

Combined Sewer Overflow Control in Michigan



Chronology

- Pre 1988: NPDES authorizations to discharge from CSOs; very few additional requirements and very few CSO treatment facilities in place
- 1988: DEQ implements Michigan's CSO control program
 - Two phase, permit driven approach
- 1988 – 1992: @ 83 CSO permits issued
- 1994: Federal CSO policy enacted very similar to Michigan's program

NPDES Permit Requirements

- Phase I: Authorized discharges and required –
 - (1) Operational practices and short term improvements to minimize discharges
 - (2) Development of a LTCP requiring:
 - Elimination of CSO or provision of “Adequate Treatment” to meet WQS
 - Presumptive or Demonstrative Options
 - Construction schedule w/ “maximum progress feasible”

NPDES Permit Requirements (cont.)

- Presumptive Option
 - Complete retention of all flows generated during the 1-year, 1- hour storm (@ 1 inch)
 - Settling with 30 minutes detention, skimming and disinfection of all flows generated during the 10-year, 1-hour storm (@ 1.8 inches)
 - Maximum use of constructed facilities to provide treatment for all flows generated over and above the 10-year, 1-hour storm, including disinfection

NPDES Permit Requirements (cont.)

- Demonstrative Option
 - Permittee could initially propose a level of treatment less stringent than state's definition of adequate
 - Proposed facilities must result in WQS being met

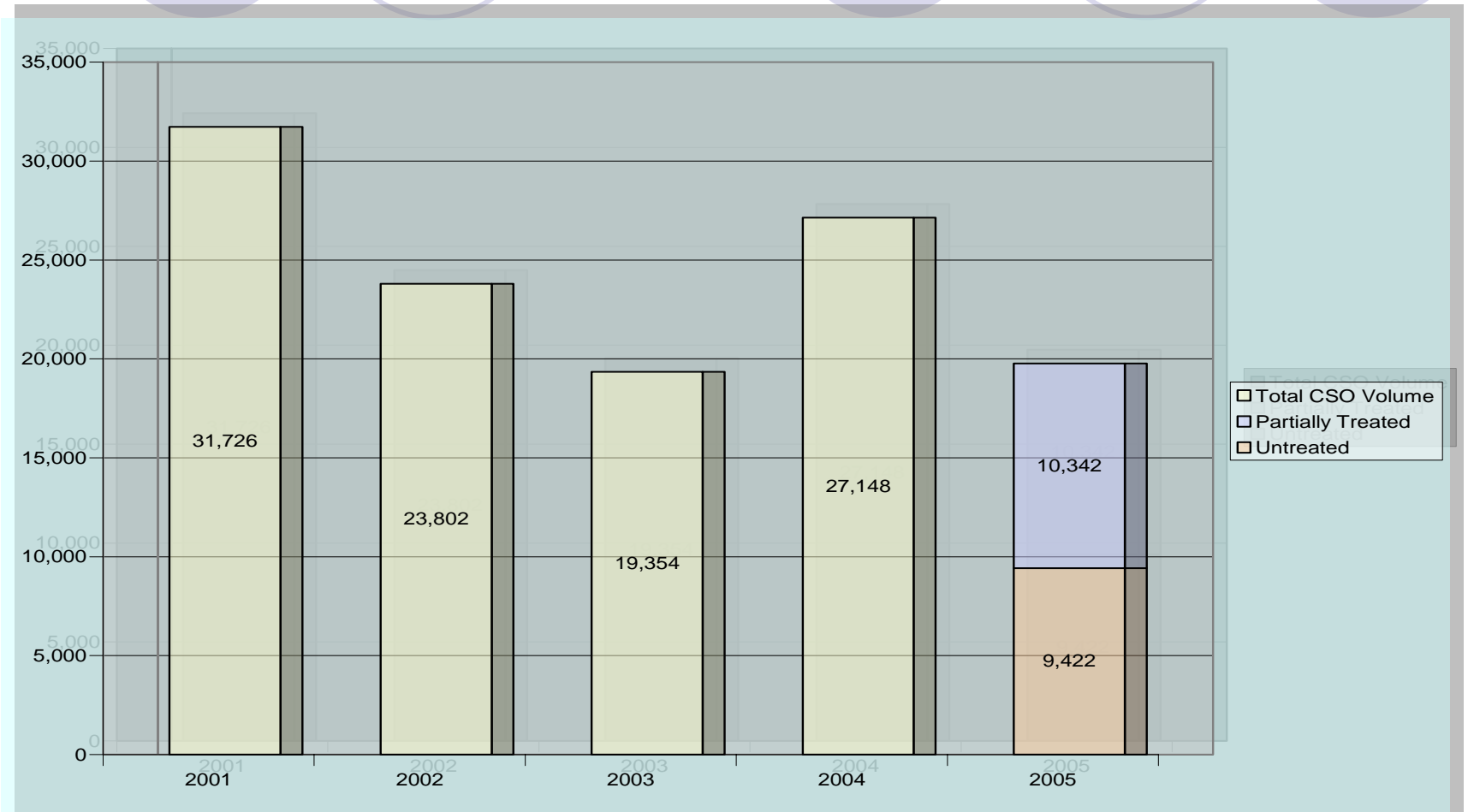
NPDES Permit Requirements (cont.)

- Phase II: Inclusion of approved LTCP
 - Construction schedule included in reissued NPDES permit or other enforcement document
 - Post project monitoring/certification

Program Status

- 83 NPDES permits included LTCP requirement beginning @ 1988
- 46 have eliminated CSO through sewer separation or storage – all flows to WWTP
- 10 have completed construction of facilities providing “adequate treatment”
- 27 still have facilities under construction
- \$1.6 billion in CWSRF funds to CSO projects to date (@ 50% of Michigan’s awards)

Combined Sewer Overflow Data



CSO Reported Volume/Year (mg)