATION

THIS ISSUE OF THE *ADVISOR* shines a spotlight on the restoration and revitalization of Great Lakes Areas of Concern (AOCs), some of the most polluted sites in our region. Thanks to an infusion of funding through the Great Lakes Restoration Initiative (GLRI) and the Great Lakes Legacy Act and many years of hard work by a multitude of federal, state and local leaders, communities are now in a position to jump-start economic redevelopment plans, following completion of cleanup activities.

Six AOCs have been cleaned up in the first five years of the GLRI, including Deer Lake and White Lake in Michigan; Presque Isle Bay in Pennsylvania; Ashtabula Harbor in Ohio; Sheboygan River in Wisconsin; and Waukegan Harbor in Illinois. And progress continues, with another 10 AOCs scheduled for completion under the current five-year GLRI Action Plan. In these and other Great Lakes cities, attention is now turning to a future that embraces their place as waterfront cities.

These highly polluted areas (43 in all, as identified in the 1987 Great Lakes Water Quality Agreement) are a sign of the region's industrial legacy, with lingering poor water quality, contaminated sediments, hazardous waste sites, combined sewer overflows, and degraded fish and wildlife habitat. Collingwood Harbour in Ontario was the first of the 43 to be delisted, a notable accomplishment after decades of remediation work and community engagement.

In Buffalo, N.Y., the waterfront is undergoing one of the largest river restoration and economic revitalization efforts in the country and is a leading example of how environmental remediation can drive economic development. The Buffalo River is on track to be removed from the AOC list by 2019.

At the Great Lakes Commission's 2014 Annual Meeting in Buffalo, we heard from Jill Jedlicka, executive director for the Buffalo Niagara Riverkeeper, about the community's desire to transform the region from 'rust to blue.'

Nothing can succeed without strong public sentiment, she said. Other ingredients in Buffalo's recipe for success include pursuing unique collaborations, leveraging inkind sweat equity, pursuing innovative methods and marketing, and not being afraid to make mistakes and learn from them.

Public and private reinvestment is happening. More than $75 million has been invested in economic and waterfront development. Though manufacturing no longer dominates, more than 3,000 jobs are coming to Buffalo through a new solar panel production facility – the largest in the world. The city has learned some important lessons and is becoming a truly great waterfront city again.

Buffalo's restoration success is symbolic of what can happen with an audacious vision and shifting perspective. The goal was to drive economic revitalization through the restoration of the health and integrity of freshwater systems. Many other Great Lakes cities – including Milwaukee, Shepboygan, Erie and Detroit – are also learning these lessons and working to change their image from industrial dominance to youthful vibrance and new economies.

The Great Lakes Commission is doing its part by leading congressional advocacy efforts and a NOAA GLRI-funded, three-year regional partnership to support habitat restoration in priority AOCs. The Commission has long recognized and promoted the complementary nature of environmental protection and economic goals. Great Lakes restoration must go hand in hand with economic revitalization.

As we restore, let's reinvest in ways that capitalize on our region's greatest asset – our fresh water. ●

Tim Eder

TIM EDER
Executive Director

CONFRONTING OUR INDUSTRIAL LEGACY:

CLEANING UP THE Areas of Concern

Cuyahoga River, Cleveland, Ohio, © flickr/Ed Chadwick.

NOWHERE IS GREAT Lakes restoration more evident than in the Areas of Concern (AOC). Indeed, the AOCs are on the front lines of our regional restoration program. Cleaning up these most degraded areas of the Great Lakes is a key focus of the ongoing Great Lakes Restoration Initiative (GLRI), with roughly one-third of its funding being directed to AOC projects. The results are striking: six AOCs have been cleaned up in the first five years of the GLRI, with another 10 scheduled for completion under the current five-year GLRI Action Plan.

This progress has been a long time coming. Many old timers never thought they would live to see AOCs delisted, and before the GLRI, local AOC leaders viewed life after delisting as a vague and distant concept that would not be confronted for years or even decades. The GLRI has changed this and dramatically accelerated the pace of remediation and restoration in the U.S. AOCs.

The AOC program was formally established in 1987 under the U.S.-Canada Great Lakes Water Quality Agreement, which defined AOCs as "geographic areas that fail to meet the general or specific objectives of the agreement where such failure has caused or is likely to cause impairment of beneficial use of the area's ability to support aquatic life." As the timeline on page 4 shows, however, federal, state and provincial agencies began identifying problem areas around the Great Lakes in the early 1970s. Ultimately, 43 AOCs were identified, including 26 in the United States, 12 in Canada and five shared by the two countries.

The AOCs vary widely in size and complexity of environmental problems. Some are confined to small harbors and others encompass entire watersheds. Some are impacted primarily by one large contaminated sediment site while others face multiple sources of pollution and extensive loss of habitat. The most common environmental problems are contaminated sediments; sewage treatment plant discharges and combined sewer overflows; nonpoint source runoff; runoff from hazardous waste sites; and habitat degradation and destruction.

Six AOCs have been cleaned up in the first five years of the GLRI, with **another 10 scheduled for completion** under the current five-year GLRI action plan

The United States and Canada committed to implementing Remedial Action Plans (RAP) to identify beneficial use impairments (BUI) in each AOC and the actions needed to solve them. The process seemed clear and straightforward. Looking back years later, one early participant noted "we thought we'd be done in a decade."

It wasn't to be. Cleaning up the AOCs turned out to be more complicated and time consuming than anticipated. In the decade following the 1987 Water Quality Agreement, the states and provinces established AOC programs, produced lengthy RAP documents, and formed public advisory councils. In its early years, the AOC program generated much enthusiasm as a comprehensive, ecosystem-based approach with a strong emphasis on community leadership and stakeholder involvement.

By the late 1990s, however, the AOC program was languishing. Despite important planning and public outreach, few on-the-ground actions were being taken and there was little guidance on how to measure progress in restoring beneficial uses and, ultimately, delist AOCs. Public enthusiasm waned and agency engagement diminished, particularly in the face of constrained state budgets and competing demands from other environmental programs.

The AOC program was challenged by a lack of funding, particularly for key problems such as contaminated sediments and habitat restoration. Existing environmental programs and regulations were not directly aligned with the AOCs and there was no regulatory mechanism, or "hammer," to compel action. The program also lacked clear metrics—or "delisting targets"—for measuring progress in restoring beneficial uses.

Things began to change in the early 2000s when the states and local AOC leaders focused on developing scientifically justified, measurable

continued on page 4

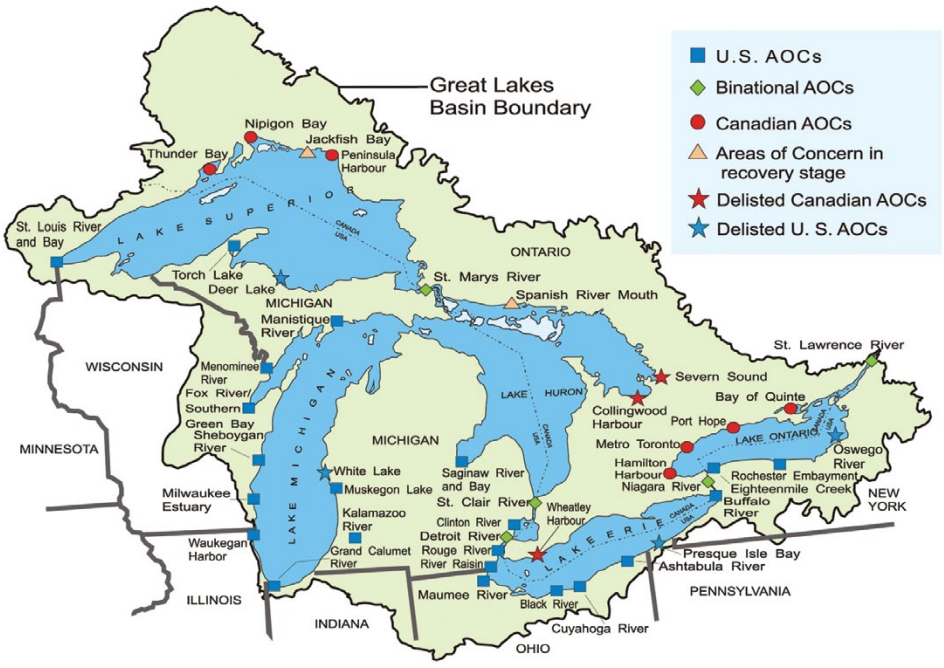
Cleaning up AOCs, continued from page 3

restoration targets specific to the AOCs. The question of "how clean is clean" is especially tricky for the AOC program, which is intended to bring the areas up from being the "worst of the worst," but not necessarily correct every environmental problem.

Another significant milestone was passage of the Great Lakes Legacy Act in 2002, which provided funding for remediating contaminated sediments in the AOCs. For the first time, the region now had a federal program specifically tailored to the AOCs, and one directed at the most significant environmental problem impacting the areas. As Kathy Evans of the Muskegon Lake AOC explained, "back in the late 1990s we were doing a lot of planning but until we got the Legacy Act and we actually competed a cleanup…I don't think people thought it was even doable." Funding for the program began in 2004 and the first cleanup project was completed on the Black Lagoon on the Detroit River in 2005. The Legacy Act program is now among the most successful cleanup programs in the region and a cornerstone of the AOC program.

Our current Great Lakes restoration process was born with the Great Lakes Regional Collaboration, which in 2005 produced the restoration strategy that forms the basis of the GLRI. With a clear, consensus-based plan in hand, the GLRI was launched in 2010 with AOC cleanup as a top priority. The GLRI enjoys strong, bipartisan support in Congress, which has provided nearly $2 billion for the program in its first six years.

For the AOCs, the GLRI's performance measures call for removing BUIs and completing all management actions needed for delisting. On the ground, this bureaucratic formulation translates into real improvements for local communities. As Jamie McCarthy of the Kalamazoo River AOC said, "cleanup has been an amazing catalyst to people in the community reclaiming the river."



Map of Great Lakes AOCs as of October 2014, ©U.S. EPA Great Lakes National Program Office.

PROGRESS TOWARD COMPLETING MANAGEMENT ACTIONS

DELISTED AOCs

Oswego River - 2006
Presque Isle Bay - 2013
White Lake - 2014
Deer Lake - 2014

ACTIONS COMPLETED

Ashtabula River
Sheboygan River
Waukegan Harbor

2015

St. Clair River

2016

River Raisin
Buffalo River
Rochester Embayment
Menominee River
St. Marys River
Clinton River
Black River

2017-18

Manistique River
Muskegon Lake

2019-20

St. Louis River and Bay
Detroit River
Grand Calumet River

2020+

Milwaukee Estuary
Lower Green Bay and Fox River
Cuyahoga River
Maumee River
St. Lawrence River
18 Mile Creek
Niagara River
Torch Lake
Rouge River
Kalamazoo River
Saginaw River and Bay

Similarly, Jane Goodman of the Cuyahoga River AOC pointed out that "folks are coming back to Cleveland especially for the natural resources and beauty and recreational activities." Restoration under the GLRI has sparked renewed community engagement with our waters.

While GLRI funding is vital, having clear restoration targets and a concerted focus on the specific actions needed to achieve them has also been critical. Federal and state agencies and local AOC leaders are collaborating efficiently to identify critical management actions and find the best ways to implement them. The pace of restoration in the AOCs has accelerated dramatically, but an "all-hands-on-deck" approach is getting the job done!

As the AOCs are cleaned up and delisted, local communities are starting to consider "life after delisting" and how to build on successful remediation and restoration to advance economic and social revitalization in waterfront areas. There are exciting new opportunities for communities to benefit from their water resources in ways unimaginable just a few decades ago. This underscores that our work in the AOCs is important not only to correct mistakes from the past but also to build a better future for our children and grandchildren. ●

AREAS OF CONCERN
A BRIEF HISTORY

1970

1972 U.S. & Canada sign the Great Lakes Water Quality Agreement (GLWQA)
Congress passes the Clean Water Act

1974 International Joint Commission (IJC) identifies 69 "problem areas" on the Great Lakes

1980

1985 IJC identifies 42 problem areas and jurisdictions begin preparing Remedial Action Plans (RAPs)

1987 Protocol to the GLWQA designates 42 AOCs and formalizes the RAP process

1989 IJC establishes AOC review process and listing/delisting criteria

1990

1991 Presque Isle Bay added as 43rd AOC

IS THERE "LIFE after DELISTING?"

Presque Isle Bay, Erie, Pa. ©flickr/Ken Lund.

WHEN AN AOC IS delisted, it is cause for celebration, but delisting can be a double-edged sword. On the one hand, it means that a legacy of contamination and degraded conditions is largely rectified. On the other hand, delisting means that one source of funding for restoration and revitalization is gone. To ensure ongoing environmental protection and economic revitalization, communities in current and former AOCs are challenged to plan for "life after delisting." Here is how some AOCs are taking on this challenge.

PRESQUE ISLE BAY, PA (delisted in 2013)

The public advisory council (PAC) continues to convene to advise the PA Dept. of Environmental Protection. The PAC is actively involved in developing future water quality goals and initiatives for the bay and Lake Erie. The PAC has also identified a list of priorities related to research, monitoring, restoration and outreach in the post-delisting era. Improved water quality has led to investments along the bay, including a convention center and hotel, with more planned in the future.

DEER LAKE, MI (delisted in 2014)

The PAC is transitioning to a new lake association that will continue to collaborate with environmental organizations, local government and state agencies. The new lake association will help Deer Lake community members speak with a unified voice and will promote continued stewardship of the lake.

WHITE LAKE, MI (delisted in 2014)

The PAC continues to convene and pursue funding from state and federal programs to protect White Lake now that it is delisted. The PAC solicited a study of public perceptions of the lake and found that many would-be tourists were unaware of its AOC designation, suggesting a clean slate to attract visitors to the area.

SHEBOYGAN RIVER, WI (management actions completed in 2013)

Local partners continue to build on the momentum created by the Sheboygan River cleanup projects by engaging community members in citizen science programs and invasive species management efforts. The entities involved in the community science programs and invasive species management include the city of Sheboygan, the Sheboygan River Basin Partnership and other community groups. These entities will be shaping the vision for life after delisting for the Sheboygan River.

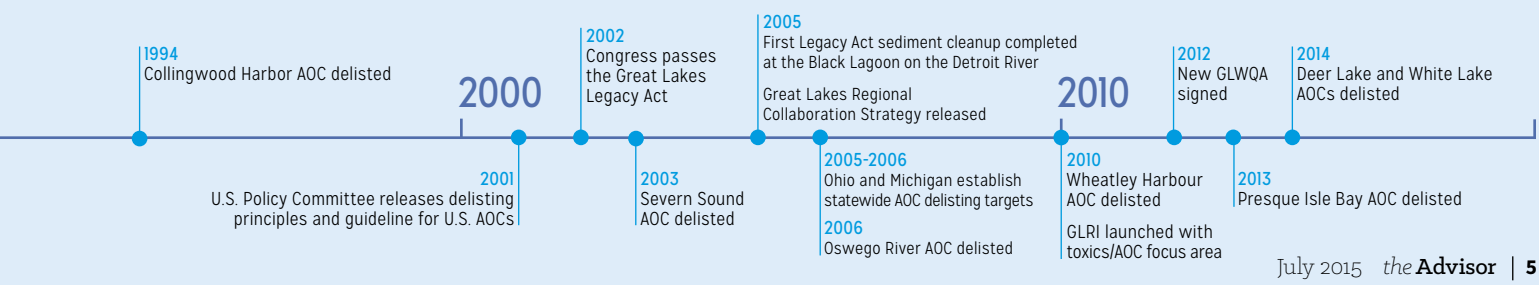
Left: Sheboygan River © flickr/islaenelinfinito.
Right: Grand Trunk shoreline restoration site on Muskegon Lake © Kathy Evans, West Michigan Shoreline Regional Development Commission.

ST. CLAIR RIVER, MI/ON (management actions expected to be completed in 2015)

The binational PAC is focusing on completing management actions to move toward delisting. There are local organizations on both sides of the U.S.-Canada border that are expected to continue their advocacy work even after the AOC is delisted. To foster continued stewardship, the AOC has leveraged environmental restoration projects, like the Blue Water River Walk, to transform an industrialized shoreline into a beautiful riverside amenity that is bringing people back to the river.

MUSKEGON LAKE, MI (management actions expected to be completed in 2017/18)

The PAC also assessed how the public perceives the lake and, like its neighbor White Lake, found that most people are unaware of its AOC designation. The Muskegon Lake PAC is engaging stakeholders to develop "Muskegon Lake Vision 20/20," a broad, unified community vision for the lake and its shoreline. The vision is the first step in developing a more detailed plan for life after delisting, with a focus on environmental and economic revitalization. ●



PROGRESS
THROUGH DETERMINATION AND COLLABORATION

Ashtabula Harbor, Port of Ashtabula, Ohio, ©Fred Leitert, Ashtabula City Port Authority.

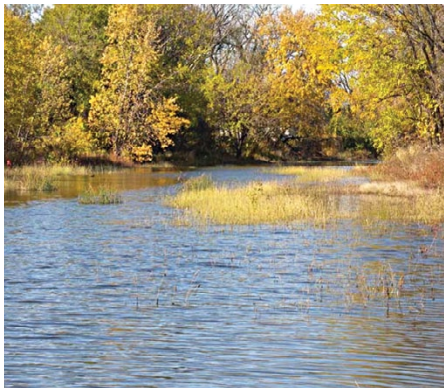
ASHTABULA RIVER AOC, OHIO

Cleanup and restoration of the Ashtabula River AOC has been completed following one of the region's largest contaminated sediment cleanups. Since the early 1990s approximately $85 million from the Great Lakes Legacy Act, the federal Superfund program, the State of Ohio and several private companies was invested to remove more than 600,000 cubic yards of contaminated sediment and restore habitat impaired from a legacy of industrial pollution.

Follow-up funding from the GLRI and a settlement agreement supported creation of 2,500 linear feet of habitat for native fish to forage and spawn. Deepening the river has allowed the return of normal commercial shipping and recreational boating and sustained the economic viability of the Port of Ashtabula, among the busiest on the Great Lakes. Pending the results of monitoring efforts, the Ashtabula River is expected to be delisted in the near future.

GRAND CALUMET RIVER AOC, INDIANA

The Grand Calumet River is among the most highly degraded AOCs, with all 14 beneficial uses originally impaired, while also home to some of the most diverse plant and animal communities in the Great Lakes. The Indiana Department of Environmental Management and the Citizens Advisory for the Remediation of the Environment committee have implemented cleanup efforts since the 1970s. Public-private partnerships have led to the removal of two BUIs, including restrictions on drinking water consumption, a major accomplishment. Work to remove the 12 remaining BUIs continues, including habitat restoration and invasive species removal through the GLRI and contaminated sediment remediation under the Great Lakes Legacy Act. The multi-phase contaminated sediment cleanup project, begun in 2009, has remediated more than 1.9 million cubic yards of contaminated sediments with another 1 million cubic yards to be addressed in upcoming phases. Leveraging funding from a Natural Resource Damage Assessment settlement enabled Indiana to secure more federal funding to implement a much larger cleanup.



Progress on a section of the Grand Calumet River between Calumet and Columbia Avenue ©U.S. EPA.

SHEBOYGAN RIVER AOC, WISCONSIN

The Sheboygan River AOC has suffered from a legacy of industrial pollution, resulting in contaminated sediments and nine BUIs. Nevertheless, all restoration projects necessary to remove these BUIs were completed in 2013, in large part due to GLRI funding, along with support from the State of Wisconsin, and the city and county of Sheboygan. A combined investment of $80 million from Superfund and the GLRI accelerated the pace of cleanup and set Sheboygan River on the path to delisting. The collective effort removed almost 400,000 cubic yards of contaminated sediment from the river and implemented seven habitat restoration projects in the city of Sheboygan.

ST. LOUIS RIVER AOC, MINNESOTA AND WISCONSIN

The St. Louis River AOC suffered from 130 years of environmental degradation through industrial practices that contaminated sediments and land use practices that resulted in both dredging and filling of critical aquatic habitat. Collaboration among more than 100 stakeholders, including Minnesota, Wisconsin, Fond du Lac Band of Lake Superior Chippewa and the St. Louis River Alliance, has generated impressive progress toward removing nine beneficial use impairments that resulted from these legacy impacts. The 2013 Remedial Action Plan is a "roadmap to delisting" that clearly defines 60 actions to clean up contaminated sediments, restore aquatic habitat, reduce erosion, restore wild rice beds and remove sources of contaminants by 2025. The RAP represents the largest cleanup and restoration effort ever proposed for the largest port and the largest freshwater estuary on the Great Lakes, and is projected to cost up to $400 million. One BUI has already been removed and there is a clear vision for removing four more by 2018 and the final four by 2025. The goal is to formally delist in 2025. Collaboration and planning, along with sustained funding through the GLRI and Minnesota's Clean Water, Land and Legacy Amendment have charted the course for environmental recovery and economic revitalization in the St. Louis River AOC. ●

Commissioner's Corner

JAMES TIERNEY, ASSISTANT COMMISSIONER, DIV. OF WATER RESOURCES,
NEW YORK STATE DEPT. OF ENVIRONMENTAL CONSERVATION

Revitalizing the Buffalo River AOC and neighboring community

THE TRANSFORMATION OF THE Buffalo River Area of Concern (AOC) ecosystem that is currently underway in Buffalo, N.Y., is simply remarkable. More than 200 years ago this area was a verdant river delta, characterized by lush riverine flora, multiple shallow streams, wetlands and the occasional deep pool holding a wealth of fish, diverse wildlife and a series of protective sand shoals at the junction of Lake Erie, Niagara River and Buffalo River. The locale was spiritually sacred and a vital hunting and gathering ground to the Seneca Indian Nation of the Iroquois Confederacy of Nations.

With the coming of European settlers in the early 1800s, it underwent major changes to accommodate the rapidly growing businesses, commercial navigation and heavy manufacturing industries that supported the growth of the entire Great Lakes region. By the early 1900s, it became the sixth largest shipping port in the world (gross tonnage handled) as the area was packed with steel/alloy foundries, mills, grain silos, breweries, warehouses, factories, ship yards and piers. The river's shoreline had become so densely developed, people could no longer access the river, losing their spiritual link to its resources and eventually allowing it to become a cesspool for the city. Unfortunately, these changes occurred without society's consideration of the long-term legacy of ecosystem damages they were creating and "leaving behind."

Today, the multiple pieces of a river revitalization are coming together. The Buffalo River Remedial Action Plan (RAP), currently being aggressively implemented and skillfully coordinated by the nonprofit Buffalo Niagara Riverkeeper, is successfully reassembling the critical pieces with help from many partner agencies and organizations. The RAP's fundamental focus has been on 1) remediating sources of toxic pollution and pathogens; 2) enhancing water quality with a new long-term control plan to address combined sewer overflows and upriver stormwater sewer overflows; 3) restoring in-stream and shoreline habitat, where possible, critical to supporting sustainable fish and wildlife populations; and 4) re-establishing the community's links to the river and its resources.

Using a complex matrix of New York State, U.S. "Superfund," Great Lakes Restoration Initiative and Great Lakes Legacy Act funding programs, as well as local government and private business contributions, some 28 active and abandoned industrial sites have been remediated. Work continues at four sites, and nearly 1 million cubic yards of contaminated sediments have been removed from the river bottom! Clean rock/sediment backfill or an engineered environmental cap were installed in four portions of the AOC to further isolate any residual contamination and provide a base for habitat restoration.

Nearly a dozen habitat restoration projects are being implemented that, collectively, will remove the habitat beneficial use impairments. These projects are helping to replace historically lost habitat and improve the riverine environment by adding complexity to the river through woody structures and aquatic vegetation and shoreline habitat through native trees, shrubs and grasses. Small "pocket parks" have been developed offering the community access to the river for fishing, boating and wildlife viewing.

Finally, New York Governor Cuomo has dedicated the "Buffalo Billion" in state economic development funds to the region, much of which is targeting new business on old brownfields along the river. Many of the pieces and key links are being assembled, construction is accelerating, jobs and wildlife AND PEOPLE are coming back to the river. A community renaissance is underway! ●

RiverBend, a 200-acre urban redevelopment project on the Buffalo River ©Buffalo Niagara Enterprise / James Kavanaugh.

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AOC SPOTLIGHT

Canada making significant progress in restoring Great Lakes Areas of Concern

THREE CANADIAN AOCs have been fully remediated and officially "delisted": Collingwood Harbour on Lake Huron (1994); Severn Sound on Lake Huron (2003); and Wheatley Harbour on Lake Erie (2010). Two other Canadian AOCs – Spanish Harbour (1999) and Jackfish Bay (2011) – have completed all remedial actions and are now designated as "AOCs in Recovery." Both will be delisted once restoration of environmental quality is confirmed through environmental monitoring. The cleanup of Randle Reef in the Hamilton Harbour AOC, the largest Canadian contaminated sediment site in the Great Lakes, is a priority for the governments of Canada and Ontario and work is underway to begin cleanup efforts. Demonstrating ongoing commitment to AOC cleanup, the new Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health, signed in December 2014, commits Canada and Ontario to complete all remedial actions in five AOCs by 2019 (Nipigon Bay, St. Lawrence at Cornwall, Peninsula Harbour, Bay of Quinte and Niagara River). Additionally, Canada and Ontario have committed to making significant progress in all other Canadian AOCs. ●

Collingwood Harbor ©flickr/Jeff S. PhotoArt.

VOICES FROM THE AOCs

CLEANING UP THE AOCS IS about more than environmental restoration, it's about bringing communities together and reconnecting with the water. As Jane Goodman from the Cuyahoga River put it "it's an ecological and emotional restoration for us." The GLC asked local citizens what cleaning up their AOC means for them and their community. **Here's what they said.**

Adam Payne, Sheboygan River, WI
"After decades of being a black eye for the community, the Sheboygan River and Harbor is now a shining beacon we can all take pride in."

Victor Digiacomo, Eighteenmile Creek, NY
"I am personally excited that I will be able to bring my kids down to the creek and 'set them loose' to explore, free from any worry that they will be exposed to harmful contaminants."

Patricia Miller, Presque Isle Bay, PA
"What looked like a distasteful eyesore is now a busy focal point for fishing, boating, water sports, and even swimming. My family spends as much time as possible at the Bay in all four seasons – it's our favorite 'staycation' spot!"

Patty Troy, St. Clair River, Michigan/Ontario
"For me personally, the AOC cleanup means that we have done our job for the next generation. We have provided them with something better than we got."