

WASTEWATER AND COLLECTION SYSTEMS

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OVERVIEW

Michigan is faced with aging infrastructure and limited funding. It is essential for the health of our future generation that we maintain and invest in our wastewater infrastructure. As of 2004, our state's wastewater infrastructure needs to protect our quality of life were approximately \$6 billion dollars.

BACKGROUND

Michigan is a water wonderland. It is surrounded by four of the five Great Lakes which are fed by some 35,000 inland lakes and ponds. These inland bodies of water cover approximately 889,600 acres of the State, per USGS and NHD data. In addition, Michigan has approximately 54,300 miles of river systems and approximately 5,500,000 acres of various wetland types. Great care must be taken to protect these valuable state assets that make up our environment, support our economy (a \$15 billion dollar industry) and quality of life.

To protect its waterways, Michigan has created an infrastructure system of sewers, pumping stations and wastewater treatment facilities. These systems are taxed everyday by the materials they transport and treat. These materials, which consist of chemicals, human waste, plastic, brick, gravel, wood, etc., create a harsh demanding environment. As a result of these demands, the life expectancy of the sewers and structures is 50 years. The life expectancy of the mechanical/electrical systems is 20 years.

CURRENT CONDITIONS

Michigan's wastewater treatment plants (WWTP) attained secondary treatment standards required by the Clean Water Act (CWA) in the 1970s. As a result, our WWTPs

are 30 to 40 years old and sewage collection systems (sewers/pump stations) are typically 50 to 100 years old and greater, pending development and age of the community. For example, over half of the approximately 25,000 miles of sanitary sewers in the state were built before 1970.

FUNDING NEEDS AND OPTIONS

The State of Michigan has funding requirements of approximately \$6 billion dollars according to the EPA Clean Watershed Needs Survey. This report addresses the needs for replacement, rehabilitation, expansion or process improvements for our State's wastewater treatment and collection systems. The correction of combined sewer overflows alone accounts for approximately a third of these capital improvement needs.

Options available for funding these improvement projects are limited. A community can fund a project by selling bonds at current market rates, typically an interest rate of 4.5% to 5.5%. Another funding source created by the Federal Government in 1988 is the State Revolving Fund (SRF) Program. The State supplements the fund and the Michigan Department of Environmental Quality (MDEQ) administers the program on behalf of the State. The SRF loan is a low interest loan, currently at 2.5%. However, Federal support of this program has been cut over the last several years and it is not anticipated to meet our state's demand for the next several years.

GRADE: C

The stewards of our State's environment, the Michigan Department of Environmental Quality (MDEQ), have given Michigan an overall good grade regarding the existing health of our waterways. However, the aging collection and

treatment systems protecting these waterways are coming to the end or exceeding their planned/expected life cycles. It is clear that significant investment is necessary to sustain meeting our environmental and health requirements mandated by the State's regulatory agencies and protecting our future generation's Quality of Life.



Sources of Information

Websites:

1. AUCMI
2. EPA
3. MDEQ
4. MWEA
5. SEMCOG
6. USGS

Reports/Documents:

1. MDEQ 2006 IR Report
2. Michigan's Environment 2005, third biennial report.
3. SRF 2006 summary, Fiscal Year 2006 Annual Report, Michigan SRF and SWQIF.
4. ASCE National Summary of Michigan's Infrastructure
5. ASCE Regional Report Cards: A Guide to Grading Your Community's Infrastructure
6. Investing in Southeast Michigan's Quality of Life: Sewer Infrastructure Needs, SEMCOG, April 2001.
7. Managing the Cost of Clean Water: An assessment of Michigan's Sewer Infrastructure Needs, Clean Water Michigan.
8. EPA, Clean Watershed Needs Survey 2004 Report to Congress, January 2008.

GRADE	
Funding	D
Condition	C
Level of Service	B
Asset Management	B
Security and Safety	C

