



MICHIGAN

OFFICE OF THE AUDITOR GENERAL

AUDIT REPORT

PERFORMANCE AUDIT
OF THE

CLEAN MICHIGAN INITIATIVE
ENVIRONMENTAL PROTECTION PROGRAMS

DEPARTMENT OF ENVIRONMENTAL QUALITY

September 2014



Doug A. Ringler, C.P.A., C.I.A.
AUDITOR GENERAL

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– Article IV, Section 53 of the Michigan Constitution

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Michigan
Office of the Auditor General
REPORT SUMMARY

*Performance Audit
 Clean Michigan Initiative
 Environmental Protection Programs
 Department of Environmental Quality*

Report Number:
 761-0217-14

Released:
 September 2014

The Department of Environmental Quality (DEQ) administers environmental protection programs funded with Clean Michigan Initiative (CMI) bond proceeds. These programs include response activities at facilities, the Waterfront Redevelopment Program, the Remediation of Contaminated Lake and River Sediments Program, the Nonpoint Source Pollution Prevention and Control Program, the Clean Water Fund, and the Pollution Prevention Program. This performance audit was required by Section 324.19615 of the Michigan Compiled Laws.

Audit Objective			Audit Conclusion
Objective 1: To assess the effectiveness of DEQ's efforts to ensure that the use of CMI funds complies with laws, regulations, and contract requirements.			Effective
Finding Related to This Audit Objective	Material Condition	Reportable Condition	Agency Preliminary Response
DEQ did not ensure that Brownfield Redevelopment Loan Program recipients provided supporting documentation for CMI-funded projects in a timely manner (<u>Finding 1</u>).		X	Agrees

Audit Objective			Audit Conclusion
Objective 2: To compile and report selected data for DEQ programs eligible for CMI funding.			Compiled and reported
Observation Related to This Audit Objective	Material Condition	Reportable Condition	Agency Preliminary Response
Status of CMI Programs and Funding (<u>Observation 1</u>).	Not applicable	Not applicable	Not applicable

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AUDITOR GENERAL

September 18, 2014

Mr. Dan Wyant, Director
Department of Environmental Quality
Constitution Hall
Lansing, Michigan

Dear Mr. Wyant:

This is our report on the performance audit of the Clean Michigan Initiative Environmental Protection Programs administered by the Department of Environmental Quality.

This report is issued pursuant to Section 324.19615 of the *Michigan Compiled Laws*, which states that the Office of the Auditor General shall conduct a performance audit every two years of programs funded with Clean Michigan Initiative bond proceeds. Upon completion of the performance audit, the Office of the Auditor General shall submit a report on the audit to the audited department and the Legislature.

This report contains our report summary; a description of programs; our audit objectives, scope, and methodology and agency responses and prior audit follow-up; comments, finding, recommendation, agency preliminary response, and observation; five exhibits, presented as supplemental information; and a glossary of abbreviations and terms.

Our comments, finding, recommendation, and observation are organized by audit objective. The agency preliminary response was taken from the agency's response at the end of our audit fieldwork. The *Michigan Compiled Laws* and administrative procedures require that the audited agency develop a plan to comply with the audit recommendation and submit it within 60 days after release of the audit report to the Office of Internal Audit Services, State Budget Office. Within 30 days of receipt, the Office of Internal Audit Services is required to review the plan and either accept the plan as final or contact the agency to take additional steps to finalize the plan.

We appreciate the courtesy and cooperation extended to us during this audit.

Sincerely,


Doug Ringler
Auditor General

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Description of Programs

Clean Michigan Initiative (CMI)

In November 1998, Michigan voters approved \$675 million of CMI bonds for environmental, natural resources, and health protection programs that would clean up and redevelop contaminated sites; protect and improve water quality; prevent pollution; abate lead contamination; reclaim and revitalize community waterfronts; enhance recreational opportunities; and clean up contaminated sediments in lakes, rivers, and streams. The six environmental protection programs administered by the Department of Environmental Quality (DEQ) are response activities* at facilities*, the Waterfront Redevelopment Program, the Remediation of Contaminated Lake and River Sediments Program, the Nonpoint Source Pollution Prevention and Control Program, the Clean Water Fund, and the Pollution Prevention Program.

The Department of Natural Resources administered the CMI natural resources protection programs. The Department of Community Health administered the CMI health protection program.

Sections 324.19601 - 324.19616 of the *Michigan Compiled Laws* provide for the specific use of CMI bond proceeds as follows:

	Up to
<u>Environmental Protection Programs:</u>	
Response activities at facilities	\$335,000,000
Waterfront improvements	50,000,000
Remediation of contaminated lake and river sediments	25,000,000
Nonpoint source pollution prevention and control projects or wellhead protection projects	50,000,000
Water quality monitoring, water resources protection, and pollution control activities	90,000,000
Pollution prevention programs	20,000,000
<u>Natural Resources Protection Programs:</u>	
State park infrastructure improvements	50,000,000
Local recreation projects	50,000,000
<u>Health Protection Program:</u>	
Abatement of lead hazards	5,000,000
Total	\$675,000,000

* See glossary at end of report for definition.

DEQ's environmental protection programs account for \$570 million (84%) of the total \$675 million of CMI bonds. As of September 30, 2013, the State of Michigan had issued nearly \$490 million (86%) of CMI bonds for the environmental protection programs administered by DEQ.

DEQ's CMI Programs

DEQ, through its various divisions, administers the following CMI programs:

1. Response Activities at Facilities (up to \$335 million): These activities are provided through four programs:
 - Environmental Cleanup and Redevelopment Program (\$241 million)
This Program provides State-funded cleanups at contaminated facilities that pose an imminent or substantial endangerment to the public health, safety, or welfare or to the environment. It also provides cleanups and/or demolition at sites in order to promote commercial redevelopment, create jobs, and revitalize neighborhoods.
 - Brownfield* Redevelopment Grant and Loan Programs (\$75 million)
These two programs provide grants (\$50 million) and loans (\$25 million) to local units of government for response activities at known or suspected contaminated properties with redevelopment potential.
 - Municipal Landfill Cost-Share Grants (\$12 million)
This program provides grants to local units of government that undertake cleanup actions at municipal solid waste landfills on, or nominated for, the federal Superfund National Priorities List of contaminated sites.
2. Waterfront Redevelopment Program (up to \$50 million): This Program provides grants to local communities for innovative waterfront improvements that contribute significantly to the local community's economy; to the redevelopment or revitalization of neighborhoods; and to increase public access to the Great Lakes, their connecting waterways, a river, or lake. Eligible activities include environmental response activities, acquisition of waterfront property, relocation and/or demolition of buildings and facilities, and infrastructure and public facility improvements.

* See glossary at end of report for definition.

3. Remediation of Contaminated Lake and River Sediments Program (up to \$25 million): This Program expands efforts already underway to remove sediments from lakes and rivers contaminated by toxins, such as polychlorinated biphenyls (PCBs), mercury, and dichlorodiphenyltrichloroethane (DDT).
4. Nonpoint Source Pollution Prevention and Control Program (up to \$50 million): This Program provides grants to nonprofit entities or local units of government to implement physical improvements as identified in an approved DEQ watershed management plan to control the runoff of pollutants such as sediment, nutrients, and pesticides into rivers, lakes, and streams. Physical improvements are defined as vegetative and structural practices and include vegetative buffers, conservation easements, storm water basins, fencing to prevent livestock access to streams, and other practices that control nonpoint source pollution.
5. Clean Water Fund (up to \$90 million): This Fund, which includes the Water Quality Monitoring Program, provides funds to implement a comprehensive water quality monitoring plan to determine water quality trends, evaluate water protection programs, and detect emerging problems. Funding also supports implementation of a variety of other water quality programs, including implementing recommendations in watershed management plans in high quality waters and Great Lakes areas of concern*; implementing voluntary municipal storm water permits; identifying and eliminating illicit connections to storm sewer systems; locating and plugging abandoned wells; identifying and fixing failing septic systems that threaten or impair State waters; and establishing technical and decision support tools for the Water Use and Withdrawal Program. In addition, CMI funding provides State matching funds required to obtain federal funding for the Conservation Reserve Enhancement Program.
6. Pollution Prevention Program (up to \$20 million): This Program consists of three subprograms:
 - Retired Engineers Technical Assistance Program Fund (\$10 million)
This subprogram creates an endowment to provide funding for pollution prevention assessments by retired engineers and scientists for small businesses, municipalities, and public institutions.

* See glossary at end of report for definition.

- Small Business Pollution Prevention Assistance - Revolving Loan Fund (\$5 million)

This subprogram provides funds to establish a revolving loan fund for small businesses to implement pollution prevention improvements.

- Pollution Prevention Activities (\$5 million)

This subprogram will further pollution prevention activities throughout the State, including start-up funding for local governments to operate household hazardous waste collections; grants to public and private organizations to implement regional pollution prevention projects; establishment of the Green Chemistry Support Program to advance research, development, and implementation of green chemistry technologies and practices; and development of an environmental education curriculum for middle schools.

As of September 30, 2013, DEQ had expended \$496.7 million in CMI funds on environmental protection projects since fiscal year 1998-99.

Audit Objectives, Scope, and Methodology and Agency Responses and Prior Audit Follow-Up

Audit Objectives

Our performance audit* of the Clean Michigan Initiative (CMI) Environmental Protection Programs, Department of Environmental Quality (DEQ), had the following audit objectives:

1. To assess the effectiveness* of DEQ's efforts to ensure that the use of CMI funds complies with laws, regulations, and contract requirements.

2. To compile and report selected data for DEQ programs eligible for CMI funding.

Audit Scope

Our audit scope was to examine the Department of Environmental Quality's efforts to ensure that the use of Clean Michigan Initiative funds complies with laws, regulations, and contract requirements. In addition, our audit scope included compiling and reporting selected data for DEQ programs eligible for CMI funding. We selected the following programs to include within the scope of our audit: the Environmental Cleanup and Redevelopment Program, Brownfield Redevelopment Grant Program, Brownfield Redevelopment Loan Program, Remediation of Contaminated Lake and River Sediments Program, Nonpoint Source Pollution Prevention and Control Program, and Water Quality Monitoring Program.

We did not include the following programs and subprograms within the scope of this audit: Voluntary Storm Water Permits Grant Program, Illicit Storm Sewer Connection Grants Program, Pollution Prevention Program, Waterfront Redevelopment Program, and Water Use and Withdrawal Program. Accordingly, we do not express any conclusions related to these programs and subprograms.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our finding and conclusions based on our audit objectives. We believe that the evidence

* See glossary at end of report for definition.

obtained provides a reasonable basis for our finding and conclusions based on our audit objectives. Our procedures, which included a preliminary survey, audit fieldwork, report preparation, analysis of agency response, and quality assurance, generally covered the period October 1, 2011 through September 30, 2013.

As part of our audit, DEQ provided supplemental information, which we compiled and presented as Exhibits 1 through 5. Our audit was not directed toward expressing a conclusion on this supplemental information.

Audit Methodology

We conducted a preliminary review of DEQ's operations related to CMI to formulate a basis for defining the audit objectives and scope. We interviewed DEQ personnel to obtain an understanding of CMI programs and projects and the use of CMI funding. We reviewed applicable laws, regulations, policies, procedures, and other reference materials. We reviewed selected CMI files, records, and reports. We used a risk-based approach to select CMI-funded programs.

To accomplish our first objective, we:

- Interviewed DEQ staff to obtain an understanding of CMI processes and procedures for monitoring CMI-funded projects.
- Reviewed applicable project monitoring criteria included in the *Michigan Compiled Laws, Michigan Administrative Code*, and applicable contract language.
- Randomly and judgmentally selected a sample of projects that were completed during our audit period and assessed DEQ's efforts to ensure that the use of CMI funds complied with laws, regulations, and contract requirements.

To accomplish our second objective, we compiled and reported selected data for DEQ programs eligible for CMI funding.

We based our audit conclusions on our audit efforts described in the preceding paragraphs and the resulting reportable condition* and observation* noted in the comments, finding, recommendation, agency preliminary response, and observation

* See glossary at end of report for definition.

section. In our professional judgment, the reportable condition is less severe than a material condition* but represents a significant deficiency in internal control.

When selecting activities or programs for audit, we direct our efforts based on risk and opportunities to improve the operations of State government. Consequently, we prepare our performance audit reports on an exception basis.

Agency Responses and Prior Audit Follow-Up

Our audit report contains 1 finding and 1 corresponding recommendation. DEQ's preliminary response indicates that it agrees with the recommendation.

The agency preliminary response that follows the recommendation in our report was taken from the agency's written comments and oral discussion at the end of our audit fieldwork. Section 18.1462 of the *Michigan Compiled Laws* and the State of Michigan Financial Management Guide (Part VII, Chapter 4, Section 100) requires DEQ to develop a plan to comply with the audit recommendation and submit it within 60 days after release of the audit report to the Office of Internal Audit Services, State Budget Office. Within 30 days of receipt, the Office of Internal Audit Services is required to review the plan and either accept the plan as final or contact the agency to take additional steps to finalize the plan.

We released our prior performance audit of the Clean Michigan Initiative Environmental Protection Programs, Department of Environmental Quality (761-0217-12), in November 2012. DEQ complied with the prior audit recommendation.

* See glossary at end of report for definition.

COMMENTS, FINDING, RECOMMENDATION,
AGENCY PRELIMINARY RESPONSE, AND
OBSERVATION

EFFORTS TO ENSURE THAT THE USE OF FUNDS COMPLIES WITH LAWS, REGULATIONS, AND CONTRACT REQUIREMENTS

COMMENT

Audit Objective: To assess the effectiveness of the Department of Environmental Quality's (DEQ's) efforts to ensure that the use of Clean Michigan Initiative (CMI) funds complies with laws, regulations, and contract requirements.

Audit Conclusion: We concluded that DEQ's efforts to ensure that the use of CMI funds complies with laws, regulations, and contract requirements were effective.

Factors leading to this conclusion include:

- Our audit report does not include any reportable conditions related to this audit objective for 5 of the 6 CMI-funded programs that we reviewed.
- The 6 CMI-funded programs that we reviewed accounted for 96% of the total CMI-funded expenditures for our two-year audit period.

FINDING

1. Brownfield Redevelopment Loan Program Supporting Documentation

DEQ did not ensure that Brownfield Redevelopment Loan Program (Brownfield Loan) recipients provided supporting documentation for CMI-funded projects in a timely manner. As a result, DEQ could not ensure the timely return and redirection of unused CMI funds to other Brownfield Loan projects.

Michigan Administrative Code R 299.5061 provides DEQ with guidelines for project compliance that are communicated to loan recipients through project contract agreements. For example, section IV(a) of the standard Brownfield Loan contract requires loan recipients to complete and submit quarterly progress reports, including supporting documentation, for eligible project expenses.

Our review of 4 of the 10 Brownfield Loan projects completed during our audit period disclosed:

- a. DEQ did not collect supporting documentation for \$103,222 in project expenditures reported by 2 of the 4 Brownfield Loan recipients on their quarterly progress reports. Brownfield Loan contracts require that supporting documentation for project expenditures be included with the submission of the quarterly progress reports. Collecting all supporting documentation would enable DEQ to ensure that all expenditures were eligible.
- b. DEQ did not always ensure the timely completion of the closeout process. We noted that DEQ did not request, and the recipient did not return, loan draws in excess of project expenditures in the amount of \$38,261 related to one completed Brownfield Loan project. As of November 2009, this recipient had received \$330,592 in loans from DEQ. However, at the completion of the project in August 2013, total project expenditures reported by the recipient were \$292,331, or \$38,261 less than the amount that DEQ loaned to the recipient. Obtaining the timely return of Brownfield Loan funds distributed to recipients but not used toward the completion of a project would enable DEQ to use the funds for other projects.

DEQ management informed us that it requires DEQ project managers to complete a closeout checklist upon completion of each project. During the closeout process, DEQ project managers should identify any funds distributed in excess of project expenditures as well as any missing quarterly progress reports and supporting documentation.

RECOMMENDATION

We recommend that DEQ ensure that Brownfield Loan recipients provide supporting documentation for CMI-funded projects in a timely manner.

AGENCY PRELIMINARY RESPONSE

DEQ agrees with the recommendation and will comply. DEQ believes that compensating controls exist to verify that proper supporting documentation is provided for CMI expenditures. Current practice requires DEQ staff to follow up on documentation at the time of project closeout. The projects identified in the finding

had not yet been closed out. To ensure that projects are closed out in a more timely fashion, DEQ informed us that it has established a process to track the status of project closeouts on a semiannual basis.

SELECTED DATA FOR DEQ PROGRAMS ELIGIBLE FOR CMI FUNDING

COMMENT

Audit Objective: To compile and report selected data for DEQ programs eligible for CMI funding.

Audit Conclusion: We compiled and reported selected data for DEQ programs eligible for CMI funding.

Observation 1 provides information regarding the status of CMI programs and funding. Exhibit 1 presents a summary of CMI authorizations and expenditures by program. Exhibit 2 presents the number of CMI-funded projects by program. Exhibit 3 presents examples of cleanup projects completed by DEQ. Exhibit 4 presents the number of identified unfunded CMI-eligible project sites. Exhibit 5 presents the funding status of high-priority Environmental Cleanup and Redevelopment Program (ECRP) projects by county.

OBSERVATION

1. **Status of CMI Programs and Funding**

Since fiscal year 1998-99, DEQ has used CMI bond proceeds to fund cleanup and monitoring projects for 20 environmental protection programs. At the time of our audit, 8 of these programs had CMI funding still available. Sections 324.19601 - 324.19616 of the *Michigan Compiled Laws* authorized \$570 million to be spent by DEQ on environmental protection programs. As of September 30, 2013, DEQ had been appropriated \$515 million of the \$570 million of CMI funds and had expended \$496.7 million, leaving an unexpended balance of \$73.3 million. Exhibit 1 presents a list of active and inactive CMI-funded programs and cumulative appropriations

and expenditures by program. The remaining \$73.3 million of CMI funds are restricted by legislation for the following activities:

Ongoing projects and activities	\$27.6 million
Response activities at facilities, including grants, new remediation projects, and maintenance and monitoring of previously completed projects	21.8 million
Nonpoint source pollution cleanup	12.7 million
Continued Statewide water quality monitoring	6.7 million
Completion of contaminated lake and river sediment projects and investigative proceedings for new projects	3.8 million
Various pollution prevention programs	0.7 million
	<hr/>
Total	<u>\$73.3 million</u>

Since fiscal year 1998-99, DEQ has funded over 1,400 projects using CMI bond proceeds. Exhibit 2 presents the number of CMI-funded projects by program. Exhibit 3 presents examples of cleanup projects that DEQ has successfully completed.

Although DEQ has completed cleanup efforts on many projects, numerous projects remain, which indicates that the demand for funding greatly exceeds the amount of CMI resources available. The following presents the status of DEQ programs and examples of unfunded projects:

a. Environmental Cleanup and Redevelopment Program (ECRP):

ECRP is the most significant of DEQ's environmental cleanup programs, accounting for 45% of all CMI expenditures. As of September 30, 2013, DEQ had expended or designated \$226 million of the \$241 million in CMI funds authorized for ECRP. DEQ plans to use the remaining \$15 million of available ECRP CMI funds to maintain and monitor completed sites and to remediate a small number of projects.

DEQ has assessed 286 ECRP project sites as high-priority. However, these sites are either unfunded, have been placed on funding hold, or are insufficiently funded. DEQ also identified an additional 1,925 project sites where it has yet to perform an initial assessment. Exhibit 4 presents the number of identified unfunded CMI-eligible project sites. Exhibit 5 presents the funding status of the 286 high-priority ECRP projects by county. No

additional CMI funding has been allotted for these or other ECRP cleanup projects. As a result, DEQ has suspended or has not begun cleanup efforts at 242 of the 286 identified high-priority sites. Without additional funding, contaminated soil and water sites known to DEQ as posing a health risk to humans and the environment will go untreated.

Examples of the high-priority ECRP projects that will not be funded include:

- Wickes Manufacturing, Mancelona, Michigan
Groundwater contamination produced by chemicals from Mt. Clemens Metal Products Company in Mancelona, Michigan, has created a groundwater contamination plume that is expected to reach the public water supply within 5 to 7 years. DEQ is monitoring the plume but lacks the funds to address the eventual need to replace the affected public water supply.
- Armen Cleaners, Ann Arbor, Michigan
Soil and groundwater contamination produced by chemicals from Armen Cleaners in Ann Arbor, Michigan, has created a known health risk by creating vapor intrusion. DEQ provided some initial mitigation efforts by providing indoor air filters to an adjacent apartment building. However, the lack of funding has prevented DEQ from conducting any further site studies and remediation efforts.

DEQ continues to use CMI funding to complete, maintain, and monitor currently funded project sites. Maintenance and monitoring can include hiring contractors to remove wastewater, maintaining pressurized air flow systems, checking and replacing air and water filters, and conducting other scheduled maintenance. Ensuring that project sites are completed and maintained is essential to the protection of human health and the environment. DEQ informed us that, although DEQ does not have CMI funds available to begin cleanup at the remaining high-priority project sites that it has identified, DEQ has set aside CMI funding to continue the necessary maintenance and monitoring of project sites through fiscal year 2019-20. However, at the current CMI funding level, DEQ indicated that it will not have the needed funds to continue maintenance and monitoring after fiscal year 2019-20.

b. Brownfield Redevelopment Grant and Loan Programs

DEQ offers grants and loans for environmental assessments and cleanups at properties with known or suspected contamination. Funds are targeted for projects that promote economic development and the reuse of brownfield properties. DEQ has used \$63.5 million of CMI funds, issued as grants or loans, to clean up 127 project sites. DEQ informed us that 19 CMI-eligible project sites remain unfunded (see Exhibit 4).

c. Remediation of Contaminated Lake and River Sediments (CLRS) Program

Through the CLRS Program, DEQ partners with the U.S. Environmental Protection Agency (EPA) by providing a match of 35% to clean up contaminated lake and river sediments that qualify for federal funding under the Great Lakes Legacy Act. DEQ has used \$19.8 million in CMI funds and \$6.3 million in money pledged from industrial partners* to obtain \$27 million of federal funding for the cleanup of lake and river sediment contamination in Michigan.

DEQ informed us that, since 2002, it has completed five contaminated sediment projects for the removal of approximately 427,000 cubic yards of contaminated sediment in four Great Lakes areas of concern (AOCs). DEQ also used the CLRS Program to remediate 85,000 cubic yards of contaminated sediment within the White Lake AOC, 115,000 cubic yards within the Detroit River AOC (see Exhibit 3), 142,000 cubic yards within the Muskegon Lake AOC, and 85,000 cubic yards within the River Raisin AOC.

DEQ informed us that, as of March 2014, it had identified 1 potential project within the Rouge River AOC and 5 additional potential projects within the Detroit River AOC (see Exhibit 4). DEQ anticipates that it will have CMI funds available to complete the remedial investigation within the Rouge River and possibly complete the investigation of one of the projects within the Detroit River.

d. Nonpoint Source (NPS) Pollution Prevention and Control Program

Eliminating NPS pollution is a critical task of DEQ given that most of the remaining water quality impacts in Michigan are caused, in part, by these

* See glossary at end of report for definition.

sources. DEQ informed us that, since 2009, it has awarded 95 NPS grants totaling \$38.8 million. These CMI funds were leveraged to secure an additional \$22.5 million in local matching funds. These funds were used to promote practices that have resulted in 130,000 tons of sediment load reductions, 126,000 pounds of phosphorus load reductions, and 260,000 pounds of nitrogen load reductions to Michigan lakes and rivers.

Since 1999, stakeholders have submitted applications for 1,053 projects totaling \$266 million. DEQ has awarded \$96.8 million in NPS grants for 378 of those projects. As a result, DEQ has identified at least \$169 million in unmet funding needs for 675 projects (see Exhibit 4).

e. Superfund Program

The Superfund Program involves a State and federal partnership to clean up some of the most complex and controversial contaminated sites in Michigan. DEQ is required to finance 10% of the costs of remedial action and the remaining 90% is federally funded. In addition, DEQ is responsible for 100% of the operations and maintenance costs following project cleanup. Historically, DEQ has used CMI funds to provide the required 10% State matching funds for operation and maintenance costs following project cleanup. However, at the current CMI funding level, DEQ indicated that it will not have the necessary State matching funds to secure additional EPA federal funding for the 65 identified Superfund Program sites that remain in the State (see Exhibit 4). Since 1980, the EPA has provided over \$1 billion in federal funds to help clean up Superfund Program sites in Michigan.

Examples of identified Superfund Program sites that require remediation efforts include:

- Velsicol Chemical Corporation, St. Louis, Michigan
Soil and groundwater contamination produced by chemicals from the Velsicol Chemical Corporation (formerly the Michigan Chemical Corporation) in St. Louis, Michigan, has created a known health risk. DEQ has partnered with the EPA to provide \$87.7 million for the cleanup of this site, which includes \$8.7 million in State matching funds. Future cleanup costs at the site are estimated at \$145 million, of which the State

will be responsible for 10% matching funds of \$14.5 million. By contributing \$14.5 million in State matching funds, another \$130.5 million in EPA funding would be secured for this project. The State would also be required to monitor this site for 50 years at an estimated cost of \$4.6 million per year.

- Ott/Story/Cordova Chemical Company, Muskegon, Michigan
Soil and groundwater contamination produced by chemicals from the Cordova Chemical Company in Muskegon, Michigan, has created a known health risk. DEQ has partnered with the EPA to provide \$65 million for the cleanup of this site over the past 10 years, which includes \$6.5 million in State matching funds. The site is in the operation and maintenance phase of cleanup, which is the statutory responsibility of the State. The estimated cost to operate and maintain the site is \$2 million per year for 60 to 100 years.

SUPPLEMENTAL INFORMATION

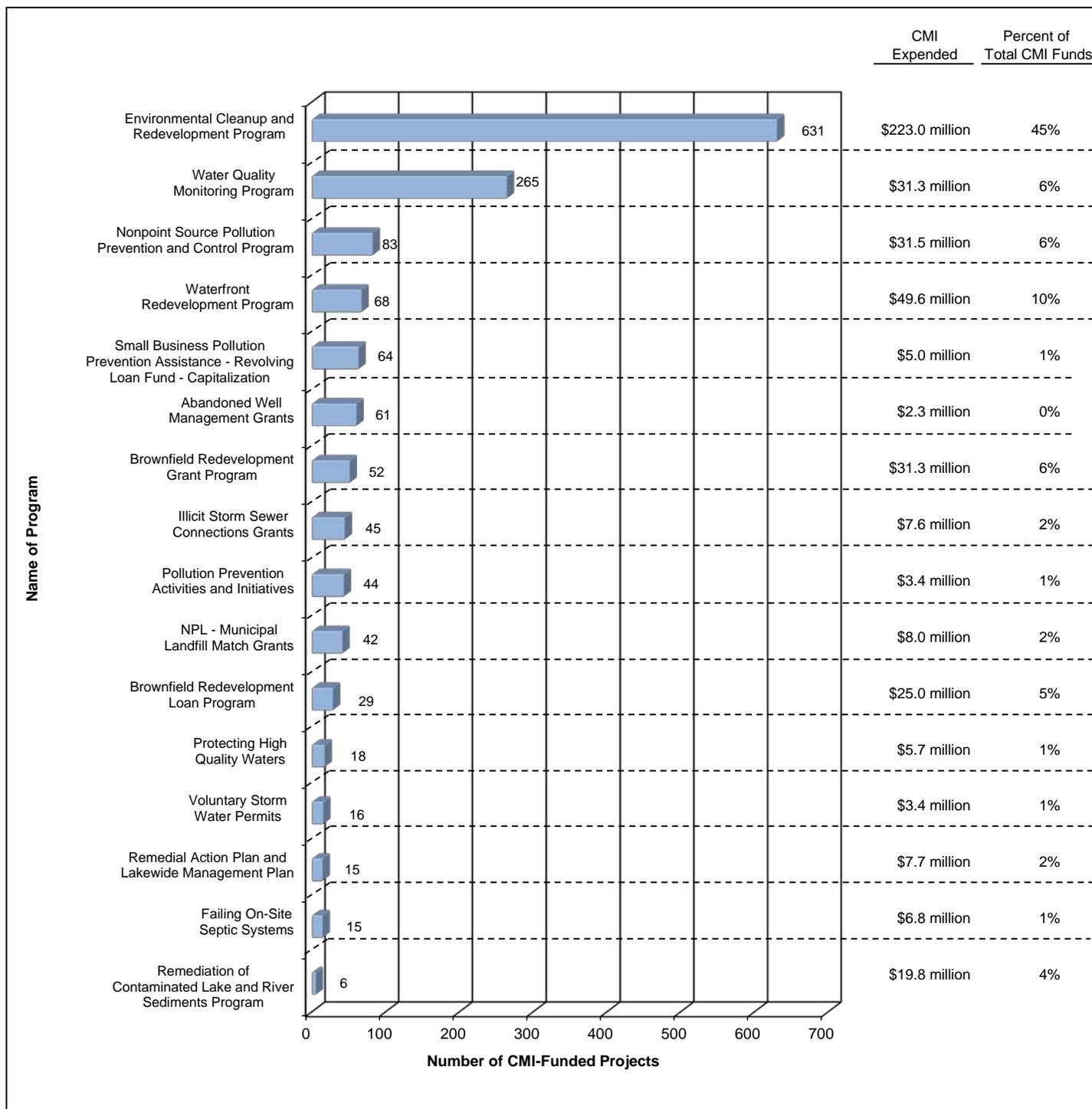
CLEAN MICHIGAN INITIATIVE (CMI)
Department of Environmental Quality (DEQ)
Summary of Authorizations and Expenditures by Program
As of September 30, 2013

	DEQ Spending Plan (Note 1)	Cumulative		CMI Funds Remaining
		Appropriations	Expenditures	
Active programs:				
Environmental Cleanup and Redevelopment Program	\$ 241,025,634	\$ 226,156,845	\$ 223,025,829	\$ 17,999,805
Brownfield Redevelopment Grant Program	50,000,000	37,537,456	31,273,955	18,726,045
Brownfield Redevelopment Loan Program	25,000,000	25,000,000	25,000,000	(Note 2)
Remediation of Contaminated Lake and River Sediments Program	25,000,000	21,208,537	19,820,029	5,179,971
Nonpoint Source Pollution Prevention and Control Program	48,443,334	35,707,027	31,485,082	16,958,252
Pollution prevention activities and initiatives	4,290,214	3,572,064	3,421,508	868,706
Water Withdrawal Assessment Program	1,473,490	1,473,490	826,916	646,574
Water Quality Monitoring Program	42,691,691	33,669,532	31,310,164	11,381,527
Clean Water Initiative (Note 3)	1,159,282			1,159,282
Active programs subtotal	<u>\$ 439,083,645</u>	<u>\$ 384,324,951</u>	<u>\$ 366,163,483</u>	<u>\$ 72,920,162</u>
Inactive programs:				
NPL - Municipal Landfill Match Grants (completed in fiscal year 2009-10)	\$ 8,000,000	\$ 8,000,000	\$ 8,000,000	\$
Waterfront Redevelopment Program	50,000,000	49,999,668	49,625,479	374,521
Retired Engineers Technical Assistance Program Fund (completed)	10,000,000	10,000,000	10,000,000	
Small Business Pollution Prevention Assistance - Revolving Loan Fund - Capitalization	5,000,000	5,000,000	5,000,000	
Illicit Storm Sewer Connections Grants (completed)	7,638,931	7,638,931	7,611,158	27,773
Remedial Action Plan and Lakewide Management Plan (completed in fiscal year 2009-10)	7,692,968	7,692,968	7,692,968	
Conservation Reserve Enhancement Program (completed in fiscal year 2009-10)	5,000,000	5,000,000	5,000,000	
Abandoned Well Management Grants (completed in fiscal year 2009-10)	2,277,286	2,277,286	2,277,286	
Voluntary Storm Water Permits	3,395,246	3,395,246	3,395,246	
Failing On-Site Septic Systems (completed in fiscal year 2009-10)	6,771,056	6,771,056	6,771,056	
Protecting High Quality Waters (completed in fiscal year 2010-11)	5,681,111	5,681,111	5,681,111	
Statewide Groundwater Inventory and Mapping	973,000	973,000	973,000	
Village of Chesaning - Water Pollution Control Grant (completed in fiscal year 2010-11) (Note 4)	899,957	899,957	899,957	
Water Withdrawal Assessment Program (DNR) (Note 5)	498,800	498,800	498,800	
Administrative support (Note 6)	17,088,000	17,087,999	17,087,998	2
Inactive programs subtotal	<u>\$ 130,916,355</u>	<u>\$ 130,916,022</u>	<u>\$ 130,514,059</u>	<u>\$ 402,296</u>
Total for all programs	<u>\$ 570,000,000</u>	<u>\$ 515,240,973</u>	<u>\$ 496,677,542</u>	<u>\$ 73,322,458</u>

- (1) DEQ established subcategories within the CMI allocations set in law that further refine the respective allocations. Within each allocation made in Section 324.19607 of the *Michigan Compiled Laws*, DEQ, through the Department of Treasury, established separate funds for tracking purposes. Under each fund, DEQ requests appropriations from the State Budget Office and the Legislature in order to spend resources related to the respective allocations.
- (2) The Brownfield Redevelopment Loan Program provides an ongoing source of CMI funds to reloan to borrowers.
- (3) The Clean Water Initiative is the remaining balance of the \$45 million allotment to the Clean Water Fund. DEQ has not determined which program will expend these funds.
- (4) The Village of Chesaning grant was a one-time appropriation in the boilerplate and was not part of a program appropriation.
- (5) The Water Withdrawal Assessment Program (DNR) was appropriated to the Department of Natural Resources (DNR); however, DEQ fulfilled the required reporting of CMI funds for this program.
- (6) Section 324.190608(5) of the *Michigan Compiled Laws* restricts administrative costs to 3%; DEQ tracked this cost through a separate appropriation.

Source: DEQ's CMI Bond Expenditure Tracking Report

CLEAN MICHIGAN INITIATIVE (CMI)
Department of Environmental Quality (DEQ)
Number of CMI-Funded Projects by Program
Fiscal Years 1998-99 Through 2012-13



The accompanying notes facilitate the understanding of this exhibit.

This exhibit continued on next page.

CLEAN MICHIGAN INITIATIVE (CMI)
Department of Environmental Quality (DEQ)
Number of CMI-Funded Projects by Program
Fiscal Years 1998-99 Through 2012-13
Continued

Notes:

- (1) CMI programs not included in Exhibit 2 account for approximately \$18.2 million (4%) of total CMI expenditures. These programs are:
- (a) Water Withdrawal Assessment Program, which was a Statewide project.
 - (b) Retired Engineers Technical Assistance Program Fund (completed), which provided individualized test results for private business and local municipalities.
 - (c) Conservation Reserve Enhancement Program (completed in fiscal year 2009-10), which provided State match money for a federal program that was managed by the Michigan Department of Agriculture and Rural Development.
 - (d) Statewide Groundwater Inventory and Mapping, which was a Statewide project.
 - (e) Village of Chesaning - Water Pollution Control Grant (completed in fiscal year 2010-11).
 - (f) Water Withdrawal Assessment Program (DNR).
- (2) CMI administrative support costs not included in Exhibit 2 account for \$17.1 million (3%) of total CMI expenditures.
- (3) The number of projects reported for each program may not be all-inclusive because the exhibit does not include projects such as those still in progress or on funding hold.

Source: The Office of the Auditor General prepared this exhibit based on data obtained from DEQ.

CLEAN MICHIGAN INITIATIVE (CMI)

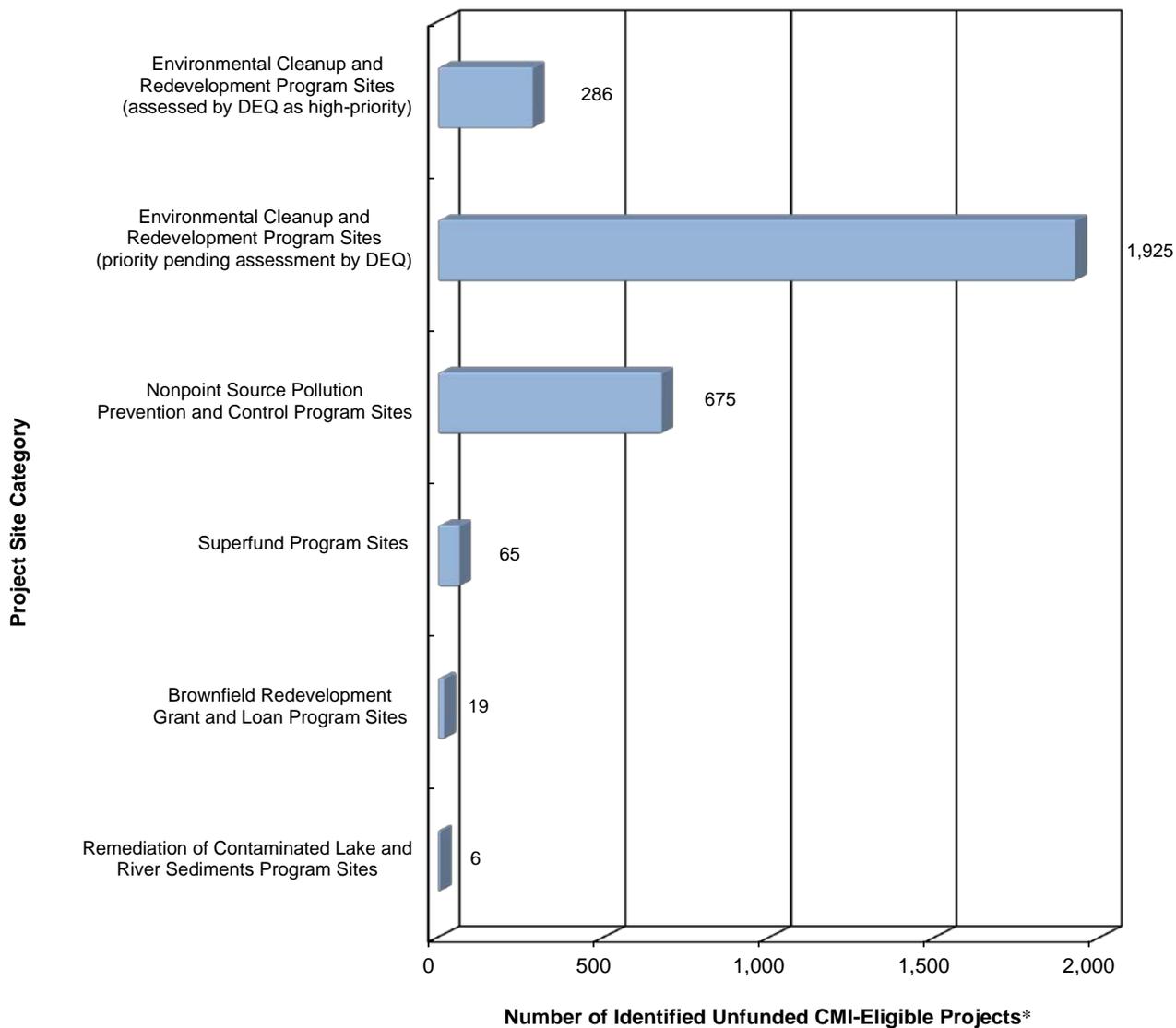
Department of Environmental Quality (DEQ)

Examples of Cleanup Projects Completed by DEQ

As of September 30, 2013

- **Remediation of Contaminated Lake and River Sediments Program (35% CMI-funded), Black Lagoon, Detroit, Michigan:** The Black Lagoon is a backwater embayment located in the Trenton Channel of the Detroit River. The cleanup project began in 2004. DEQ partnered with the U.S. Environmental Protection Agency (EPA) to fund the \$9.3 million project, of which \$3.3 million was CMI-funded. The cleanup project removed more than 470,000 pounds of contaminants and 115,000 cubic yards of polluted sludge from the Black Lagoon. In June 2007, the Black Lagoon site was renamed Ellias Cove and is part of Meyer Ellias Park.
- **Brownfield Redevelopment Grant Program (100% CMI-funded), Urban Market, Grand Rapids, Michigan:** DEQ used \$1 million in CMI funds to complete the cleanup of a 3.45-acre abandoned industrial area. Cleanup efforts included demolishing 6 unsafe buildings, removing an 8,500 gallon underground storage tank, and removing 52,000 tons of contaminated soil. The 3.45-acre site features the Grand Rapids Urban Market, which provides an indoor facility featuring a 24-vendor market hall and an outdoor farmer's market accommodating dozens of farmers and artisans. The Market also offers private event facilities, an incubator kitchen, a rooftop greenhouse, and classes for children and adults in the nation's first demonstration kitchen for children.
- **Various DEQ programs, including the Environmental Cleanup and Redevelopment Program (100% CMI-funded), Harbor Shores, Benton Harbor, Michigan:** DEQ used \$15.1 million in CMI funds to complete remediation of numerous sites in a 570-acre decayed and abandoned industrial center in Benton Harbor. The remediation efforts cleaned up heavy metals, polychlorinated biphenyls (PCB), and petroleum by-products. The remediation efforts also included the maintenance of the sites and removal of several hundred tons of garbage along the Paw Paw River remaining from an industrial landfill. Remediation of the industrial center resulted in additional investments by nonprofit organizations, corporations, and local units of government expected to approach \$500 million. Harbor Shores includes an 18-hole signature golf course designed by Jack Nicklaus and is in the process of completing 1,000 residential, commercial, and retail units; a hotel and conference center; a marina; and 83 acres of new park land and public waterfront access points.

CLEAN MICHIGAN INITIATIVE
Department of Environmental Quality (DEQ)
Number of Identified Unfunded CMI-Eligible Project Sites
As of March 2014



* The number of identified unfunded projects is not all-inclusive.

Source: The Office of the Auditor General prepared this exhibit based on data obtained from DEQ.

GLOSSARY

Glossary of Abbreviations and Terms

area of concern (AOC)	A geographic location that has experienced environmental degradation.
brownfield	Real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.
CLRS Program	Remediation of Contaminated Lake and River Sediments Program.
CMI	Clean Michigan Initiative.
DEQ	Department of Environmental Quality.
DNR	Department of Natural Resources.
ECRP	Environmental Cleanup and Redevelopment Program.
effectiveness	Success in achieving mission and goals.
EPA	U.S. Environmental Protection Agency.
facility	Any area, place, or property where a hazardous substance in excess of the concentrations that satisfy the cleanup criteria for unrestricted residential use has been released, deposited, disposed of, or otherwise comes to be located. "Facility" does not include any area, place, or property provided for in Section 324.20101(s) of the <i>Michigan Compiled Laws</i> .
industrial partner	A local business that has voluntarily partnered with the EPA Great Lakes National Program Office to implement a

contaminated sediment cleanup through the Great Lakes Legacy Act.

material condition

A matter that, in the auditor's judgment, is more severe than a reportable condition and could impair the ability of management to operate a program in an effective and efficient manner and/or could adversely affect the judgment of an interested person concerning the effectiveness and efficiency of the program.

NPL

Superfund National Priority List.

NPS

nonpoint source.

observation

A commentary that highlights certain details or events that may be of interest to users of the report. An observation differs from an audit finding in that it may not include the attributes (condition, effect, criteria, cause, and recommendation) that are presented in an audit finding.

performance audit

An audit that provides findings or conclusions based on an evaluation of sufficient, appropriate evidence against criteria. Performance audits provide objective analysis to assist management and those charged with governance and oversight in using the information to improve program performance and operations, reduce costs, facilitate decision making by parties with responsibility to oversee or initiate corrective action, and contribute to public accountability.

reportable condition

A matter that, in the auditor's judgment, is less severe than a material condition and falls within any of the following categories: an opportunity for improvement within the context of the audit objectives; a deficiency in internal control that is significant within the context of the audit objectives; all instances of fraud; illegal acts unless they are

inconsequential within the context of the audit objectives; significant violations of provisions of contracts or grant agreements; and significant abuse that has occurred or is likely to have occurred.

response activity

The evaluation, interim response activity, remedial action, demolition, or the taking of other actions necessary to protect the public health, safety, or welfare; the environment; or the State's natural resources.

