

GREAT LAKES REVIVAL

How Restoring Polluted Waters Leads to
Rebirth of Great Lakes Communities



GREAT LAKES REVIVAL tells the story of how 10 communities came together to clean up the most fouled waters in the Great Lakes basin and documents the many benefits of this cleanup to the people of the Great Lakes states and provinces. It provides a powerful case for sustaining the flow of cleanup funding that has revived these and other communities: the Great Lakes Restoration Initiative and Great Lakes Legacy Act in the United States and the Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health and the Great Lakes Protection Initiative in Canada. And it also reminds us that we all benefit when we come to see—or just even know that they exist intact—these jewels that crown our one shared home, the fragile blue and green sphere that is planet Earth.

THE GREAT LAKES are one of the world’s most distinctive, valuable, and emotionally resonant natural features. Their water basin and ecosystem both serve the people and define the character and lifestyle of eight U.S. states and two Canadian provinces.

The ties to these waters and the bounty of the lakes have shaped and sustained native peoples for millennia. The beauty and grandeur of the lakes left European explorers and settlers in awe. These waters also supported the industrial and agricultural revolutions of the 19th and 20th centuries. These revolutions, in turn, powered the growth of Great Lakes’ cities and provided jobs and wealth to millions; yet over time, they also fouled these waters horribly.

As citizens of the United States and Canada awoke to visible damage and invisible dangers of polluted water and toxic residues, crippling local economies and degrading the quality of life around these magnificent waters, they chose to act. The two nations made a commitment to clean water and, beginning in 1985,

focused on what came to be termed Great Lakes “Areas of Concern,” the most dangerously fouled waters in the Great Lakes, its bays, harbors, and connecting rivers. People came together to develop remedial action plans to restore this fundamental infrastructure that undergirds thriving communities and provides a rich quality of life and an attractive backdrop for life, work, and play: clean water.

Great Lakes Revival is the story of that work: how stakeholders came together to clean up Areas of Concern, reconnect residents to these waters, and revitalize the communities they call home. Detailed case studies (see box, next page) share distinct stories of how this work was done and illustrate the benefits of water reclamation in catalyzing community revival.

From these unique stories, common threads and lessons have emerged. These communities came together, struggled, and ultimately found the paths to effectively reclaim their waters. They also came to learn what these waters meant to the people of their communities.



Buffalo River restoration has been a catalyst for creating waterfront public spaces in Buffalo, New York. Photo at left courtesy of Buffalo Niagara Waterkeeper; photo at right courtesy of Joe Cascio.

These communities overcame challenges in defining the scope, size, and nature of the problem; and how to even begin the work of unburdening the waters from years of abuse and neglect. They faced costly and confounding choices in tackling the legacy of toxics buried in sediments: whether and how to proceed, at what cost, and where to find the resources. In different ways and through varied approaches, they came to appreciate the importance of engaging and empowering the community in driving the cleanup. In so doing, they animated impactful processes that empowered local residents as partners.

The communities all came to incorporate in their work the restoration of habitat for fish and wildlife, resulting in a powerful and satisfying restoration of the life in and around the lakes that was such an integral part of their historic beauty and gift to human denizens. By cleaning, reclaiming, and reconnecting local communities to the waters, these communities have also catalyzed local economic development and community rebirth to the tune of hundreds of millions, even billions, of dollars of economic benefits and countless new jobs for local residents (Table 1). Finally, they have rebuilt the emotional connection—the “love of the lakes”—that is such a defining attribute for those lucky enough to live in their vicinity.

“ Without the cleanup of Collingwood Harbour in the late 1980s and early 1990s, the revitalization of Collingwood’s waterfront would not have been possible.

Nancy Farrer, Director of Planning and Building Services, Town of Collingwood

Case Studies

Buffalo River Cleanup Improves Buffalo’s Ecological Health, Economy, and Public Spaces

The Collingwood Harbour Story: From Shipbuilding Center to Great Lakes Pollution Hot Spot to Waterfront Revitalization

Cleveland Flats’ Revitalization Linked to Recovery of the Cuyahoga River

Cleanup of the Detroit River to Revitalization of the Waterfront

The Economic Benefits of Remediating Contaminated Sediments at Hamilton Harbour’s Randle Reef

From Lumber to Foundries to Revitalization: The Muskegon Lake Story

From Cleanup of the River Raisin to Revitalization of Monroe, Michigan

Economic Benefits Help Drive Cleanup of Severn Sound

From Remediation to Restoration and Revitalization: The St. Louis River Story

Cleanup of Toronto Harbour Leads to Waterfront Revitalization



Collingwood’s shipyards (left) circa early 1960s , courtesy of William Forsythe / Boatnerd.com; Collingwood Harbour Yacht Club with The Shipyards in the background courtesy of FRAM Building Group.

Table 1. A summary of economic benefits resulting from the cleanup and restoration of 10 AOCs in the United States and Canada.

AOC	Economic Benefits
Buffalo River (New York)	Cleaning up the Buffalo River has spurred improving public access that has contributed to waterfront economic revitalization, including more than \$428 million (U.S.) of waterfront development between 2012 and 2018.
Collingwood Harbour (Ontario)	The cleanup of Collingwood Harbour catalyzed the transformation of its over 100-year-old shipyards into a mixed-use waterfront community with more than 600 homes, a waterfront promenade and park, a community amphitheater, and hiking trails that will link to the Georgian Trail. A municipal fiscal impact analysis concluded that in five years there would be a net annual surplus of more than \$900,000 (Canadian) to the Town of Collingwood.
Cuyahoga River (Ohio)	The cleanup of the Cuyahoga River has led to the transformation of the Cleveland Flats from the industrial heartland into a community where nature, commerce, and industry live together. Since 2012, the Flats has seen \$750 million (U.S.) in economic development, with \$270 million (U.S.) of new developments in the planning phase.
Detroit River (Michigan)	Cleanup of the Detroit River has led to transformation of the waterfront, including creating the 5.5-mile Detroit RiverWalk to improve public access. The investment of \$80 million (U.S.) in building the Detroit RiverWalk in the first 10 years has returned over \$1 billion (U.S.) of public and private sector investments.
Hamilton Harbour (Ontario)	Underway is the largest contaminated sediment remediation project in the Canadian Great Lakes in Hamilton Harbour's Randle Reef at a cost of \$139 million (Canadian). Local businesses are projected to realize by 2032 about \$600 million (Canadian) in gross accumulated benefits with recreational users and the federal government realizing \$496 million (Canadian) and \$338 million (Canadian), respectively.
Muskegon Lake (Michigan)	In 2009, a \$10 million (U.S.) restoration project was implemented along the south shore of Muskegon Lake, removing 24.7 acres of historical, unnatural fill, restoring 27 acres of wetlands, and softening 1.9 miles of shoreline. An economic benefits study found that this \$10 million (U.S.) restoration project will generate nearly \$60 million (U.S.) of economic benefits for the Muskegon area over a 20-year period, or a 6-to-1 return on investment.
River Raisin (Michigan)	The cleanup of the River Raisin has been an essential building block in the revitalization of Monroe. Monroe is now rebranding itself as a vibrant urban center with an ecologically significant river, significant historical assets, a new national park, a state park, and an international wildlife refuge within its city limits, all connected by greenway trails. The River Raisin National Battlefield Park annual attendance is projected to reach 635,000, improving the local and state economies by over \$53 million (U.S.) annually.
Severn Sound (Ontario)	Total monetary value of RAP restoration projects implemented between 1991 and 2002 was estimated at \$35.3 million (Canadian). Total implementation costs of restoration projects during the same time period was estimated at \$2.16 million (Canadian). Every dollar spent on restoration would generate \$16.34 (Canadian) in benefits, reflecting cost effectiveness of RAP restoration projects. These benefits were based on a 10-year life span, meaning they were only estimated for 10 years.
St. Louis River (Minnesota)	Environmental restoration and intentional planning have created better access to the waterfront and have drawn attention to the renewed resources through new developments and national recognition. New waterfront developments include a \$34 million (U.S.) resort that converted a cement terminal into a luxury resort and a \$38 million (U.S.) mixed-use housing development.
Toronto and Region (Ontario)	Decades of cleanup under the Toronto and Region RAP and collaborative planning have led to revitalization of Toronto's waterfront with substantial economic and social benefits, including \$4.1 billion (Canadian) in output to the Canadian economy, approximately \$848 million (Canadian) in tax revenues, and about 14,100 years of employment.

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The International Association for Great Lakes Research is a scientific organization made up of researchers studying the Laurentian Great Lakes, other large lakes of the world, and their watersheds, as well as those interested in such research. Members encompass all scientific disciplines with a common interest in the sustainable management of large lake ecosystems.

This report is available at
iaglr.org/aoc/

On the cover

Background photo: Detroit riverfront circa early 2000s (courtesy of Detroit Riverfront Conservancy)
Postcard photos, clockwise, from upper left: Detroit RiverWalk (courtesy of Detroit Riverfront Conservancy);
Watching the fire boat on the Cuyahoga River (courtesy of Cuyahoga River Restoration); Collingwood Harbour
Yacht Club with The Shipyards in the background (courtesy of FRAM Building Group); Activity along the Buffalo
River (courtesy of Joe Cascio); and the Simcoe Wavedeck, Toronto (courtesy of Waterfront Toronto)