



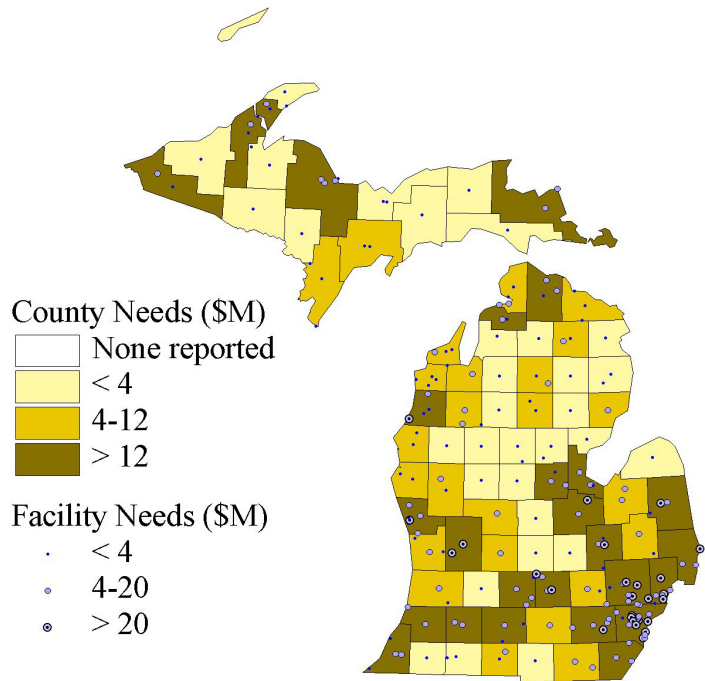
# Michigan

## Clean Watersheds Needs Survey 2004

### The Clean Watersheds Needs

**Survey** (CWNS) is a comprehensive assessment of needs<sup>1</sup> to meet the water quality and water-related public health goals of the Clean Water Act (CWA). States and the U.S. Environmental Protection Agency (EPA) conduct the CWNS every four years under CWA Sections 205(a) and 516 (b)(1).

Michigan reported needs totaling \$7.0 billion in 2004. This is a fifty-four percent increase from the \$4.6 billion in needs reported in 2000.



### Reported Needs in Michigan

| Type of Need   | Needs (2004 Dollars, Millions) |                |                |
|--|--------------------------------|----------------|----------------|
|  | 2000                           | 2004           | Percent Change |
| Wastewater treatment plant improvements                          | \$1,013                        | \$927          | -8%            |
| Wastewater collection and conveyance improvements                | \$829                          | \$754          | -9%            |
| Combined sewer overflow correction                               | \$2,713                        | \$4,334        | 60%            |
| Stormwater management controls                                   | nr <sup>b</sup>                | nr             | n/a            |
| Home sewage treatment system improvements                        | n/a                            | \$2            | n/a            |
| Recycled wastewater distribution <sup>a</sup>                    | n/a                            | nr             | n/a            |
| <b>Total Wastewater Treatment Needs</b>                          | <b>\$4,555</b>                 | <b>\$6,017</b> | <b>32%</b>     |
| Agriculture best management practices (BMPs)                     | nr                             | \$44           | n/a            |
| Forestry BMPs  | nr                             | \$11           | n/a            |
| Residential/ business development BMPs                           | nr                             | \$107          | n/a            |
| Ground water protection BMPs                                     | nr                             | nr             | n/a            |
| Marinas and boating BMPs   | nr                             | nr             | n/a            |
| Mining and quarrying BMPs  | nr                             | < \$0.5        | n/a            |
| Contaminated industrial site (Brownfield) remediation            | nr                             | nr             | n/a            |
| Leaking storage tank remediation                                 | nr                             | \$559          | n/a            |
| Sanitary landfill BMPs   | nr                             | nr             | n/a            |
| Water resource restoration and protection                        | nr                             | \$257          | n/a            |
| <b>Total Nonpoint Source Pollution Control Needs<sup>c</sup></b> | <b>nr</b>                      | <b>\$978</b>   | <b>n/a</b>     |
| <b>Total Needs</b>   | <b>\$4,555</b>                 | <b>\$6,995</b> | <b>54%</b>     |

<sup>a</sup> The CWNS did not collect data on recycled water distribution in 2000

<sup>b</sup> Not reported

<sup>c</sup> The actual NPS pollution control needs are expected to be higher since documenting and reporting their costs is difficult.

<sup>1</sup> Costs in the CWNS are generally eligible for funding under the Clean Water Act State Revolving Fund (CWSRF). All needs are capital needs except stormwater management needs, which include program development costs. The survey is a "snapshot" of data and needs; needs are as of January 1, 2004, and all costs are in January 2004 dollars.



# Michigan

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The enactment of the Clean Water Act (CWA) in 1972 resulted in dramatic improvements in the:

- Number of wastewater treatment plants.
- Percentage of the population served by wastewater treatment plants.
- Level of effluent treatment from wastewater treatment plants.

In 2004, 75% of Michigan residents received centralized wastewater treatment services at the secondary, greater than secondary, or no discharge treatment level, compared to 22% in 1972.

| Number of Centralized Treatment Facilities and Population Served |                      |            |                        |                   |                         |                  |                                      |                        |
|--|----------------------|------------|------------------------|-------------------|-------------------------|------------------|--------------------------------------|------------------------|
| Treatment Level  | Number of Facilities |            |                        | Population Served |                         |                  |                                      |                        |
|  | 1972                 | 2004       | Projected <sup>a</sup> | 1972              | % Total Population 1972 | 2004             | % Total Population 2004 <sup>b</sup> | Projected <sup>a</sup> |
| Less than Secondary  | 35                   | 0          | 0                      | 957,000           | 10.5%                   | 0                | 0%                                   | 0                      |
| Secondary  | 71                   | 204        | 208                    | 556,000           | 6.1%                    | 1,277,066        | 12.6%                                | 1,361,675              |
| Greater than Secondary   | 41                   | 120        | 122                    | 1,419,000         | 15.5%                   | 6,227,896        | 61.6%                                | 6,717,059              |
| No Discharge   | 0                    | 68         | 70                     | 0                 | 0%                      | 108,121          | 1.1%                                 | 124,612                |
| <b>Total</b>   | <b>147</b>           | <b>392</b> | <b>400</b>             | <b>2,932,000</b>  | <b>32.0%</b>            | <b>7,613,083</b> | <b>75.3%</b>                         | <b>8,203,346</b>       |

<sup>a</sup>Number of facilities and population served if all needs documented in the CWNS 2004 are met.

<sup>b</sup>The remaining population is largely served by home and cluster sewage treatment systems. (Number of facilities from Tables C-7 and C-8 of the CWNS 2004 Report to Congress)

### What are treatment levels?

- *Less than secondary treatment* removes solids by filtration, sedimentation, and chemical coagulation.
- *Secondary treatment* removes most of the organic matter in wastewater using biological processes.
- *Greater than secondary treatment* removes additional organic matter, nitrogen, phosphorus, or toxics.
- *No discharge facilities* include facilities that reuse wastewater, discharge to an underground aquifer, or dispose of wastewater via methods such as irrigation or evaporation.

The CWA goals of fishable, swimmable and drinkable waters require secondary or greater treatment.

Small communities often need additional assistance to meet CWA requirements, because they often lack adequate financing, training, and economies of scale to efficiently manage and maintain wastewater treatment systems.

In Michigan, small community wastewater facilities serve 1% of the population and comprise 1% of total wastewater treatment and collection needs. EPA small community support information is available at: [www.epa.gov/owm/mab/smcomm](http://www.epa.gov/owm/mab/smcomm)

| Population   | Facilities |           | Needs (2004 Dollars, Millions) |             |
|--------------|------------|-----------|--------------------------------|-------------|
|              | 2000       | 2004      | 2000                           | 2004        |
| < 1,000      | 5          | 4         | \$13                           | \$6         |
| 1,000-3,499  | 19         | 8         | \$131                          | \$54        |
| 3,500-10,000 | 10         | 7         | \$61                           | \$20        |
| <b>Total</b> | <b>34</b>  | <b>19</b> | <b>\$205</b>                   | <b>\$80</b> |

Visit [www.epa.gov/cwns](http://www.epa.gov/cwns) for more information including:

- Detailed Reports to Congress
- Other state fact sheets
- Maps, charts, and data downloads for watersheds, counties, congressional districts, states, and regions