

2017 Environmental Programs Budget Analysis

Final Report

06.08.17





**PUBLIC SECTOR
CONSULTANTS**

Prepared by

Public Sector Consultants
Lansing, Michigan
www.publicsectorconsultants.com

Prepared for

Michigan League of Conservation Voters
Lansing, Michigan
www.michiganlcv.org

Michigan Environmental Council
Lansing, Michigan
www.environmentalcouncil.org

TABLE OF CONTENTS

INTRODUCTION AND SUMMARY OF FINDINGS	4
FEDERAL FUNDING AND PROPOSED CHANGES	5
STATE FUNDING AND PROPOSED CHANGES	7
KEY PROGRAM: GREAT LAKES RESTORATION INITIATIVE	10
KEY PROGRAM: SUPERFUND	13
KEY PROGRAM: BROWNFIELDS	15
KEY PROGRAM: SEA GRANT	17
REFERENCES	19
APPENDIX A. EPA MICHIGAN GRANTS REPORT	25
APPENDIX B. DEPARTMENT OF COMMERCE NOOA MICHIGAN GRANTS – 2016	27
APPENDIX C. 2016 MICHIGAN SUPERFUND PRIORITY LIST	29

INTRODUCTION AND SUMMARY OF FINDINGS

Federal and state programs and funding are critical to protecting Michigan's economy, environment, and quality of life. Michigan relies on the federal government to develop and enforce regulations, provide funding, and study environmental issues. Changes at the federal level directly affect the State of Michigan's ability to enforce regulations, fund important efforts, issue permits, and provide training and other services. These changes also impact local governments and organizations that receive funding directly from the federal government and that benefit from federally funded state programs.

As leaders in ensuring every Michigander has access to clean air and water and can enjoy our state's beauty, the Michigan League of Conservation Voters and Michigan Environmental Council hired Public Sector Consultants to perform an independent analysis of how federal and state environmental programs work together to benefit Michigan communities and what changes to those programs could mean.

This report directs attention to the largest sources of environmental program funding in Michigan: the U.S. Environmental Protection Agency (EPA) and Michigan Department of Environmental Quality (DEQ). In fiscal year 2017, the DEQ received more than \$139 million from the federal government—more than a quarter of its budget. The vast majority of these monies came from the EPA. The president has proposed a 31 percent reduction to the EPA's budget, and Michigan's governor, House of Representatives, and Senate have recommended fiscal year 2018 reductions to the DEQ's budget, further compounding the president's proposed EPA cuts. State-level changes, particularly those made without considering likely federal cuts, could have dire impacts on Michigan communities' ability to protect public health and local ecosystems.

Some environmental programs are at greater risk than others. In particular, the president proposes eliminating the Great Lakes Restoration Initiative (GLRI) and Sea Grant as well as significantly reducing the Superfund and Brownfields Programs. These programs provide critical support to Michigan communities—via the DEQ and directly to local governments and organizations—to remediate properties, improve local economies, and protect public health. In fiscal year 2016, Michigan communities benefited from:

- \$48.7 million in GLRI funding for pollution cleanup, invasive species prevention and control, algal bloom prevention, and native species habitat restoration
- \$15 million in Superfund funding for contamination prevention and cleanup at some of the most polluted sites across the state
- \$2.22 million in funding for the federal Brownfields Program that is used for contamination prevention, assessment, and cleanup
- \$1.8 million in Sea Grant funding for fishery research, beach and boater safety, environmental protection, algal bloom monitoring, icebreaking, maritime security, and rescue capabilities

The content of this report was developed via research that included interviews with representatives from the Michigan DEQ, Department of Natural Resources (DNR), Department of Agriculture and Rural Development (MDARD), and House Fiscal Agency. Additionally, USAspending.gov data, which details all federal funding over \$3,000, was used to refine the list of programs described below. The lists of each the top 50 EPA grants and the top 50 U.S. Department of Commerce National Oceanic and Atmospheric Administration (NOAA) grants provided to Michigan recipients in fiscal year 2016 can be found in Appendices A and B, respectively.

FEDERAL FUNDING AND PROPOSED CHANGES

Funding for the EPA is the driving force behind much of the environmental programming at the federal, state, and local levels. In fiscal year 2016, the EPA had more than 15,000 full-time employees (FTEs) administering a budget of more than \$8.1 billion.¹ The EPA's programs protect Americans from significant risks to their health and safeguard the environment. These protections play an important role in the success of economic growth, energy, transportation, agriculture, industry, and international trade efforts. To accomplish its mission, the EPA develops and enforces regulations, gives grants, sponsors partnerships, studies environmental issues, and disseminates information.

Nearly half of the EPA's budget, \$4 billion, goes toward grants to state environmental programs, nonprofits, educational institutions, and others.² These organizations use the money for a wide variety of projects—community cleanups, scientific studies, etc.—that inform decision making related to everything from economic development to wastewater treatment. In fiscal year 2016, Michigan entities received more than \$168 million in EPA grants.³

In May 2017, the president released his fiscal year 2018 budget. This document describes a proposed \$2.6 billion decrease in the EPA's budget, a 31 percent change from fiscal year 2017, with a corresponding 25 percent reduction in workforce.⁴ It recommends that the EPA's major discretionary programs be cut by 50 percent. If these recommendations are enacted, many programs—programs that have been around for decades and that serve as the foundation for Michigan efforts to combat pollution and protect public health and economies—would be defunded.⁵ Exhibit 1 lists the EPA programs that would receive the largest cuts, including some of the programs most important to Michigan: the Great Lakes Restoration Initiative, the Superfund Program, and the Brownfields Program—the impacts on these programs are described in more detail in subsequent sections of this report.

EXHIBIT 1. President's Proposed Fiscal Year 2018 EPA Base Budget Adjustments—Major Discretionary Reductions

Program	Amount 2017 Continuing Resolution (in millions)	Amount 2018 Proposed Budget (in millions)	Amount Proposed Change (in millions)	Proposed Percentage Change
Geographic Programs (e.g., GLRI)	\$427	\$0	(\$427)	(100%)
Superfund	\$1,092	\$762	(\$330)	(30%)
Categorical Grants (e.g., brownfields)	\$1,079	\$597	(\$482)	(45%)
Research and Development	\$483	\$249	(\$234)	(48%)
Enforcement	\$548	\$419	(\$129)	(24%)
ENERGY STAR® and Voluntary Climate Programs	\$427	\$0	(\$427)	(100%)
Total	\$4,056	\$2,027	(\$2,029)	(50%)

SOURCE: Office of Management and Budget. May 23, 2017. *Major Savings and Reforms: Budget of the U.S. Government Fiscal Year 2018*. Accessed May 30, 2017. <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/budget/fy2018/msar.pdf>

In general, the proposed cuts would slow or reverse the progress that Michigan has made in protecting public health and ecosystems. The budget reductions would affect state and local work to protect public health by cutting federal funding for carrying out federal laws that regulate public drinking water systems, toxic substances, and pesticides; protecting wildlife, wilderness, and bodies of water; and pollution research, standard setting, cleanup, monitoring, and enforcement.

The president's budget proposes eliminating all geographic programs, including the \$288 million contribution to the GLRI. Geographic programs are those programs focusing on specific regions of the country. Many of these programs are part of the Clean Water Act, which charges the EPA with helping restore the nation's waterways. In 2016, Michigan communities benefited from \$48.7 million in GLRI funding.⁶ Since the inception of the program in 2010, Michigan communities have benefited from \$606 million for 760 GLRI projects.⁷

The president's proposed budget reduces Superfund enforcement and remediation work by cutting the program's budget by 30 percent. The Superfund Program is designed to address the most serious uncontrolled or abandoned contaminated sites across the country. Through this program, the EPA partners with state and local organizations to identify polluters and compel them to pay for remediation; the EPA also makes federal funds available for cleanup. In fiscal year 2016, Michigan received \$15 million from the Superfund Program.⁸ Since the inception of the program in 1980, Michigan has received more than \$397 million in federal grants for cleanup at 84 sites.⁹

The president's proposed budget also includes a 45 percent reduction in categorical grants that cleanup and protect our nation's water, air, and land resources. These grants are called "categorical" in that the funds can only be spent on activities that fall within the statutory and regulatory boundaries of that program. Of key interest to Michigan are those categorical grants related to the remediation of brownfield sites. The \$482 million proposed categorical grant cut includes \$47.7 million for state categorical grants for the Brownfields Program.¹⁰ States also receive approximately \$80 million in noncategorical grants for brownfield cleanup, and the president's budget proposes eliminating those noncategorical grants as well.¹¹ In 2016, Michigan communities received \$2.22 million in federal brownfields funds.¹²

The president proposes a 48 percent cut to the EPA's research and development (R&D) work and a 24 percent cut to environmental enforcement activities. For more than four decades, the EPA's R&D has informed a wide variety of environmental issues and programs.¹³ The proposed R&D reduction will slow advances in scientific understanding and technology to solve environmental challenges affecting our health, environment, and economy. The EPA enforces environmental laws to reduce pollution, protect public health, and level the playing field for responsible companies. The proposed reduction for enforcement could curtail the EPA's ability to police environmental offenders and impose penalties. The EPA integrates its research and development and enforcement work into its programs to protect safe drinking water, reduce air pollution, and protect safe and healthy land; because of this, these cuts are not discussed separately in this report.

The president also proposes eliminating the \$262 million in NOAA grants and education work.¹⁴ NOAA contributes to and administers many programs important to Michigan, including the GLRI and Sea Grant. To date, NOAA has contributed more than \$171 million toward GLRI.¹⁵ In 2015, Sea Grant was funded at \$67.3 million, with an estimated economic impact of \$575 million or 854 percent of the federal investment.¹⁶ In fiscal year 2016, Michigan received more than \$39 million from NOAA, with over \$2 million in Sea Grant funding alone.¹⁷

STATE FUNDING AND PROPOSED CHANGES

More than a third of the State of Michigan's revenues come from federal and other operating grants. These monies are the second largest source of revenue for Michigan, second only to state taxes which provide 48.1 percent of revenue.¹⁸ For fiscal year 2018, the president has proposed a \$4.1 trillion budget, which is on par with last year's budget but shifts capital from domestic programs, which fund grants to states and local organizations, to defense and homeland security.¹⁹

The majority of Michigan's environmental program funding comes from the EPA, and the president proposes reducing the EPA's budget by 31 percent. Michigan's governor, House, and Senate, also propose reductions to environmental programs, which would potentially exacerbate the consequences of the federal cuts.

Three departments within the State of Michigan have an explicit focus on environmental programming: MDARD, DNR, and DEQ.

- MDARD comprises six divisions that, respectively, cultivate and expand new economic opportunities for the food and agricultural sector, safeguard the public's food supply, inspect and enforce sound animal health practices, control and eradicate plant pests and diseases threatening the food and agriculture system, preserve the environment by which the farming community makes their living and feeds consumers, and protect consumers by enforcing laws relating to weights and measures. MDARD's funding is structured with many relatively small federal and state funding streams that work together to fund bigger initiatives and achieve larger goals. Because of this, cuts to a single funding stream may not mean the elimination of an entire program, although changes impact district resources and therefore services and activities in Michigan communities. MDARD receives relatively little EPA funding as compared to DEQ.²⁰
- The DNR is responsible for the conservation, protection, management, use, and enjoyment of the state's natural and cultural resources. Most the DNR's funding, 69 percent, comes from restricted state sources—such as revenues from the sale of oil and gas leases, the extraction of minerals on state lands, and royalties.²¹ In fiscal year 2016, the DNR received significantly less funding than the DEQ and MDARD from the EPA.²²
- The DEQ works to reduce public health and environmental risks, assists Michigan communities in addressing infrastructure needs, and builds partnerships to address Michigan's environmental issues. The DEQ, as compared to MDARD and the DNR, receives the largest share of federal funds for environmental programming. Moreover, many of the DEQ's programs rely on funding from the Clean Michigan Initiative (CMI), which is set to expire just as potential significant cuts are implemented at the federal level. Of the three departments, the DEQ has the most environmental programming at risk from federal and/or state budget changes.

In fiscal year 2017, the DEQ received more than \$139 million from the federal government, comprising more than a quarter of its budget.²³ The vast majority of these monies came from the EPA.²⁴ The governor, House, and Senate are all proposing cuts to DEQ's budget for fiscal year 2018, as summarized in Exhibit 2 and in the text that follows. If implemented, these cuts would affect a wide variety of Michigan communities.

EXHIBIT 2. Major DEQ Budget Changes from Fiscal Year 2016 Year-to-date Appropriations

Program/Activity	Governor Budget Proposed Change	Senate-approved Change	House-approved Change
Department and administrative support	\$297,400	\$297,400	(\$716,400)
Office of the Great Lakes	(\$132,100)	(\$132,100)	(\$132,100)
Office of Environmental Assistance	(\$117,000)	(\$117,000)	(\$117,000)
Water Resources Division	(\$212,000)	(\$212,000)	(\$212,000)
Law Enforcement Division	(\$7,100)	(\$7,100)	(\$7,100)
Air Quality Division	(\$99,100)	(\$99,100)	(\$1,461,100)
Resource Management Division			
Drinking water and environmental health	\$3,143,000	\$80,600	\$580,600
Oil, Gas, and Mineral Service	\$3,886,100	\$3,886,100	(\$113,900)
Recycling initiative	\$3,100	\$3,100	(\$146,900)
Strategic water quality initiatives, grants, and loans	(\$35,000,000)	(\$35,000,000)	(\$35,000,000)
Water State Revolving Loan Fund	\$35,007,000	\$35,007,000	\$35,007,000
Other	(\$442,100)	(\$442,100)	(\$442,100)
Subtotal Resource Management Division	\$6,597,100	\$3,534,700	(\$115,300)
Remediation and Redevelopment Division			
Contaminated site investigations, cleanup, and revitalization	\$1,180,100	(\$73,400)	(\$73,400)
Emergency cleanup actions	\$-	(\$1,000,000)	\$-
Environmental Cleanup and Redevelopment Program	(\$14,900,000)	(\$14,900,000)	(\$14,900,000)
Laboratory services	\$152,700	\$29,900	\$152,700
Other	\$67,400	\$67,400	\$67,400
Subtotal Remediation and Redevelopment Division	(\$13,499,800)	(\$15,876,100)	(\$14,753,300)
Underground Storage Tank Authority	\$5,400	\$5,400	\$5,400
Information technology	\$348,000	\$348,000	\$348,000
One-time appropriations			
Drill core storage facility	\$-	\$500,000	\$-
Drinking water declaration of emergency	(\$6,200,000)	(\$7,200,100)	(\$6,200,000)
Environmental Cleanup and Redevelopment Program	\$14,900,000	\$-	\$-
Oil and Gas Mineral Services	(\$4,000,000)	(\$4,000,000)	(\$1,000,000)
Refined Petroleum Product Cleanup Program	\$-	\$-	\$14,900,000
Water Pollution Control and Drinking Water Revolving Fund	(\$2,950,000)	(\$2,950,000)	(\$2,950,000)
Other	(\$975,000)	(\$975,000)	(\$975,000)
Subtotal one-time appropriations	\$775,000	\$14,625,100	\$3,775,000
Grand Totals	(\$6,044,400)	(\$26,883,200)	(\$13,386,100)

SOURCES: Michigan Senate Fiscal Agency. April 17, 2017. Decision Document: Environmental Quality S.B. 140. Accessed May 30, 2017. http://www.senate.michigan.gov/sfa/Departments/DecisionDoc/DDdeq_web.pdf

The DEQ's Air Quality Program is responsible for regulating sources of air pollutants to minimize adverse impacts on human health and the environment; it is funded through a variety of measures, including hazardous waste fees. Declines in hazardous waste have reduced available revenue.²⁵ To fully fund the program, both the governor and Senate included in their budgets \$1.4 million in general funds. The House does not include this offset. Other changes to this program's budget--which the governor, Senate,

and House all propose--include new funding for a staff member related to the energy package passed in December 2016, a shift in facilities costs to a new Facilities Management line, reduction in over-appropriated federal funds and fiscal year 2017 employee lump-sum payments, and economic adjustments. The result of these changes, combined with the \$1.4 million included in each of the governor's and Senate's budgets, result in a proposed reduction of \$99,100 by the governor and Senate, and a \$1,461,100 proposed reduction from the House.

The DEQ's Oil and Gas Program is responsible for protecting public health and the environment while supporting oil and gas development. This program is funded by a fee on oil and gas produced in Michigan. Program staff are responsible for reviewing new permit applications, conducting site inspections, and monitoring oil and gas production. In late 2014, oil and gas prices began to drop, and no significant price increases are projected in the near future. As a result, the governor and Senate have included \$4 million in general funds to offset the declining restricted fund revenues. The House did not include these funds. The governor, Senate, and House also recommend moving facilities costs to the new Facilities Management line, removing fiscal year 2017 lump-sum payments to employees, and adjusting for economics; these additional changes reflect a \$113,900 decrease in the Oil and Gas Program.

Vapor intrusion occurs when vapors from existing contamination migrate through water and/or soil to adjacent properties.²⁶ Vapor intrusion can contaminate indoor air and make people sick. According to an MLive report, "In the past year, the DEQ took some level of action at more than forty vapor intrusion sites in Michigan. The agency estimates there could be as many as 4,000 sites statewide where vapors from toxicant plumes, which enter buildings through poorly sealed basements, could pose a health risk."²⁷ Last year, two evacuations took place in Grand Rapids alone.²⁸ The governor has proposed \$1.3 million in general fund dollars to establish a multi-agency program to address this emerging issue, reflected in the Remediation and Redevelopment Division's budget for contaminated site investigations, cleanup, and revitalization. The proposed agency would review and prioritize sites, conduct sampling, evaluate health risks, implement risk reduction measures, and mitigate source contamination. The House and Senate did not include general fund monies to support the creation of this program. Without these funds, vapor intrusion risks to Michigan families will continue to be largely unknown and unaddressed. Other items reflected in the contaminated site investigations, cleanup, and revitalization budget line include a shift in facilities costs to the new Facilities Management line, removal of the fiscal year 2017 employee lump-sum payments, and economic adjustments. These other items reflect a proposed \$73,400 reduction.

The Clean Michigan Initiative Bond of 1998 authorized \$675 million for the work of the Environmental Cleanup and Redevelopment Program. Michigan's fiscal year 2017 budget appropriates the remaining \$14.9 million of the CMI. After this appropriation, the response activities category of the CMI will be fully appropriated and allocated to sites. As a result, the governor included in his budget a \$14.9 million one-time transfer from the Refined Petroleum Fund to continue supporting cleanup and redevelopment activities until a more stable source of funding can be identified. Neither the House nor the Senate included this fund shift in their budgets. If no replacement is made and related federal cuts—like those to brownfields funding—are approved, the impact to local efforts to remediate contaminated properties would be significant. These potential financial challenges come on the tails of the expiration of the 1988 Environmental Protection Bond, which provided \$660 million for environmental protection throughout Michigan. The Environmental Protection Bond was fully appropriated and allocated to sites at the end of fiscal year 2016. Without a new bond or the appropriation of general fund dollars to fund this important

environmental cleanup work, properties throughout the state will remain contaminated, prohibiting lucrative economic development opportunities and putting public health at risk.

KEY PROGRAM: GREAT LAKES RESTORATION INITIATIVE

The Great Lakes are Michigan’s most valuable natural resources and are fundamental to the state’s identity and quality of life. The Great Lakes also have extraordinary economic value for Michigan; however, decades of industrial activity have left a legacy of pollution and contamination in the Great Lakes ecosystem. Restoring the lakes and addressing these legacy environmental issues helps advance our region’s broader strategy to create jobs, stimulate economic development, and invest in freshwater resources and waterfront communities.

The GLRI is the product of a long history of bipartisan, multisector, community-based support.²⁹ Its goal is to accelerate the pace of restoration in the Great Lakes, with a focus on the following:

- Cleaning up Great Lakes Areas of Concern
- Preventing and controlling invasive species
- Reducing nutrient runoff that contributes to harmful/nuisance algal blooms
- Restoring habitat to protect native species ³⁰

Via the GLRI, federal agencies work in cooperation with states, tribes, municipalities, universities, and other organizations to target the biggest threats to the Great Lakes ecosystem and to accelerate progress toward long-term goals.³¹ As described in Exhibit 3, the EPA administers the largest share of GLRI funds.

EXHIBIT 3. GLRI Funding by Federal Agency (All States)

Federal Funding Agency	Cumulative Total GLRI Amount	% of Total
EPA	\$720,735,232	40.9%
United States Fish and Wildlife Service	\$256,355,345	14.5%
U.S. Army Corps of Engineers	\$191,206,003	10.8%
Department of Commerce NOAA	\$171,480,503	9.7%
U.S. Department of Agriculture Natural Resources Conservation Service	\$139,695,470	7.9%
U.S. Geological Survey	\$100,738,478	5.7%
U.S. Department of Agriculture Forest Service	\$60,042,983	3.4%
National Park Service	\$31,936,064	1.8%
Bureau of Indian Affairs	\$30,561,294	1.7%
Department of Transportation Maritime Administration	\$16,639,781	0.9%
U.S. Coast Guard	\$15,580,261	0.9%
Agency for Toxic Substances and Disease Registry	\$11,617,339	0.7%
U.S. Department of Agriculture Animal and Plant Health Inspection Service	\$8,139,525	0.5%
Department of Transportation Federal Highway Administration	\$6,705,858	0.4%
Centers for Disease Control and Prevention	\$2,863,162	0.2%
Total	\$1,764,297,298	

SOURCE: Great Lakes Restoration Initiative. February 2017. "Spreadsheet of All GLRI Projects." Great Lakes Restoration Initiative. Accessed June 5, 2017. <https://www.glri.us/projects/all-glri-projects-20170222.xlsx>

Since the GLRI's inception, the federal government has appropriated \$1.8 billion to the program. Michigan communities have benefited from \$606 million for 760 GLRI projects since 2010.³² In fiscal year 2016 alone, Michigan communities benefited from \$48.7 million in GLRI funding.³³ These monies fund activities that reduce threats to public health, create recreational opportunities, and strengthen local economies in Michigan's waterfront communities.³⁴ Only a small portion of funds funnel through Michigan's state government; the vast majority of funds go directly to local governments and organizations. Michigan's fourteen Areas of Concern are described in Exhibit 4.

EXHIBIT 4. Michigan's GLRI Areas of Concern

Restored	Slated to Achieve Restoration Status under Action Plan II	To Receive Restoration Status at a Later Date
Deer Lake	Clinton River	Detroit River
White Lake	Manistique River	Kalamazoo River
	Menominee River	Rouge River
	Muskegon Lake	Saginaw River and Bay
	River Raisin	Torch Lake
	St. Clair River	
	St. Marys River	

SOURCE: Great Lakes Restoration Initiative. February 2017. "Spreadsheet of All GLRI Projects." Great Lakes Restoration Initiative. Accessed June 5, 2017. <https://www.glri.us/projects/all-glri-projects-20170222.xlsx>

Two of Michigan's 14 Areas of Concern, White Lake in West Michigan and Deer Lake in the Upper Peninsula, have been cleaned up and removed from the list of Great Lakes toxic hotspots. The GLRI aims to complete cleanup work in seven more Michigan Areas of Concern in the coming years.³⁵ If the GLRI program is eliminated at the federal level, these communities would need to find other funding sources for their cleanup work, or implementation of the projects would not be possible. Given the other cuts to the EPA, it is not clear what other funding sources would be available.

The DEQ Office of the Great Lakes is responsible for programs to protect, restore, and sustain the Great Lakes, including administering the DEQ's GLRI funding. The Office of the Great Lakes employs approximately 20 FTEs, half of whom are funded with GLRI dollars. If the federal government zeros out GLRI funding, the DEQ would need to either eliminate these positions, divert funding from other programs, or seek other funding sources.

SPOTLIGHT PROJECT

The Clinton River, located just north of Detroit in southeastern Michigan, flows 80 miles from its source to Lake St. Clair near the city of Mt. Clemens. The federal government formally identified the area as impaired in 1987 due to high fecal coliform bacteria and nutrients; sediment contamination caused by heavy metals, polychlorinated biphenyls (PCBs), oil, and grease; and the presence of other pollutants. The degradation was so severe that there were restrictions on fish and wildlife consumption, declines in fish and wildlife populations, beach closings, and loss of fish and wildlife habitat.

To date, the Clinton River Area of Concern has received more than \$22.5 million in GLRI funds.³⁶ In 2010, Macomb County and the Huron-Clinton Metropolitan Authority received \$1,492,500 in GLRI funding to restore the coastal wetlands at Lake St. Clair Metropark in Harrison Township. This work was

completed in 2013 and resulted in the restoration of the plant life and the installation of boardwalks and informative signage. In 2013, \$262,904 in GLRI funding was awarded to reduce E. coli levels at New Baltimore Beach and Lake St. Clair Metropark Beach along Lake St. Clair. The project included replacing sand, landscaping beach area, and redirecting stormwater runoff away from beaches.³⁷ In 2015, EPA announced nearly \$20 million in funding over three years for 11 projects in and around the Clinton River watershed, including:

- \$6.3 million to restore habitat around Partridge Creek Commons, McBride Drain, and the Clinton River Spillway
- \$4.5 million to improve habitat and stabilize stream banks along a nine-mile section of the Clinton River
- \$2.6 million to upgrade fish and wildlife habitat near where the Clinton River meets Lake St. Clair
- \$2.5 million to rehabilitate the eastern end of the Clinton River Spillway into the lake
- \$2.2 million to restore 3,000 feet along Galloway Creek fish passage ³⁸

SPOTLIGHT PROJECT

The Torch Lake Area of Concern is located on the Keweenaw Peninsula within Houghton County on the northwestern shore of Michigan's Upper Peninsula and on Lake Superior's southern shore. The federal government formally identified the area as being impaired in 1987 as a result of copper mining and processing operations and spills that left byproducts on the land and dumped in the lake. ⁴⁰ According to Second Wave Media:

"Some 200 million tons of copper tailings were dumped in the 2,700-acre lake, which by some estimates account for 20 percent of its volume. In addition to copper residues, tailings are often contaminated with heavy metals, PCBs, and polycyclic aromatic hydrocarbons (PAHs), a family of chemicals associated with petroleum products or incomplete combustion of organic material. Due to the volume, toxicity, and slush-like consistency of the contaminated sediments, the EPA determined that 'the technology and scale needed to safely remove or stabilize these sediments without causing environmental harm doesn't currently exist,' and that it would be too difficult and expensive to attempt to remove them. Instead, the EPA decided on a strategy of natural remediation, or allowing fresh sediment to gradually accumulate over the tailings and other materials, gradually closing them off from the environment. In the meantime, efforts were made to cap and stabilize piles of tailings on the land by covering them with fresh soil and planting various types of vegetation to cover it. But even those have sometimes been subject to fresh erosion."⁴¹

The contamination was so severe that there were restrictions on fish and wildlife consumption, degradation of the flora and fauna on and in the bottom sediments of the adjacent lakes and streams, and fish tumors and other deformities.⁴² Cleanup of the Torch Lake Area of Concern has been coordinated with work at the Torch Lake Superfund site. In 1999, severely eroded stream banks at Scales Creek were stabilized. In 2006, at a cost of \$12.3 million, remediation at the Torch Lake Superfund site was completed, having cleaned, cleared, graded, and covered approximately 800 acres of land. In 2014, a

nine-inch vegetative cover was placed over approximately six acres of the Quincy Smelter site.⁴³ Sources of the contamination still need to be identified to make further progress. Until that is done there is no set timeline by which the site is expected to achieve restored status.⁴⁴ Without funding for this investigative work, it could take centuries before the site is fully restored.⁴⁵

KEY PROGRAM: SUPERFUND

Congress created the Superfund program in 1980 to protect human health and the environment by responding to releases or threatened releases of hazardous substances, pollutants, and contaminants. This work is particularly important for some of our most vulnerable residents: children. Superfund cleanups have been shown to reduce the incidence of birth defects by as much as 25 percent for those living within approximately one mile of a site, and cleanups of lead-contaminated soil have contributed to documented reductions in children’s blood-lead levels across the country.⁴⁶ In addition, Superfund cleanups create development, recreational, and ecological opportunities that create jobs, increase property values, and enhance local tax bases. Residential property values within three miles of Superfund sites have been found to increase 19 to 25 percent when sites are cleaned up and removed from Superfund National Priorities List.⁴⁷

The National Priorities List is the EPA’s list of hazardous waste sites eligible for cleanup under the Superfund program.⁴⁸ There are 1,336 sites on the list, 65 of which are in Michigan (see Appendix B).^{49,50} Since the list’s creation, 393 sites, 20 of which are in Michigan, have been removed.^{51,52}

Superfund sites are addressed in different ways. The EPA, state, or private parties may implement the cleanup. Exhibit 5 provides a breakdown of who is conducting response actions on Michigan Superfund sites.

EXHIBIT 5. Party Responsible for Michigan Superfund Site Response Actions

Response Actions by Party	Number of Actions
Private Party—EPA Enforcement Lead (state support)	40
Private Party—State Enforcement Lead	11
EPA Lead Orphan Site	13
State Lead Orphan Site	12

SOURCE: Michigan Department of Environmental Quality, March 2017. Fiscal Year 2016 Federal Superfund Legislative Report. Accessed May 25, 2017. http://www.michigan.gov/documents/deq/deq-rrd-SFS-2016SuperfundLegislativeReport_559627_7.pdf

NOTE: The total number of actions is greater than the 65 sites on the National Priorities List because Superfund sites are frequently divided into operable units to facilitate site work. This can result in sites being in multiple categories and/or activities simultaneously. Additionally, some deleted sites have ongoing response activities.⁵³

Since the inception of the program in 1980, Michigan sites have received more than \$397 million in federal funding commitments, and in fiscal year 2016, Michigan received \$15 million for five sites.⁵⁴ The state matched those dollars with contributions totaling \$1.7 million in fiscal year 2016.⁵⁵ Exhibits 6 and 7 detail the breakdown of funding contributed to various Michigan projects.

EXHIBIT 6. Superfund Federal Grant Dollars Awarded in Fiscal Year 2016

Site/Project	City	Federal Amount	State Match
Conduct brownfields 128(a) activities		\$839,123	\$0
Remedial design activities at Spartan Chemical	Wyoming	\$580,369	\$0
Conduct management assistance activities		\$322,491	\$0
Management assistance activities at the Kalamazoo River site	Kalamazoo	\$300,000	\$0
Site assessment (preremedial) activities		\$226,714	\$0
Remedial investigation activities at the Wash King site	Pleasant Plains Township	\$192,868	\$0
Superfund Core Program*		\$112,500	\$12,500
Operations and maintenance activities at the J&L Landfill site	Rochester Hills	\$47,804	\$0
Five-year reviews at Spartan Chemical	Wyoming	\$30,000	\$0
Five-year reviews at Peerless Plating	Muskegon	\$20,000	
Total		\$2,671,869	\$12,500

SOURCES: Michigan Department of Environmental Quality. March 2017. Fiscal Year 2016 Federal Superfund Legislative Report. Accessed May 25, 2017. http://www.michigan.gov/documents/deq/deq-rrd-SFS-2016SuperfundLegislativeReport_559627_7.pdf

NOTES: 128(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) are categorical grants that address the assessment, cleanup, and redevelopment of brownfield sites and other sites with actual or perceived contamination. Superfund Core Programs are EPA funds for non-site-specific activities that develop and maintain a state's ability to participate in the Superfund response program.

EXHIBIT 7. Superfund State of Michigan Contracts Signed in Fiscal Year 2016

Site/Project	City	Federal Amount	State Match
Increase to the Velsicol Chemical Corporation site contract for water supply replacement	St. Louis	\$4,554,100	\$506,111
Increase to the Velsicol Chemical Corporation site contract for in-situ thermal treatment of former plant Area One	St. Louis	\$14,806,800	\$1,645,200
New contract for interim response activities at the DSC McLouth Steel Gibraltar site	Gibraltar	\$1,350,000	\$150,000
Total		\$20,710,900	\$2,301,311

SOURCE: Michigan Department of Environmental Quality. March 2017. Fiscal Year 2016 Federal Superfund Legislative Report. Accessed May 25, 2017. http://www.michigan.gov/documents/deq/deq-rrd-SFS-2016SuperfundLegislativeReport_559627_7.pdf

NOTE: Contracts are Financial mechanisms whereby the state can provide the EPA with the required 10 percent match when the EPA is conducting the remediation.

If the president's proposed 30 percent cut to this program is approved, the other 65 sites in Michigan are at risk of remaining contaminated. This means that these sites would continue to leach toxins and chemicals into local water, soil, and air, putting local health at risk. Moreover, to the extent that the EPA would have had the resources to identify and compel polluters to pay for cleanup efforts, more of the financial burden for remediation will rest with state and local organizations.

SPOTLIGHT PROJECT

The Kalamazoo River Superfund site comprises approximately 80 miles of the Kalamazoo River, adjacent riverbanks and contiguous floodplains, a three-mile stretch of Portage Creek, paper mill properties, and disposal areas. In the 1970s, local paper mills and other factories dumped waste products containing PCBs into the river.⁵⁶ PCBs do not readily break down, and ultimately contaminated the soil and sediment at the

Kalamazoo River site. PCBs are known carcinogens that also cause serious noncancerous immune, reproductive, nervous, and endocrine system problems.⁵⁷

In 1990, the Kalamazoo River site was added to the National Priorities List. The EPA identified six areas within the site requiring cleanup, and the First Cleanup Action began later that year.^{58,59} From 1997 to 1999, \$7.5 million in EPA funding resulted in removal and onsite containment action at Bryant Mill Pond. In 2009, the EPA provided \$40 million in funding for two important projects:

- \$30 million facilitated removal of contaminated sediment from the river's Plainwell Impoundment, rerouting of the Kalamazoo River to its original channel, and removal of the dam near Plainwell. Because of this work, the Kalamazoo River now flows freely from Kalamazoo to Otsego City.
- \$10 million was used to clear, excavate, and restore a two-mile stretch of the river; this action removed 90 percent of PCB-contaminated soil from the area.

From 2011 to 2013, the EPA provided \$16 million to remove contaminated soil and sediment from areas within Portage Creek as well as to conduct sampling at Upjohn Park. The sampling determined no contamination was present at the park.

To date, the EPA's investment of nearly \$100 million has resulted in cleanup at three of six areas; operation and maintenance activities and groundwater monitoring are ongoing at the areas that have been cleaned, and local communities are already benefiting from these activities. The 36-acre former paper mill property is now on the National Register of Historic Places, and in 2012 a global engineering, environmental consulting, and construction services company relocated its U.S. construction headquarters there, bringing 50 jobs. Also, importantly, the Kalamazoo River is now safe for swimming, boating, fishing, and other water recreation.

KEY PROGRAM: BROWNFIELDS

The EPA's Brownfields Program is designed to empower states, communities, and other stakeholders to work together to prevent, assess, safely clean, and sustainably reuse brownfields. A brownfield is a former industrial site that often requires environmental remediation before it can be redeveloped. Brownfields grants serve as the foundation of the program. These grants support revitalization efforts by funding environmental assessment, cleanup, and job training activities.

Brownfields create many benefits for local communities. On average, brownfields projects leveraged \$16.11 per EPA dollar expended and can increase residential property values from 5 percent to 15.2 percent when cleanup is completed.⁶² In 2016, Michigan communities received \$2.22 million in federal brownfields funds.⁶³

The State of Michigan's Brownfields Program comprises:

- CMI Brownfield Redevelopment Grants
- CMI Brownfield Redevelopment Loans
- Site Reclamation Grants
- Revitalization Revolving Loans (RRL)
- Site Assessment Grants

The CMI initially identified up to \$20 million in bond funds available for Brownfield Redevelopment Grants. The statute was amended in December 2003 and again in December 2012 to increase the funds available for Brownfield Redevelopment Grants to \$50 million. Also, the Michigan legislature appropriated \$15 million in fiscal year 2004 and \$10 million in fiscal year 2007 to support the program. These monies have leveraged federal funds for a total investment to date of \$335 million:

- \$155 million to clean up contaminated sites to promote redevelopment
- \$93 million to clean up contaminated facilities that pose an imminent or substantial endangerment to the public health, safety, or welfare or to the environment
- \$75 million for grants and loans to local governments for response activities at known or suspected contaminated properties with redevelopment potential
- \$12 million to local units of government to assist with remedial costs at municipal solid waste landfills which are on or nominated for the Superfund National Priorities List.⁶⁴

As described in Exhibit 8, in fiscal year 2016, five new grants and one addition to an existing grant were awarded, totaling nearly \$1.8 million.

EXHIBIT 8. Fiscal Year 2016 Michigan Brownfield Redevelopment Grants

Recipient	Amount
Port of Monroe Marine Terminal	\$602,550
Eastside Cleaners, Shiawassee	\$425,000
Inn on Water Street, St. Clair	\$249,875
600 East Michigan, Kalamazoo	\$191,750
Haworth, Village of Douglas	\$164,765
Utica Ballpark	\$126,800
Total	\$1,760,740

SOURCE: Sylvia Renteria, pers. comm.

A net total of \$35 million in Great Lakes Protection Bond funding has been appropriated for Site Reclamation Grants. To date, 78 grants have been awarded, totaling \$45.3 million. In fiscal year 2016, one new grant was awarded totaling \$126,800. All funds have been allocated.

A total of \$10 million in Great Lakes Protection Bond funding has been appropriated for Site Assessment Grants. To date, 121 grants have been awarded in 46 communities, totaling \$13.8 million. In fiscal year 2016, one new grant was awarded. All funds have been allocated.

The RRL Program was originally capitalized through an appropriation transfer of \$4 million of general funds. The RRL Program also received funds for the proceeds associated with the Michigan Department of Technology, Management, and Budget land sales. The original funding, loan repayments, and accumulated interest, as well as returned funds from projects cancelled for various reasons and funds returned for projects that have been completed under budget, can be used to make loans to local units of government. To date, 29 loans have been awarded, totaling \$13 million. In fiscal year 2016, one new loan was awarded totaling \$1 million, loan repayments amounted to \$158,776, and interest on repayments equaled \$25,436.

SPOTLIGHT PROJECT

The Village at Grand Traverse Commons is the site of the former Traverse City State Hospital, a psychiatric hospital beginning in 1885. Upon closing in 1989, the grounds were left in disrepair. The blight, contamination, structural challenges, functional obsolescence, historic-designation constraints, stigma associated with its former use, and sheer cost of redevelopment made it difficult to find a developer for the site.⁶³

Over more than a decade, the site received more than \$3 million in awards to remediate the area and remove lead-based paint, asbestos, and old mechanical equipment. Brownfield grants, loans, and tax increment financing leveraged more than \$35.8 million in private investment, creating 331 jobs.⁶⁴ Today, the site is a unique destination with restaurants, stores, offices, homes, public spaces, and trails funded with \$103 million in total investment and supporting more than 450 jobs, 93 new or expanded businesses, and 238 new residential units.⁶⁵ Additional development—including live-work condos and apartments, a hotel, and possibly a brewpub—is planned for the site.

SPOTLIGHT PROJECT

Located in the City of Monroe, 35 miles south of Detroit, the deep draft commercial harbor of the Port of Monroe is the only port on Lake Erie.⁶⁶ Most of the port's infrastructure was built in the 1930s, and the location offers critical rail, highway, and airport connections.⁶⁷ In 2010, the port supported 577 local jobs that created an economic impact of \$70.0 million in income and consumption.⁶⁸

The port is hamstrung by a 21-foot channel with a turning basin at its head of only 18 feet; fully-loaded lake freighters need 27 feet of water.⁶⁹ In 2015, the port received a \$3 million loan from the Michigan Economic Development Corporation (MEDC) to create two large cofferdams along Lake Erie, allowing ships to be moored against the port.⁷⁰⁻¹ This is the MEDC's first port project. Michigan has 36 ports and no infrastructure to care for them.⁷¹ The project will benefit other Michigan ports by expanding trade routes and cargo opportunities to increase accessibility. At the Port of Monroe, it will reduce cargo delays and allow for the accommodation of larger vessels, transforming the port into a premier Great Lakes general cargo handling facility.⁷²

As part of cofferdam project, significant dredging will be needed.⁷³ In 2016, the port received a \$602,550 Brownfield Redevelopment Grant from the DEQ to ensure that the dredged material is disposed of properly.⁷⁴

KEY PROGRAM: SEA GRANT

Sea Grant is a federal-private partnership that turns science into action to ensure coastal communities remain engines of economic growth. Sea Grant requires a two-to-one match.⁷⁵ Michigan Sea Grant is a cooperative program of the University of Michigan and Michigan State University. It is part of a network of 33 university-based Sea Grant programs and 2,457 scientists, engineers, educators, students and outreach experts working on Sea Grant projects.⁷⁶

The largest portion of Michigan Sea Grant's budget goes toward working with communities to provide research and education that address local needs, support sustainable resource use, and promote economic growth. Staff work with communities to make decisions about infrastructure, economic development, and

tourism. Eight extension educators serve Michigan's 41 coastal communities by living and working there, and 15 staff provide support remotely. According to MLive, "All those jobs would be eliminated should the current budget proposal pass."⁷⁷

Each year, Michigan Sea Grant receives roughly \$1.8 million. In 2015, these monies facilitated \$3.7 million in economic benefits to the state.⁷⁸ Cuts to this program could impact fishery research, beach and boater safety, environmental protection, algal bloom monitoring, icebreaking, maritime security, and rescue capabilities.

SPOTLIGHT PROJECT

Sustainable Harbors is a project funded by Michigan Sea Grant to identify the barriers preventing small harbors from becoming economically, socially, and environmentally sustainable, as well as to equip coastal community leaders with the tools to assess and strengthen their own waterfront assets.⁷⁹

The project launched in 2014 with an in-depth assessment of the unique challenges facing Michigan's small harbor communities. To start, the project team visited communities around the state—Rogers City, St. Ignace, Ontonagon, Au Gres, Pentwater, and New Baltimore—and led public design workshops to help community members develop and prioritize meaningful ways to make their waterfronts more environmentally, socially, and financially sustainable.

The City of New Baltimore used this opportunity to develop a financial and environmental management plan for their harbor and leveraged this plan to obtain a nearly \$3 million grant to purchase a private harbor as part of their public harbor amenities.⁸⁰

REFERENCES

- ¹ Environmental Protection Agency. October 4, 2016. "EPA's Budget and Spending." *Environmental Protection Agency*. Accessed May 25, 2017. <https://www.epa.gov/planandbudget/budget>
- ² Environmental Protection Agency. March 28, 2017. "Our Mission and What We Do." *Environmental Protection Agency*. Accessed May 25, 2017. <https://www.epa.gov/aboutepa/our-mission-and-what-we-do>
- ³ USASpending. 2017. *Data Feed*. Accessed May 25, 2017.
http://download.usaspending.gov/datadownloads/Assistance/99ea97be26b7/Data_Feed.csv
- ⁴ Office of Management and Budget. May 23, 2017. *America First: A Budget Blueprint to Make America Great Again*. Accessed May 25, 2017.
https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/budget/fy2018/2018_blueprint.pdf
- ⁵ Environmental Protection Agency. February 2015. *FY 2016 EPA Budget in Brief*. Accessed May 25, 2017.
https://www.epa.gov/sites/production/files/2015-02/documents/fy_2016_bib_combined_v5.pdf
- ⁶ Great Lakes Restoration Initiative. February 2017. "Spreadsheet of All GLRI Projects." *Great Lakes Restoration Initiative*. Accessed June 5, 2017. <https://www.glri.us/projects/all-glri-projects-20170222.xlsx>
- ⁷ Garret Ellison. March 29, 2017. "Trump Budget Eliminates Great Lakes Cleanup Funds." *MLive*. Accessed May 25, 2017.
http://www.mlive.com/news/index.ssf/2017/03/trump_budget_eliminates_great.html
- ⁸ Michigan Department of Environmental Quality. March 2017. *Fiscal Year 2016 Federal Superfund Legislative Report*. Accessed May 25, 2017. http://www.michigan.gov/documents/deq/deq-rrd-SFS-2016SuperfundLegislativeReport_559627_7.pdf
- ⁹ Ibid.
- ¹⁰ Environmental Protection Network. March 22, 2017. *Analysis of Trump Administration Proposals for FY2018 Budget for the Environmental Protection Agency*. Accessed June 5, 2017.
http://www.4cleanair.org/sites/default/files/Documents/EPA_Budget_Analysis_EPN_3-22-2017.pdf
- ¹¹ Ibid.
- ¹² Ronald Smedley. 2017. "DEQ—EPA Brownfield Assessment and Cleanup Grants for 2017." *Department of Environmental Quality*. Accessed May 25, 2017. http://www.michigan.gov/deq/0,4561,7-135-3311_29262-224215--,00.html

- ¹³ Environmental Protection Agency. November 2015. *Science to Protect Public Health and the Environment: EPA Research Program Overview 2016–2019*. Accessed June 5, 2017. https://www.epa.gov/sites/production/files/2015-10/documents/strap_2016_overview_508.pdf
- ¹⁴ Office of Management and Budget. May 22, 2017. *Major Savings and Reforms: Budget of The U. S. Government Fiscal Year 2018*. Accessed June 5, 2017. <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/budget/fy2018/msar.pdf>
- ¹⁵ Great Lakes Restoration Initiative. February 2017. "Spreadsheet of All GLRI Projects." *Great Lakes Restoration Initiative*. Accessed June 5, 2017. <https://www.glri.us/projects/all-glri-projects-20170222.xlsx>
- ¹⁶ NOAA Sea Grant. April 2017. *A Smart Investment in Our Costal Economy*. Accessed June 5, 2017. <http://seagrant.noaa.gov/Portals/o/Documents/50th%20Anniversary/SG-50-TwoPager-Updated-03312017-2015-numbers.pdf>
- ¹⁷ USASpending. 2017. *Data Feed*. Accessed May 25, 2017. http://download.usaspending.gov/datadownlods/Assistance/99ea97be26b7/Data_Feed.csv
- ¹⁸ State Budget Office. 2017. "Frequently Asked Questions Regarding the State's Finances." *State Budget Office*. Accessed June 5, 2017. <http://www.michigan.gov/budget/0,4538,7-157-40794-139068--F,00.html>
- ¹⁹ Gregory Krieg and Will Mullery. May 23, 2017. "Trump's Budget by The Numbers: What Gets Cut and Why." *CNN*. Accessed June 5, 2017. <http://www.cnn.com/2017/05/23/politics/trump-budget-cuts-programs/>
- ²⁰ USASpending. 2017. *Data Feed*.
- ²¹ Austin Scott. December 2015. "House Fiscal Agency Background Briefing: Natural Resources." PowerPoint presentation. Accessed May 25, 2017. http://house.michigan.gov/hfa/Archives/PDF/Natural_Resources_Budget_Briefing_fy15-16.pdf
- ²² USASpending. 2017. *Data Feed*.
- ²³ Michigan Senate Fiscal Agency. April 17, 2017. *Decision Document: Environmental Quality S.B. 140*. Accessed May 30, 2017. http://www.senate.michigan.gov/sfa/Departments/DecisionDoc/DDdeq_web.pdf
- ²⁴ USASpending. 2017. *Data Feed*.
- ²⁵ Department of Technology, Management, and Budget. February 8, 2017. *Executive Budget: Fiscal Years 2018 and 2019*. Accessed June 5, 2017. http://www.michigan.gov/documents/snyder/Full_FY_2018_budget_proposal_551006_7.pdf

- ²⁶ Michigan Senate Fiscal Agency. April 17, 2017. *Decision Document: Environmental Quality S.B. 140*. Accessed May 30, 2017. http://www.senate.michigan.gov/sfa/Departments/DecisionDoc/DDdeq_web.pdf
- ²⁷ Gregory Krieg and Will Mullery. May 23, 2017. "Trump's Budget by The Numbers: What Gets Cut and Why." *CNN*. Accessed June 5, 2017. <http://www.cnn.com/2017/05/23/politics/trump-budget-cuts-programs/>
- ²⁸ Ibid.
- ²⁹ Great Lakes Restoration Initiative. February 2017. "GLRI Projects." *Great Lakes Restoration Initiative*. Accessed May 25, 2017. <https://www.glri.us/projects/index.html>
- ³⁰ Ibid.
- ³¹ Ibid.
- ³² Garret Ellison. March 29, 2017. "Trump Budget."
- ³³ Great Lakes Restoration Initiative. February 2017. "Spreadsheet."
- ³⁴ Tim Eder and Matt Doss. March 2017. *Great Lakes Restoration at Work*. Accessed May 25, 2017. <http://www.glc.org/wp-content/uploads/2017/03/GLC-Michigan-GLRI-Fact-Sheet-2017-Final-20170309.pdf>
- ³⁵ Great Lakes Restoration Initiative. September 2014. *Great Lakes Restoration Initiative Action Plan II*. Accessed May 25, 2017. <https://www.glri.us/actionplan/pdfs/glri-action-plan-2.pdf>
- ³⁶ Great Lakes Restoration Initiative. February 2017. "Spreadsheet."
- ³⁷ Environmental Protection Agency. October 4, 2016. "Restoring Clinton River AOC (Timeline)." *Environmental Protection Agency*. Accessed May 25, 2017. <https://www.epa.gov/clinton-river-aoc/restoring-clinton-river-aoc-timeline>
- ³⁸ Todd Spangler. November 9, 2015. "EPA Awards \$20 Million for Clinton River Watershed Work." *Detroit Free Press*. Accessed May 25, 2017. <http://www.freep.com/story/news/local/michigan/macomb/2015/11/09/epa-awards-20-million-clinton-river-watershed-work/75463722/>
- ³⁹ Environmental Protection Agency. September 14, 2016. "About Torch Lake AOC." *Environmental Protection Agency*. Accessed June 5, 2017. <https://www.epa.gov/torch-lake-aoc/about-torch-lake-aoc>
- ⁴⁰ Kirk Haverkamp. March 24, 2016. "Upper Peninsula's Areas of Concern Work Toward Restoration and 'Delisting.'" *Second Wave*. Accessed June 5, 2017. <http://www.secondwavemedia.com/upper-peninsula/features/upperpeninsulaAOC.aspx>
- ⁴¹ Ibid.

- 42 Environmental Protection Agency. September 14, 2016. "About Torch Lake."
- 43 Ibid.
- 44 Kirk Haverkamp. March 24, 2016. "Upper Peninsula's Areas of Concern."
- 45 Ibid.
- 46 Environmental Protection Agency. May 1, 2017. "Superfund Remedial Annual Accomplishments." *Environmental Protection Agency*. Accessed May 25, 2017. <https://www.epa.gov/superfund/superfund-remedial-annual-accomplishments>
- 47 Ibid.
- 48 Environmental Protection Agency. April 5, 2017. "Superfund: National Priorities List (NPL)." *Environmental Protection Agency*. Accessed June 7, 2017. <https://www.epa.gov/superfund/superfund-national-priorities-list-npl>
- 49 Environmental Protection Agency. May 16, 2017. "Superfund NPL Site Totals by Status and Milestone." *Environmental Protection Agency*. Accessed May 25, 2017. <https://www.epa.gov/superfund/npl-site-totals-status-and-milestone>
- 50 Environmental Protection Agency. April 5, 2017. "Superfund National Priorities List (NPL) Sites—by State." *Environmental Protection Agency*. Accessed May 25, 2017. <https://www.epa.gov/superfund/national-priorities-list-npl-sites-state#MI>
- 51 Environmental Protection Agency. May 16, 2017. "Superfund NPL Site Totals."
- 52 Environmental Protection Agency. April 5, 2017. "Superfund Deleted National Priorities List (NPL) Sites—by State." *Environmental Protection Agency*. Accessed May 25, 2017. <https://www.epa.gov/superfund/deleted-national-priorities-list-npl-sites-state#MI>
- 53 Michigan Department of Environmental Quality. March 2017. *Fiscal Year 2016 Federal Superfund Legislative Report*. Accessed May 25, 2017. http://www.michigan.gov/documents/deq/deq-rrd-SFS-2016SuperfundLegislativeReport_559627_7.pdf
- 54 Ibid.
- 55 Ibid.
- 56 Environmental Protection Agency. June 5, 2017. "Superfund Site: Allied Paper Inc./Portage Creek/Kalamazoo River." *Environmental Protection Agency*. Accessed June 5, 2017. <https://cumulis.epa.gov/superepad/cursites/csitinfo.cfm?id=0502325>
- 57 Environmental Protection Agency. February 13, 2017. "Learn about Polychlorinated Biphenyls (PCBs)" *Environmental Protection Agency*. Accessed June 5, 2017. <https://www.epa.gov/pCBS/learn-about-polychlorinated-biphenyls-pCBS#what>

- ⁵⁸ Environmental Protection Agency. June 5, 2017. "Superfund Site."
- ⁵⁹ World Heritage Encyclopedia. 2017. "Kalamazoo Superfund Site." *Project Gutenberg Self-publishing Press*. Accessed June 5, 2017. http://www.gutenberg.us/articles/kalamazoo_superfund_site
- ⁶⁰ Environmental Protection Agency. April 28, 2017. "Overview of the Brownfields Program." *Environmental Protection Agency*. Accessed May 25, 2017. <https://www.epa.gov/brownfields/overview-brownfields-program>
- ⁶¹ Ronald Smedley. 2017. "DEQ—EPA Brownfield Assessment."
- ⁶² Department of Environmental Quality. 2017. "CMI Brownfield Funding." *Michigan.gov*. Accessed June 5, 2017. http://www.michigan.gov/deq/0,4561,7-135-3311_29262-103375--,00.html
- ⁶³ The Village at Grand Traverse Commons. October 2015. "Committed to the Asylum: Preserving History, Reusing Buildings and Growing the Economy by Creating a Neighborhood." PowerPoint presentation. https://www.michigan.gov/documents/deq/ERRMC_TC_Keynote_Minnervini_GrandTraverseCommons_505360_7.pdf
- ⁶⁴ Michigan Sea Grant. 2010. Diamonds in the Rough: Reclaiming Brownfields for Michigan's Communities. Accessed June 5, 2017. http://www.michigan.gov/documents/deq/deq-rrd-BRA-BrownfieldSuccessesBrochureSeaGrant-2-2010_313891_7.pdf
- ⁶⁵ Susan Wenzlick. March 29, 2017. "Historic Grand Traverse Commons Featured in New Video." *Michigan.gov*. Accessed June 5, 2017. <http://www.michigan.gov/som/0,4669,7-192-47796-407841--,00.html>
- ⁶⁶ Port of Monroe. 2017. "Welcome to The Port of Monroe." *Port of Monroe*. Accessed June 5, 2017. <http://www.portofmonroe.com/>
- ⁶⁷ David Patch. December 11, 2016. "Toledo Ship's Savior Revives Monroe Port." *The Blade*. Accessed June 5, 2017. <http://www.toledoblade.com/local/2016/12/11/Toledo-ship-s-savior-revives-Monroe-port.html>
- ⁶⁸ Martin Associates. October 2012. The Economic Impacts of The Port of Monroe. Accessed June 5, 2017. <http://www.portofmonroe.com/Portals/1028/docs/PORT-OF-MONROE-Economic-Impacts.pdf>
- ⁶⁹ David Patch. December 11, 2016. "Toledo Ship's Savior."
- ⁷⁰ Ibid.
- ⁷¹ Ibid.
- ⁷² Ibid.

- ⁷³ City of Monroe. September 21, 2015. "Resolution of Support for Port of Monroe Grant Application to the MDEQ." *City of Monroe*. Accessed June 5, 2017.
http://monroecitymi.iqm2.com/Citizens/Detail_LegiFile.aspx?MeetingID=2330&ID=1211
- ⁷⁴ Ibid.
- ⁷⁵ NOAA Sea Grant. April 2017. *A Smart Investment in Our Coastal Economy*. Accessed June 5, 2017.
<http://seagrant.noaa.gov/Portals/o/Documents/50th%20Anniversary/SG-50-TwoPager-Updated-03312017-2015-numbers.pdf>
- ⁷⁶ Ibid.
- ⁷⁷ Martin Slagter. March 10, 2017. "Proposed Federal Cuts Would Eliminate U-M and MSU Sea Grant Program." MLive. Accessed June 5, 2017. http://www.mlive.com/news/ann-arbor/index.ssf/2017/03/ums_sea_grant_impacts_economy.html
- ⁷⁸ Ibid.
- ⁷⁹ Martin Slagter. March 10, 2017. "Proposed Federal Cuts."
- ⁸⁰ Sea Grant Michigan. 2017. "Sustainable Small Harbors." *Sea Grant Michigan*. Accessed June 5, 2017.
<http://www.miseagrant.umich.edu/smallharborsustainability/>

APPENDIX A. EPA MICHIGAN GRANTS REPORT

Recipient	Recipient County	Grant Amount	Program Title
Michigan Dept. of Environmental Quality	Ingham	\$57,450,000	Capitalization Grants for State Revolving Fund
Michigan Dept. of Environmental Quality	Ingham	\$25,873,000	Safe Drinking Water State Revolving Fund
City of St. Louis	Gratiot	\$6,900,000	Superfund State Political Subdivision and Indian Tribe Site Specific Cooperative
County of Wayne	Wayne	\$6,500,000	Great Lakes Program
Michigan Dept. of Environmental Quality	Ingham	\$5,978,590	Performance Partnership Grants
City of Macomb - Public Works	Macomb	\$5,652,000	Great Lakes Program
City of Sterling Heights	Macomb	\$4,005,000	Great Lakes Program
Great Lakes Fishery Commission	Washtenaw	\$3,566,545	Great Lakes Program
Michigan Dept. of Environmental Quality	Ingham	\$2,594,260	State Public Water System Supervision
Michigan Dept. of Environmental Quality	Ingham	\$2,526,620	Performance Partnership Grants
Michigan Dept. of Environmental Quality	Ingham	\$2,504,490	Performance Partnership Grants
Michigan Dept. of Environmental Quality	Ingham	\$2,467,693	Hazardous Waste Management State Program Support
Michigan Dept. of Environmental Quality	Ingham	\$2,429,244	Great Lakes Program
Michigan Dept. of Environmental Quality	Ingham	\$2,272,500	Nonpoint Source Implementation
Central Michigan University	Isabella	\$1,970,982	Great Lakes Program
Michigan Dept. of Environmental Quality	Ingham	\$1,728,018	Leaking Underground Storage Tank Trust Fund Program
Michigan Dept. of Environmental Quality	Ingham	\$1,560,740	State Public Water System Supervision
Southwest Detroit Environmental Vision	Wayne	\$1,212,099	National Clean Diesel Funding Assistance Program (B)
Michigan Dept. of Environmental Quality	Ingham	\$1,130,416	Air Pollution Control Program Support
Michigan Dept. of Environmental Quality	Ingham	\$1,088,030	Air Pollution Control Program Support
Michigan Dept. of Environmental Quality	Ingham	\$905,578	Air Pollution Control Program Support
Michigan Dept. of Environmental Quality	Ingham	\$848,470	Air Pollution Control Program Support
Michigan Dept. of Environmental Quality	Ingham	\$839,123	State and Tribal Response Program Grants
Michigan Dept. of Environmental Quality	Ingham	\$833,000	Great Lakes Program
Detroit Wayne County Port Authority	Wayne	\$820,000	Brownfields Assessment and Cleanup Cooperative Agreements
Michigan Dept. of Environmental Quality	Ingham	\$787,654	Surveys-Studies-Investigations-Demonstrations and Special Purpose Activities
Regents of the University of Michigan	Washtenaw	\$724,664	Science to Achieve Results (STAR) Program
Michigan Dept. of Environmental Quality	Ingham	\$713,027	Hazardous Waste Management State Program Support
Michigan Technological University	Houghton	\$648,799	Great Lakes Program
Tip of the Mitt Watershed Council	Emmet	\$641,077	Great Lakes Program
George W. Kuhn Drainage District	Oakland	\$600,000	Brownfields Assessment and Cleanup Cooperative Agreements

Michigan Department of Licensing and Regulatory Affairs	Ingham	\$592,540	State Underground Storage Tanks Program
Michigan Dept. of Environmental Quality	Ingham	\$580,369	Superfund State Political Subdivision and Indian Tribe Site Specific Cooperative
Michigan Dept. of Environmental Quality	Ingham	\$580,000	Water Quality Management Planning
Michigan Dept. of Environmental Quality	Ingham	\$543,410	Air Pollution Control Program Support
City of Grand Rapids	Kent	\$500,000	Brownfields Assessment and Cleanup Cooperative Agreements
Grand Traverse Bay Watershed Initiative	Leelanau	\$499,370	Great Lakes Program
Macatawa Area Coordinating Council	Ottawa	\$473,111	Great Lakes Program
Michigan Technological University	Houghton	\$470,407	Great Lakes Program
Michigan Depart of Health & Human Services	Ingham	\$434,086	State Lead Program Grants
Grand Valley State University	Ottawa	\$405,275	Great Lakes Program
Kalamazoo County Government	Kalamazoo	\$400,000	Brownfields Assessment and Cleanup Cooperative Agreements
Van Buren County	Van Buren	\$400,000	Brownfields Assessment and Cleanup Cooperative Agreements
Michigan Dept. of Environmental Quality	Ingham	\$369,800	WPC State and Interstate Program Support
Nottawaseppi Huron Band of Potawatomi	Calhoun	\$368,203	Performance Partnership Grants
Michigan Dept. of Environmental Quality	Ingham	\$360,000	Regional Wetlands Program Development Grants
Keweenaw Bay Indian Community	Baraga	\$348,814	Performance Partnership Grants
Little River Band of Ottawa Indians	Manistee	\$342,279	Performance Partnership Grants
Grand Valley Metropolitan Council	Kent	\$340,065	Great Lakes Program
Great Lakes Commission	Washtenaw	\$340,000	Great Lakes Program

APPENDIX B. DEPARTMENT OF COMMERCE NOAA MICHIGAN GRANTS – 2016

Recipient	Recipient County	Grant Amount	Program Title
Great Lakes Commission	Washtenaw	\$8,058,200	Habitat Conservation
Friends of Detroit River		\$4,828,635	Habitat Conservation
Regents of the University of Michigan	Washtenaw	\$3,965,258	Coastal Zone Management Administration Awards
Environmental Quality, Michigan Department of		\$3,795,056	Habitat Conservation
Environmental Quality, Michigan Department of	Ingham	\$2,605,000	Coastal Zone Management Administration Awards
Friends of Detroit River	Wayne	\$2,330,898	Habitat Conservation
Great Lakes Commission	Washtenaw	\$2,093,012	Habitat Conservation
Great Lakes Observing System Regional Associates		\$1,657,748	Integrated Ocean Observing System (IOOS)
Regents of the University of Michigan	Washtenaw	\$1,114,075	Sea Grant Support
Regents of the University of Michigan	Washtenaw	\$724,492	NOAA Cooperative Institutes
Regents of the University of Michigan	Washtenaw	\$700,000	Climate and Atmospheric Research
Regents of the University of Michigan	Washtenaw	\$648,914	Climate and Atmospheric Research
Ducks Unlimited, Inc.	Washtenaw	\$600,000	Habitat Conservation
Regents of the University of Michigan	Washtenaw	\$575,421	Center for Sponsored Coastal Ocean Research - Coastal Ocean Program
Regents of the University of Michigan	Washtenaw	\$496,751	NOAA Cooperative Institutes
Regents of the University of Michigan	Washtenaw	\$394,943	NOAA Cooperative Institutes
Regents of the University of Michigan	Washtenaw	\$340,666	NOAA Cooperative Institutes
Regents of the University of Michigan	Washtenaw	\$330,899	Sea Grant Support
Friends of Detroit River	Wayne	\$265,000	Habitat Conservation
Regents of the University of Michigan	Washtenaw	\$206,651	Sea Grant Support
Regents of the University of Michigan	Washtenaw	\$181,520	NOAA Cooperative Institutes
Regents of the University of Michigan	Washtenaw	\$179,724	NOAA Cooperative Institutes
Regents of the University of Michigan	Washtenaw	\$163,307	NOAA Cooperative Institutes
Regents of the University of Michigan	Washtenaw	\$162,918	NOAA Cooperative Institutes
Regents of the University of Michigan	Washtenaw	\$151,979	NOAA Cooperative Institutes
Regents of the University of Michigan	Washtenaw	\$148,241	Sea Grant Support
Friends of Thunder Bay National Marine Sanctuary	Alpena	\$131,191	Ocean Exploration
Regents of the University of Michigan	Washtenaw	\$121,561	Ocean Exploration
Regents of the University of Michigan	Washtenaw	\$118,711	Ocean Exploration
Regents of the University of Michigan	Washtenaw	\$117,771	NOAA Cooperative Institutes
Regents of the University of Michigan	Washtenaw	\$116,605	NOAA Cooperative Institutes
Regents of the University of Michigan		\$113,000	Climate and Atmospheric Research
Regents of the University of Michigan	Washtenaw	\$109,991	Weather and Air Quality Research
Regents of the University of Michigan	Washtenaw	\$106,100	NOAA Cooperative Institutes
Regents of the University of Michigan	Washtenaw	\$99,924	NOAA Cooperative Institutes
Regents of the University of Michigan	Washtenaw	\$96,392	NOAA Cooperative Institutes
Regents of the University of Michigan	Washtenaw	\$88,345	Ocean Exploration

Michigan State University	Ingham	\$75,000	Marine Sanctuary Program
Eastern Michigan University	Washtenaw	\$75,000	Marine Sanctuary Program
Inland Seas Education Association Corp		\$74,969	Marine Sanctuary Program
Saginaw Valley State University	Bay	\$73,675	Marine Sanctuary Program
Regents of the University of Michigan	Washtenaw	\$73,554	NOAA Cooperative Institutes
Regents of the University of Michigan	Washtenaw	\$69,929	NOAA Cooperative Institutes
Regents of the University of Michigan		\$66,447	NOAA Cooperative Institutes
Regents of the University of Michigan	Washtenaw	\$60,000	Sea Grant Support
Regents of the University of Michigan	Washtenaw	\$56,500	Sea Grant Support
Regents of the University of Michigan	Washtenaw	\$56,500	Sea Grant Support
Regents of the University of Michigan	Washtenaw	\$56,500	Sea Grant Support
Muskegon Area Intermediate School District	Muskegon	\$54,205	Marine Sanctuary Program
Regents of the University of Michigan	Washtenaw	\$49,000	NOAA Cooperative Institutes
Great Lakes Commission	Washtenaw	\$8,058,200	Habitat Conservation

APPENDIX C. 2016 MICHIGAN SUPERFUND PRIORITY LIST

Site Name	City	Listing Date
Adam's Plating	Lansing	3/31/89
Aircraft Components (D & L Sales)	Benton Harbor	6/17/96
Albion-Sheridan Township Landfill	Albion	10/4/89
Allied Paper, Inc./Portage Creek/Kalamazoo River	Kalamazoo	8/30/90
American Anodco, Inc.	Ionia	3/31/89
Auto Ion Chemicals, Inc.	Kalamazoo	9/8/83
Barrels, Inc.	Lansing	10/4/89
Bendix Corp./Allied Automotive	St. Joseph	2/21/90
Bofors Nobel, Inc.	Muskegon	3/31/89
Butterworth #2 Landfill	Grand Rapids	9/8/83
Cannelton Industries, Inc.	Sault Sainte Marie	8/30/90
Chem Central	Wyoming Township	9/8/83
Clare Water Supply	Clare	9/21/84
DSC McLouth Steel Gibraltar Plant	Gibraltar	3/26/15
Duell & Gardner Landfill	Dalton Township	9/8/83
Electrovoice	Buchanan	9/21/84
Forest Waste Products	Otisville	9/8/83
G&H Landfill	Utica	9/8/83
Grand Traverse Overall Supply Co.	Greilickville	9/8/83
Gratiot County Golf Course	St. Louis	3/4/10
Gratiot County Landfill	St. Louis	9/8/83
H. Brown Co., Inc.	Grand Rapids	6/10/86
Hedblum Industries	Oscoda	9/8/83
Hi-Mill Manufacturing Co.	Highland	2/21/90
Ionia City Landfill	Ionia	9/8/83
J & L Landfill	Rochester Hills	3/31/89
K&L Avenue Landfill	Oshtemo Township	9/8/83
Kaydon Corp.	Muskegon	2/21/90
Kentwood Landfill	Kentwood	9/8/83
Kysor Industrial Corp.	Cadillac	10/4/89
Liquid Disposal, Inc.	Utica	9/8/83
McGraw Edison Corp.	Albion	9/8/83
Metamora Landfill	Metamora	9/21/84
Michigan Disposal Service (Cork Street Landfill)	Kalamazoo	2/21/90
Motor Wheel, Inc.	Lansing	6/10/86
Muskegon Chemical Co.	Whitehall	2/21/90
North Bronson Industrial Area	Bronson	6/10/86
Northernair Plating	Cadillac	9/8/83
Organic Chemicals, Inc.	Grandville	9/8/83
Ott/Story/Cordova Chemical Co.	Dalton Township	9/8/83
Packaging Corp. of America	Filer City	9/8/83
Parsons Chemical Works, Inc.	Grand Ledge	3/31/89
Peerless Plating Co.	Muskegon	8/30/90

Petoskey Municipal Well Field	Petoskey	9/8/83
Rasmussen's Dump	Brighton	9/8/83
Rockwell International Corp. (Allegan Plant)	Allegan	7/22/87
Rose Township Dump	Rose Township	9/8/83
Roto-Finish Co., Inc.	Kalamazoo	6/10/86
SCA Independent Landfill	Muskegon Heights	9/8/83
Shiawassee River	Howell	9/8/83
South Macomb Disposal Authority (Landfills #9 and #9A)	Macomb Township	6/10/86
Southwest Ottawa County Landfill	Park Township	9/8/83
Sparta Landfill	Sparta Township	9/8/83
Spartan Chemical Co.	Wyoming	9/8/83
Springfield Township Dump	Davisburg	9/8/83
State Disposal Landfill, Inc.	Grand Rapids	2/21/90
Sturgis Municipal Wells	Sturgis	9/21/84
Tar Lake	Mancelona Township	9/8/83
Ten-Mile Drain	St. Clair Shores	9/29/10
Thermo-Chem, Inc.	Muskegon	6/10/86
Torch Lake	Houghton County	6/10/86
U.S. Aviex	Howard Township	9/8/83
Velsicol Chemical Corp.(Michigan)	St. Louis	9/8/83
Verona Well Field	Battle Creek	9/8/83
Wash King Laundry	Pleasant Plains Township	9/8/83



**PUBLIC SECTOR
CONSULTANTS**

230 N. Washington Square
Suite 300
Lansing, MI 48933