

FY2018 Michigan PWSS Program Data Management and Reporting Summary October 1, 2017 to September 30, 2018 Federal funding used: PWSS grant, DWSRF set-aside funds		
State Contact	Amy Lachance, lachancea1@michigan.gov , 616-490-9590	
EPA Region 5 Contact	Kris Werbach (SDWIS/Fed reporting); werbach.kristine@epa.gov ; (312) 886-6527	Andrea Porter (high priority queries); porter.andrea@epa.gov ; (312) 886-4427
	Jennifer Crooks, crooks.jennifer@epa.gov	312-886-0244
Expectations	<p>MI-CWS and MI-NCWS will maintain a database that tracks public water systems inventory, actions, and violations for all federal rules. MI-CWS and MI-NCWS will update to the most recent version of FedRep as new releases are made, conduct timely reporting on a quarterly basis to Region 5 (FFYQ1 – February 15, FFYQ2 – May 15, FFYQ3 – August 15, and FFYQ4 – November 15), and correct any reporting errors as soon as possible. States must report to EPA actions and sample data quarterly and inventory data at least annually in accordance with 40 CFR 142.15. These data must be reported in XML format and utilize the Central Data Exchange (CDX) as the media for data transfer to U.S. EPA.</p> <p>States should continue planning SDWIS/Prime transition schedules and activities into FY2019, if applicable. States will keep Region 5 up-to-date on SDWIS/Prime transition plans, if applicable.</p> <p>States provide the anticipated target date for using SDWIS/Prime: MDEQ is working toward transitioning to Prime for CWSs, and is working toward moving NCWS data from WaterTrack to SDWIS-State, which will be an easier data base to transition to Prime. But MDEQ is not aware of a final date for completion of Prime by EPA. MDEQ anticipates using Prime when it becomes available.</p> <p>States should continue to improve inventory reporting to SDWIS/FED, focusing primarily on inventory data quality errors and improving locational data for CWS and NTNCWS intakes, wells, and other source facility types, as well as treatment plants, for regional emergency response needs. States are encouraged to report locational data for TNCWS, too, but this is not a requirement.</p>	
State Commitment	<p>The number of CWS data errors decreased throughout FY 2017. Sources without flows to treatment plants went from 28 errors in March 2017, to 17 in August 2017. All filter status code errors were resolved. The CWS program decreased its data quality errors to 29 in the quarter ending 6/30/17. The NCWS program reviewed the accuracy of classification of NTNCWS churches and TNC Head Starts programs, and made necessary changes in the inventory in WaterTrack. Overall, the NCWS program regularly works with R5 to make corrections to any errors that are detected.</p> <p>CWS entry point sampling has not yet been migrated to SDWIS/State. However, the program participated in a Lean Process Improvement project, evaluating monitoring</p>	

	<p>and compliance procedures and data systems. MDEQ has submitted a request for State IT funding, and is in the process of finalizing the BPA to obtain an SAIC contract for transition to SDWIS Prime. Care is being taken to assure all program needs will be met with the new data system(s), which will center around SDWIS Prime. In preparation for SDWIS Prime, MDEQ staff have participated in SDWIS Prime testing opportunities, and have input Michigan data for the upcoming round of testing.</p> <p>Both CWS and NCWS programs expect to use CMDP when the Program switches to SDWIS Prime.</p> <p>NCWS program received a starter SDWIS/State database from SAIC in May 2017, and is working towards migration of data to SDWIS/State. NCWS program plans to report violations via SDWIS/State in 2018.</p> <p>The drinking water program is also working with the MDEQ Laboratory to improve lab forms and assure the Lab's proposed new LIMS system will be compatible with CMDP.</p> <p>CWS program has centralized compliance determination for RTCR, LCR and CCRs. With this, data processing procedures are being updated, and improved consistency is expected.</p> <p>MDEQ has implemented a "Rules School", where new and existing staff attend training on specific rules. Training in FY 2017 included such topics as RTCR, LT2, DBP and CCR. Additional Rules School sessions are already scheduled through FY 2018.</p>
<p>Region 5 Assistance</p>	<p>Region 5 will assist states with resolving data quality issues, as appropriate and resources allow.</p> <p>R5 will notify states of any inventory requirement changes when they are documented by EPA headquarters.</p>
<p>Discrepancies</p>	<p>In FY 2018, there are 3 activities that MDEQ is currently not fully implementing; largely due to inadequate data management tools:</p> <ol style="list-style-type: none"> 1. NCWS Data Management/Reporting Limitations: MDEQ is able to report some violations to SDWIS-Fed, but not all violations. Work is underway to move the NCWS data management system to SDWIS-State; please see FY 2017 Implementation Plan (dated Oct 4, 2017) 2. Issuance of Tier 3 Public Notice (PN) Violations: due to resource limitations, MDEQ has only followed up on Tier 1/Tier 2 PN violations. Beginning July 1, 2018, MDEQ will post on its website all Tier 3 PN violations, until it can achieve full implementation. Please see FY 2017 Implementation Plan (dated Oct 4, 2017) 3. Issuance of Reporting Violations: due to resource limitations, MDEQ placed a lower priority on enforcement of missed reporting deadlines when the data was taken within the proper timeframes, but results were submitted to the State after the deadline. State has outlined commitments. Please see FY 2017 Implementation Plan (dated Oct 4, 2017)

	<p>Region 5 tracks progress related to state and EPA efforts to obtain additional resources necessary to enable MDEQ to fully implement NCWS violation reporting, report Tier 3 PN violations, and issue reporting violations related to late reporting of required sample results.</p> <p>Recent increases in monitoring violations are primarily due to: --Increased DBP violations at CWS: DBP sampling was new to customer supplies and supplies were unaccustomed to having to collect samples in a specific month. As a result, there was an increase in systems missing sampling deadlines. There have also been some cases of systems collecting samples from a location other than on their sample siting plans. Time and continued education should resolve this issue. --Increased scrutiny of lead/copper paperwork and reporting deadlines has resulted in an increase in violations issue. Again, time and education should help address this issue.</p>
Milestones	R5 requests that states copy the Region when responding to the annual headquarters survey asking about which states are using various SDWIS/State components.
Self-Assessment and Evaluation	See excerpt below from FY 2015/FY 2016 End-of-Year Evaluation report (dated 12/18/2017) below regarding data management issues.
Relevant Attachments/References	<p>Final Program/File Review conducted by EPA, dated October 24, 2017</p>  <p>Final 2016 Michigan Program R</p>

Excerpt from FY 2015/FY 2016 End-of-Year Evaluation (dated 12/18/2017) regarding data management issues:

Data Management and Reporting: MDEQ, with assistance from the Department of Technology Management and Budget (DTMB), maintains two data management systems that are supposed to track requirements for all rules and serve as the central store of data reported by laboratories, field offices and LHDs. However, MDEQ continues to have severely inadequate electronic data management and reporting capabilities, due to ongoing competing priorities and resource limitations. This is of great concern to EPA Region 5, since the accurate reporting of data to the State is the foundation of the drinking water program, and the NCWS program is having difficulty reporting violations for a number of rules. The lack of up-to-date data management has caused inefficiencies within the program; staff lack of access to real-time data may delay timely actions to address noncompliance. Financial/staff limitations within DTMB and the drinking water program continue to be an ongoing obstacle. For details regarding MDEQ's Data Management Limitations, see Attachment D in the FY 2015 and FY 2016 Annual Resource Deployment Plans (ARDP), the State's PWSS grant workplans.

Community Water System Program

The CWS program upgraded to the State's Safe Drinking Water Information System (SDWIS/State) 3.33 and FedRep 3.51 in late FY 2016 in order to use SDWIS/State to track RTCR activities. DTMB has been working to upgrade the CWS SDWIS to a MS Sequel 2014 environment, which is a requirement for all SDWIS-State 3.33 reports to run properly.

MDEQ is currently not fully utilizing SDWIS Compliance Decision Support (CDS). EPA Region 5 encourages full automation of CDS for all rules to streamline and automate compliance decisions, which would allow staff to gain significant efficiencies. The CWS program is using SDWIS CDS for Inventory, RTCR (including Level 1 and Level 2 assessments), LCR, Stage 2 chlorine residuals, Stage 2 Trihalomethanes/Haloacetic Acids reporting, Surface Water Treatment Rule (SWTR) reporting, sanitary survey, site visits and deficiencies tracking, and violation/enforcement tracking.

EPA awarded a Multi-Purpose grant to MDEQ in July 2016 worth \$173,000 to develop and implement enhance data tracking and analysis capabilities for LCR data.

In 2015, the CWS program did not track entry point chemical monitoring in SDWIS/State because SDWIS/State did not handle schedules the same way MDEQ handles schedules, and electronic reporting was not unavailable. The CWS program continues to track entry point monitoring in a separate database. MDEQ plans to transition entry point tracking to SDWIS soon.

As of July 2016, MDEQ reported the following violations prior to March 31, 2016 for newer rules at CWSs: Ground Water Rule (GWR), Lead and Copper Short-Term Revisions (LCRSTR), Long-Term 2 Surface Water Treatment Rule (LT2SWTR), Stage 1 and Stage 2 Disinfectants/Disinfection By-Products Rule (Stage 1 DBPR/Stage 2 DBPR). EPA Region 5 notes increased reporting of these violations, which shows increased attention and capability to conduct federal violation reporting.

- 12 GWR Treatment Technique (TT) and 61 GWR monitoring and reporting (M/R) violations;
- 7 Stage 1 DBPR TT violations, which is lack of a certified operator (one violation reported in 2015);
- 251 Stage 2 DBPR M/R violations and 31 Stage 2 DBPR MCL violations; and,
- 50 LCRSTR consumer notification M/R violations (Type 66 violations, these results are 4 times the reported number in 2014, which indicates that the State is reporting these violations as they are identified).

EPA Region 5 will continue to track CWS violation reporting to the federal database for new rules.

Due to the requirement that all 8 categories in a sanitary survey should be evaluated, a validation was created as a SDWIS/ODS 3.5 Data Check. A total of 103 CWSs had data quality

errors as a result of this new validation. During FY 2016, MDEQ reduced these data quality errors to 31.

The CWS program has struggled for many years to ensure complete and accurate source treated flag and facility flow information is in SDWIS/State; these issues have been identified in error reports since October 2005. Periodic corrections to improve this data have been done. Currently, MDEQ has 15 source treated flag/facility flow errors, less than 0.5% of the data.¹ However, the underlying issue of entering this data into SDWIS/State on a regular basis still remains a concern. A Standard Operating Procedure (SOP) should be written to outline how this data should be entered into SDWIS/State so staff can complete this task as new source water system facilities are added to SDWIS/State.

Noncommunity Water System Program

The NCWS program is continuing its use of WaterTrack, and DTMB maintains the software, programs and equipment for WaterTrack. WaterTrack is unable to report certain data to SDWIS/Fed for the Lead and Copper Rule due to data management limitations of WaterTrack; and WaterTrack can only partially support tracking and reporting for the GWR and Stage 2 DBPR. Thus, no GWR violations or other new rule violations are being reported to the federal database for NCWS. However, State staff are manually tracking these violations.

The NCWS program uses WaterTrack and FedRep 3.4 to report actions and sample data to EPA quarterly, and inventory data at least annually, in accordance with 40 CFR 142.15. Once the NCWS program is able to upgrade to SDWIS/State 3.33, they will need to upgrade to FedRep 3.51, which is necessary for the State to report RTCR data to EPA.

While MDEQ is struggling to ensure WaterTrack continues to function, MDEQ is also working with EPA-Headquarters' (EPA-HQ) and EPA-HQ's contractor, SAIC, to deploy a NCWS version of SDWIS-State on a new server; the State is hopeful to migrate all NCWS data to SDWIS-State by spring 2018. Since SDWIS-Prime will not be available to States for at least another year, the State's plan to migrate data from WaterTrack to SDWIS-State will allow the switch to SDWIS-Prime in the future to be simplified. The NCWS program estimates that it will be approximately a year before it can meet most of the RTCR reporting requirements. Meeting all RTCR reporting requirements might not be possible until SDWIS Prime is available. EPA Region 5 strongly recommends continued effort to address the State's reporting limitations and offers assistance to the State.

Data Reporting to SDWIS/Fed

The reporting schedule for States to upload data to the national database, SDWIS/Fed, is quarterly. The State met its quarterly reporting requirement in FY 2015; however, MDEQ did not meet the quarterly reporting deadlines for the third and fourth quarters of FY 2016. If the State's data is not reported to EPA Region 5 within 60 days, EPA Region 5 raises the issue to the

¹ Reporting facility flow data has been an inventory requirement since June 1998.

State Director's attention. NCWS data reporting after the deadline is becoming more common, which makes it difficult for EPA Region 5 to process and correct data errors in a timely manner.

It is also important for the State to correct identified errors in the database in a timely manner. EPA Region 5 requests that the State prioritize correcting inventory errors, open-ended violations linked to SOX (return to compliance) codes in the Operational Data System (ODS), and report the required missing locational data. Note: The CWSs have 10 sources without locational data out of 3,358 sources, and NCWSs have 9 sources without locational data out of 1,692 sources; which is 99.4% accuracy.

NOTE: Since late 2016, MDEQ has been working to address IT issues. The process has begun to identify data needs, design and create data system(s) throughout the State's drinking water program, in addition to identifying costs and sources of funding.