

U. S. Environmental Protection Agency
Public Water System Supervision Program

Final Report

**Program Review for the
Michigan Department of Environmental Quality
Water Bureau**

*Prepared by The Cadmus Group, Inc.
for
The Environmental Protection Agency
Office of Ground Water & Drinking Water
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List of Acronyms

ALE - Action Level Exceedance
ARDP - Annual Resource Deployment Plan
ARRA - American Reinvestment and Recovery Act
CCR - Consumer Confidence Reports
CDS - Compliance Decision System
CDX - Central Data Exchange
CPI – Consumer Price Index
CT - Contact Time
CWS - Community Water System
CWSRF - Clean Water State Revolving Fund
DBCP - Dibromochloropropane
DBPR - Disinfectants/Disinfection By-Products Rule
DWSRF - Drinking Water State Revolving Fund
EDB - Ethylene Dibromide
EDI - Electronic Data Interface
EPTDS - Entry Point to the Distribution System
ESS - Electronic Sanitary Survey
FANLs - Facility Analyte Levels
FBRR - Filter Backwash Recycling Rule
FTP - File Transfer Protocol
GWUDI - Ground Water under the Direct Influence of Surface Water
GWR - Ground Water Rule
HAA5s - Haloacetic Acids
IESWTR - Interim Enhanced Surface Water Treatment Rule
IOC - Inorganic Chemicals
IT - Information Technology
LCR - Lead and Copper Rule
LCRMR - Lead and Copper Rule Minor Revisions
LCR STR - Lead and Copper Rule Short-Term Revisions
LIMS - Laboratory Information Management System
LT1ESWTR - Long-Term 1 Enhanced Surface Water Treatment Rule
LT2ESWTR - Long-Term 2 Enhanced Surface Water Treatment Rule
MCL - Maximum Contaminant Level
MDL - Method Detection Level
MOR - Monthly Operating Report
M/R - Monitoring and Reporting
MRDL - Maximum Residual Disinfectant Level
NCWS - Noncommunity Water System
NOV - Notice of Violation
NPDES - National Pollutant Discharge and Elimination System
NRWA - National Rural Water Association
NTNCWS - Nontransient Noncommunity Water System
OCCT - Optimal Corrosion Control Treatment
ODS - Operational Data System
PE - Public Education (for the LCR)
PN - Public Notification

PR - Program Review
PWS - Public Water System
PWSS - Public Water System Supervision
QA - Quality Assurance
RAA - Running Annual Average
SDWA - Safe Drinking Water Act
SDWB - Safe Drinking Water Branch
SDWIS/Fed - Federal Safe Drinking Water Information System
SDWIS/Fed Rep - SDWIS Federal Reporting System
SNC - Significant Non-Complier
SOC - Synthetic Organic Chemicals
SWAP - Source Water Assessment Program
SWTR - Surface Water Treatment Rule
SSWR1 - State Safe Drinking Water Information System Web Release version 1
SSWR2 - State Safe Drinking Water Information System Web Release version 2
TCR - Total Coliform Rule
TOC - Total Organic Carbon
TTHM - Total Trihalomethanes
VOC - Volatile Organic Compounds
WQP - Water Quality Parameters
XML - Extensible Markup Language

I. Introduction

A. Purpose of Review

During the week of November 2, 2009, the “team,” consisting of representatives of EPA HQ: Renee Morris; EPA Region 5: Jennifer Crooks and Wendy Drake; and The Cadmus Group, Inc.: Jeffe Kennedy, Laurie Potter, Val Meiers and Kim Clemente; conducted a Program Review (PR) at the central office and at two district offices of the Water Bureau of the Michigan Department of Environmental Quality (MDEQ), which became the Michigan Department of Natural Resources and Environment (MDNRE) on January 17, 2010. The PR serves a number of purposes:

- To verify whether information in the primacy agencies’ databases and files is correctly represented in the federal Safe Drinking Water Information System (SDWIS/Fed), Cadmus compared MDEQ’s data to the most recently frozen data in SDWIS/Fed (i.e., for the quarter ending September 30, 2009 which includes state data up to June 30, 2008);
- To evaluate whether primacy agencies are determining compliance in accordance with the National Primary Drinking Water Regulations, Cadmus compared MDEQ’s actions and policies to federally mandated rules and policies;
- To identify specific actions that will improve the primacy agencies’ public water system supervision (PWSS) programs, Cadmus made recommendations for MDEQ that should improve their program;
- To determine whether primacy agencies have implemented recommendations identified in past reviews, Cadmus asked the states to comment on the recommendations from the previous report and reviewed the answers against the current audit findings (Appendix A contains the list of recommendations and the state answers);
- To garner information on how EPA can assist primacy agencies in implementing the National Primary Drinking Water Regulations, Cadmus solicited feedback from MDEQ and made observations based on audit findings. This information should provide EPA with insight on how EPA’s assistance has been most valuable and where additional assistance would be effective.

Table 1: Number of PWSs in SDWIS/Fed and Number Reviewed by the Team

	Number of CWSs	Number of NTNCWSs	Number of TNCWSs
SDWIS/Fed Inventory ¹	1,404	1,464	8,686
Number Reviewed By Size ²	(26 total)	11	14
Small System	15		
Medium System	7		
Large System	3		
Very Large System	1		
Number Reviewed By Source ³	(26 total)	(11 total)	(14 total)
Ground Water	17	11	14
Surface Water	1		
GWP	1		
SWP/GUP	7		

¹SDWIS/Fed inventory as of 10/13/09.
²Small: < 1,000
Medium: 1,001 - 10,000
Large: 10,001 - 50,000
Very large: > 50,000
³SW = Surface Water, GU = Ground Water Under the Direct Influence of Surface Water, P = Purchased

B. Description of Sample

Rather than reviewing every public water system (PWS) supervised by MDEQ, the team examined a sample of those systems, with the intention that they would provide a representative insight into the PWSS program. Table 1 identifies the SDWIS/Fed inventory for Michigan and the number of systems in the stratified, random sample reviewed by the team. The community water system (CWS) sample represents a 90-percent confidence level, with an error tolerance level of 7 percent. The noncommunity water system (NCWS) sample represents an 80-percent confidence level, with an error tolerance level of 10 percent. A detailed description of the sampling methodology can be found in Chapter 3 of the *EPA Protocol for Participation in a PWSS Program Review*, available from The Cadmus Group, Inc.

C. Regulations Reviewed

The team reviewed Michigan's database, hard copy files and scanned materials for updates to inventory and compliance data for the rules listed in Table 2.

The period of review for each of the regulations is shown in Table 2. Appendix B contains a table that summarizes any data discrepancies between state and federal records and errors in compliance determination that were identified during this review. Appendix C contains a detailed, system-specific list of each discrepancy identified during this review.

Table 2: Periods of Review

<u>Category</u>	<u>Date</u>
Inventory	Most recent
CCR	Year 2007, due 2008
Sanitary Survey	2 most recent surveys
Total Coliform Rule	Jul. 1, 2008 - Jun. 30, 2009
Lead & Copper Rule	2 most recent samples
Phase II/V (except nitrate)	2005 - 2007
Nitrate	2007, 2008
Stage 1 DBPR (triennial)	2007-2009
(annual or quarterly)	Jul. 1, 2008 - Jun. 30, 2009
Revised Radionuclides	Initial and Grandfathered samples
SWTR	Jul. 1, 2008 - Jun. 30, 2009
IESWTR	Jul. 1, 2008 - Jun. 30, 2009
LT1 ESWTR	Jul. 1, 2008 - Jun. 30, 2009
FBRR	Dec. 8, 2003 - Jun. 30, 2009
Public Notice	Per related violation

II. Primacy Agency Program Summary

This section outlines the program's organizational structure, its waiver program, assistance provided by the state to systems, the data system, and information about sample collection and analysis and laboratories. Each section also outlines successes and challenges from the previous and current reviews, plus recommendations, if warranted, that may help the state improve their program.

A. Program Organizational Structure

The MDEQ, now MDNRE, Drinking Water Program is a decentralized program that is responsible for implementing the provisions of the Safe Drinking Water Act (SDWA). The program is fundamentally divided into two sections: the CWS program and the NCWS program. Both programs have centralized oversight in the Lansing central offices, where data reporting also occurs.

However, each section is divided into decentralized offices throughout the state. There are eight district offices, which perform all compliance determinations for the CWSs. The field staff are in the same bureau, but in a different chain of command. Forty-four Local Health Departments (LHDs) handle compliance determination for all nontransient noncommunity water systems (NTNCWS) and transient noncommunity water systems (TNCWS) systems, with oversight from Lansing.

To perform quality assurance (QA) on CWS compliance determination, Lansing Operations Division compares all validated violations against the previous three quarters, to look for inconsistencies and any issues left unresolved. For NCWSs, Lansing Operations Division regularly queries WaterTrack to check for violations and to determine what follow-up is occurring.

For the CWSs, district office staff create and issue violation letters. A new procedure was recently mandated by the state where all violation notice templates must be vetted by the executive office to ensure that all DEQ divisions are using the correct language. For the NCWSs, the LHDs have templates, which some use and others modify. The LHDs have the same enforcement authority as the state does. If the LHDs are unable or unwilling to pursue enforcement, the state will take it over for them.

Schools and childcare facilities are overseen by the LHDs, with no particular distinction made for those facilities. MDEQ does require a water quality report – comparable to a simplified CCR – for these systems and asks the LHDs to check that they're completed, but there is no formalized oversight or enforcement to ensure that water quality reports are issued by schools and childcare facilities. Outside the current parameters of SDWA, MDEQ has no specific programs to address drinking water contamination in schools or childcare facilities.

The previously separate program for mobile home parks has been dismantled. About 600-700 of them are customers of existing community supplies and are included in the CWS's distribution systems. The remaining mobile home parks (~400) are CWSs, which fall under the district office staff's oversight.

Oversight from the central office for the two different programs is handled differently. Consistency is maintained in the NCWS program primarily through the common database, WaterTrack, which sets monitoring schedules for the systems and compares actual monitoring against the schedule. The LHDs have contracts with MDEQ and are paid on a quarterly basis. When the LHDs submit requests for payment, the NCWS staff review WaterTrack and ascertain what activities have been completed by the LHD. The NCWS staff in Lansing also conduct annual reviews to assess performance. The field audits review a random number of systems for sanitary surveys, operator certification, well permits and compliance determination. MDEQ has a self-assessment program for LHDs that have a history of compliance. Excessive turnover in an LHD, or performance decline, would put the office back on a schedule of full assessments that includes field audits by state staff.

The CWS program in Lansing works directly with the eight district offices to maintain consistency. Each district appoints at least one analyst to attend regular meetings of the district representatives. District offices also contact Lansing Operations Division to answer questions or weigh in on more complex issues. The district offices and Lansing Operations Division also share a database, SDWIS/State Web Release 2.2 (SSWR2), which is monitored closely. Not all districts are comfortable using the compliance decision system (CDS) module yet, which is not operational for all rules. District supervisors and engineers also meet quarterly to discuss general and specific compliance issues.

During this Program Review, the Water Bureau was part of the MDEQ. As of January 17, 2010, MDEQ and Michigan Department of Natural Resources (MDNR) merged into a new agency, the Michigan Department of Natural Resources and Environment (MDNRE). It is not clear at this time how the drinking water program will be organized within the new agency. The Bureau is comprised of about 360 staff and operates with a \$50 million annual budget. The annual public water supply program budget is approximately \$13 million and is funded largely by the PWSS grant, public water supply fees, and DWRP set-asides. The fees are discussed in greater detail in Section II.C. State Assistance.

Program Organizational Structure Successes and Challenges

- Direction from Lansing Operations Division to the district offices must be carefully handled, since there is not a direct chain of command. The district offices visited noted that Lansing Operations Division is very helpful and responsive.
- Legislative oversight on developing policies has increased in the last year. New policies require stakeholder input just as for new rules. Thus, MDEQ has begun to develop "staff reference manuals" or staff guidance documents for using SSWR2 and WaterTrack, rather than implementing standard operating procedures (SOPs).
- The current organization is intended to integrate programs and make the best use of personnel. Thus the district offices have many split positions and many staff are cross-trained. Some districts will have a staff member who works 50 percent on drinking water and 50 percent on the National Pollutant Discharge and Elimination System (NPDES) program. This can lead to a loss of efficiency.

MDEQ noted in comments to the draft report that some argue cross training actually results in increased efficiency.

- The decentralization has led to a loss of consistency, at least with the CWS program. Information is sent to eight districts, where it's filtered by a slightly different management focus. When the program was centralized, all managers were experts in drinking water. Now the district manager might be from another program entirely.

- Managers from other environmental programs tend to address environmental problems in a reactive manner by using enforcement. Managers from the drinking water program tend to be more proactive because they want to emphasize preventative measures to maintain compliance that includes technical assistance. A major drinking water contamination issue means that public health has already been threatened.
- Michigan has about 10,000 NCWSs. Some of the LHDs have adequate staff for proper oversight; others do not. The LHDs receive the entire amount of the fees paid by the NCWSs, which are re-programmed back to the LHDs by MDEQ. Some of the more financially strapped LHDs may reallocate drinking water funds to other programs, which MDEQ cannot prevent if they are meeting program requirements.

Recommendations

1. Though it is not known at this time how the drinking water program will be reorganized within MDNRE, if the reorganization allows, past experience in Michigan and in other primacy agencies reviewed, indicates that a direct chain of command from the Lansing Operations Division to the drinking water district staff would greatly enhance MDNRE's ability to create a consistent, effective program.
2. One option that Michigan could consider is moving the NTNCWSs out of the LHDs and combine them into the CWS program. As MDNRE does not have direct control over how LHDs distribute resources, this would allow greater scrutiny of these systems, which monitor much more like CWSs than TNCWSs.

In comments to the final report, MDNRE added: Some NTNCWSs are like some CWS, but both groups range widely in size and type of oversight required. That monitoring requirements are similar for NTNCWs and CWS is about their only similarity. A more appropriate recommendation might be: "Given that some LHDs are financially strapped and that this may lead to lapses in oversight on some systems, MDNRE could consider options for reassigning or bolstering oversight on certain types of water systems."

3. MDNRE should focus resources to fully implement CDS in SSWR2.

B. Waiver Information

MDEQ has maintained a waiver program developed in 1993. Region 5 approved this policy and provided written approval. Michigan does not use variances or exemptions, but does have statewide waivers for asbestos, dioxin, benzo(a)pyrene, di(ethylhexyl) adipate and di(ethylhexyl) phthalate. In addition, MDEQ has partial waivers, primarily based on system vulnerability, for dalapon, diquat, endothall, glyphosate, ethylene dibromide (EDB) and 1,2 dibromo-3-chloropropane (DBCP).

For CWSs, Michigan reduces volatile organic compound (VOC) monitoring from quarterly to annual for surface water systems and triennial for ground water systems, if there are no detections. NTNCWSs may apply for a waiver of up to six years, if there are no detects (40 CFR 141.24(f)(7) and State Rule 716(9)). Inorganic chemicals (IOC) can be reduced to once every nine years. Synthetic organic chemical (SOC) waivers are based on vulnerability. SOC waivers are granted as often as possible, in line with MDEQ's philosophy of offering as many monitoring waivers as possible.

Consecutive systems monitor for the total coliform rule (TCR) and Stage 1 and 2 Disinfectant and Disinfection By-Products Rules (Stage 1 and 2 DBPR). Michigan considers this an allowance of the rule and not a true "waiver" as CFR §141.29 allows states to consider interconnected systems as one system for monitoring purposes. Some consecutive systems have monitoring agreements with the sellers to have TCR and DBPR monitored as part of the seller's distribution system. Most consecutive systems have this agreement for lead and copper rule (LCR) monitoring.

Waiver Program Successes and Challenges

- MDEQ recently conducted targeted and random monitoring of waived contaminants to confirm and continue existing waivers.
- Source water intake protection program information is also used for determining whether waivers can be granted.
- MDEQ plans to revisit the waiver program in the near future, as it needs rewriting and consolidation. As noted in Section III.F. Phase II/V Rule, the interpretation of the waiver program seems to have changed over the course of years, and varies between district offices.
- It's not clear that waivers are being renewed on the required three-year interval. There is a sense, with the "statewide waiver" terminology used and further discussed under the Phase II/V section of this report, that waivers are granted and not renewed on the required three-year interval. This practice would not conform to federal requirements.
- Systems are assumed to be waived for SOCs, unless there is evidence that they are not.

Recommendations

1. MDEQ and Region 5 should revisit the waiver program and ensure that all aspects are clearly laid out and that waivers are correctly granted and renewed.

C. State Assistance

The Drinking Water program has about 67 staff devoted to the PWSS program (including wellhead protection, well code administration, etc.). This does not include 11 secretarial positions (one

in each district and three in Lansing) and the Program Manager. Counting those positions, there are 79 full-time equivalents (FTEs) in Michigan's Drinking Water Program. The program also supports approximately 18 staff in the LHDs. Because there are 44 LHDs, many of these are partial positions.

The MDEQ Drinking Water Program received \$1,529,000 from Michigan's General Fund for fiscal year 2010, which is \$300,000 down from the last fiscal year. In 2010, the Drinking Water program's request for set-asides from the Drinking Water State Revolving Fund (DWSRF) capitalization grant is included in the Intended Use Plan. The total amount of set-asides requested, \$6,125,440, is based on an expected appropriation of \$44,000,000. Of this, \$1,783,640 comes from Administration Set-Aside, \$700,000 from Operator Certification Set-Aside, \$600,000 from PWSS Supplement Set-Aside, \$450,000 from Capacity Development Set-Aside, \$700,000 from Source Water Protection Set-Aside, \$1,000,000 from Wellhead Protection Set-Aside and \$891,800 from Technical Assistance Set-Aside. This request has increased by \$1,100,000 in 2010 over 2009, to compensate for decreases in the General Fund allotment and for reduced fees from systems, which are based on the Consumer Price Index (CPI).

Fees are calculated for CWSs based on ten population categories and are adjusted annually based on the CPI. The smallest is 25-100, while the largest is "more than 500,000." The latter includes only the city of Detroit. For NCWSs, the fee is also calculated using the CPI and is based on system type. The most recent fees are \$440.39 for NTNCWSs, \$103.97 for TNCWSs, and range from \$305.84 to \$102,514.42 for CWSs.

In comments to the draft report, Region 5 provided the following explanation:

Resource limitations, including dramatic budget cuts, have had a significant impact on MDEQ's PWSS program. Increased regulatory requirements coupled with a decrease in available funding, have required MDEQ to prioritize program activities and focus resources on the most important program areas in the Annual Resource Deployment Plan (ARDP), the annual workplan for the drinking water program.

Beginning in FY 2007, MDEQ and Region 5 negotiated temporary disinvestments as a part of the ARDP, which allowed MDEQ to temporarily disinvest in certain non-public health related primacy activities in order to focus those resources on activities directly affecting public health. Region 5 acknowledges that MDEQ is directing their limited resources to implementing and enforcing drinking water regulations that directly affect public health. This acknowledgement is seen as an innovative way for States to continue to ensure safe drinking water is provided to the public, even as States are struggling with diminishing resources. However, the Region must emphasize that MDEQ's disinvestment in non-public health related primacy activities is a temporary measure only until MDEQ is able to obtain sufficient resources to fully implement the PWSS program.

State Assistance Successes and Challenges

- MDEQ is increasing their funding request from set-asides because the CPI dropped by 1.5 percent from 2009 to 2010, decreasing for the first time since Michigan implemented the fee program in 1993. In the past, MDEQ had not maximized what they could request from the set-asides, which now has given them greater program flexibility in choosing when to access these funds.
- The revenue from NCWSs has also decreased, since about 1,500 systems have either closed or consolidated in the last three to four years, many due to poor economic conditions and some due to arsenic challenges.
- At the time of the review, MDEQ was asked by management to prepare numbers to show how they would absorb a further twenty-percent reduction in the general fund, which would amount to approximately \$5,000,000.
- Frequent hiring freezes have impacted Michigan for about ten years. This has made it difficult to replace positions. There is also a ban on contract services.
- The state hiring process is cumbersome, which makes it difficult to hire people, even when positions can be replaced. Because the process can take several months, good candidates find other positions before MDEQ can complete the paperwork.
- MDEQ could use further training for water system operators, especially new operators and regarding new rules. MDEQ would like to see training on general operations for small CWSs and NCWSs, since those systems have very similar issues. The training needs to be simple, practical and frequent. Practical application is the most important quality desired.
- Training for new staff would also be appreciated on fundamental public health issues and compliance decisions. The training provided at the onset of rules is sufficient at that time, but there needs to be more repetition after that. MDEQ would like to see subsequent trainings “repackaged” into smaller modules that address the critical points of decision-making.
- EPA Webcasts can be helpful, but tend to impart too much information and do not offer an effective feedback loop.
- MDEQ offers training primarily in the operator certification program.
- MDEQ also produces quarterly newsletters jointly with AWWA. The Capacity Development set-aside monies fund the quarterly newsletter distribution to every CWS. The NCWS program does not have newsletters.
- The CWS program sends monitoring schedules to systems annually. Some LHDs may provide schedules, but there is no NCWS statewide requirement to do so.

- Due to funding cuts and resource shifts, vacant positions are filled with staff from other programs that have been cut or eliminated. While this practice preserves jobs, it decreases the technical knowledge of staff and requires tremendous resources to train these staff. In this paradigm, continued and directly applicable training becomes very important.

Recommendations

1. If the State of Michigan continues to cut funding for MDEQ's drinking water program, MDEQ should consider cutting state-only activities that are not required by state law and that do not affect public health, and devote its limited resources to maintaining those activities required by federal regulation.

In comments to the draft report, MDEQ noted: MDEQ cannot drop all state activities in favor of federal requirements. We are obligated under the Michigan Safe Drinking Water Act to enforce state and federal requirements. We are partially funded by water supply annual fees, not just federal grant money. In addition, many state activities (such as on-site surveillance, technical assistance, permitting, etc.) serve to improve compliance with federal law.

In additional comments to the final report, MDNRE suggested that the recommendation might be better phrased as "MDEQ should consider prioritizing state-only activities that are not required by state law and that do not affect public health, and devote its limited resources to implementing required federal and state activities that have a direct public health impact."

2. In the future, when MDEQ is able to obtain sufficient resources to fully implement its drinking water program, MDEQ will return to implementation of non-public health related primacy activities, as agreed.

D. State Data System

MDEQ's CWS program uses SSWR2 with Microsoft Access add-ons, hosted on a SQL server. The NCWS program uses a database of the state's own design, called WaterTrack, which is also web-based.

Many analytical results for NCWSs are received electronically, primarily those provided by the state lab, however a large portion is hand-entered by LHD staff. Because WaterTrack and the state lab databases were designed in tandem, those data are easily imported. Data for CWSs also arrive electronically from the state lab, but the data format does not match that for SSWR2. Thus far, MDEQ has been unable to get sufficient and consistent enough information technology (IT) support to map the electronic data for import to SSWR2. All data are thus entered into program databases manually.

WaterTrack partially automates compliance determination for monitoring for all rules. The program requires a sample be present in the system in order to avoid a monitoring violation. If a sample is not present where the schedule requires, a candidate violation is generated. Compliance determination for maximum contaminant level (MCL) or treatment technique (TT) violations is not automated, however.

The CWS program uses automated compliance determination via SSWR2 for TCR. Some districts also use SSWR2 automation for tracking maximum residual disinfection level (MRDL) and surface water treatment rule (SWTR) monitoring.

Data are retained on hard copy in system files kept in the district offices and LHDs. TCR data are typically discarded after two years, but the data for all other rules are kept on hand indefinitely and may be archived according to the practices of the office in which they are kept.

CWS data are transmitted to SDWIS/Fed via Fed/Rep, which creates an Extensible Markup Language (XML) file, which is then transmitted to the Central Data Exchange (CDX). For NCWSs, WaterTrack data are extracted via Microsoft Access queries. The data are converted to XML, checked with Fed/Rep, and transmitted via CDX. Data are reported quarterly, including inventory updates.

MDEQ reviews ODS reports and finds them useful, but would prefer that those errors were detected through Fed/Rep, instead, so corrections could be made before final submittal.

Data System Successes and Challenges

- The conversion to the CDS module of SSWR2 has been slow. CWS staff still find it more “user friendly” to determine compliance with spreadsheets, rather than learn to use the SSWR2 modules.
- MDEQ continues to work with Headquarters’ SSWR2 contractor (SAIC) to incorporate CDS into SSWR2. Competing staff priorities and constant new releases have made progress slow. However, MDEQ expects to see the majority of distribution system compliance monitoring in SDWIS by early spring 2010, followed by Phase II/V and radionuclide monitoring by fall 2010.
- MDEQ would like to have compliance reports that show schedules, especially those for the ground water rule (GWR) in a more intuitive way, preferably something systems could look at and see all scheduled monitoring detailed in one page.
- Limitations on IT support create challenges for MDEQ in optimizing their use of the two databases. The State of Michigan has a centralized IT department, so the Drinking Water program must compete with other departments and programs. Five or six years ago, the Drinking Water program employed six to eight people just for IT assistance. The program lost these positions in the last reorganization, which included all of the IT positions, to a common

pool. The Drinking Water program must apply for data work to be done and pay additionally for it, though the program still supports those positions.

- Because IT is centralized, personnel are assigned to Drinking Water projects by IT management, so the technician assigned won't necessarily be familiar with SDWIS/State or WaterTrack.
- WaterTrack appears to greatly aid compliance determination for the NCWS program and helps create consistency across a very diverse group of offices. SSWR2, however, because manual data entry is required and automated compliance determination is barely used, creates more staff burden than it relieves.
- Universal electronic data reporting is crucial to relieving MDEQ's CWS program's workload. Ideally, the drinking water program would like to require electronic data-reporting, and its format, as part of lab certification. The drinking water program currently has no ability to require the state lab to alter their data-reporting format.
- Region 5 is concerned about the viability of WaterTrack. At this time, MDEQ believes that WaterTrack should be able to meet some of the required tracking and reporting under the GWR in the short term. However, WaterTrack will not be able to meet all the new requirements, nor other data needs of the NCWS Program in the long term. The NCWS Unit is currently evaluating whether SDWIS/State would be usable for the NCWS program. Resources need to be allocated to ensure the continued improvement and efficiency in electronic data management for the NCWS program.

Recommendations

1. MDEQ and Region 5 should work together to allow full implementation of SSWR2. More IT, training or data entry resources should be devoted to this project. SSWR2 is an asset to the MDEQ staff and should not be an impedance to daily efforts.
2. Likewise, all of these same resources should be put towards importation of electronic analytical results into SSWR2.
3. Electronic data reporting would eliminate many of the data system challenges noted, such as intensive staff time required to hand-enter data. Electronic data reporting will also improve public health protection, since the state will be notified immediately of non-compliance, such as a TCR positive result. MDNRE is strongly encouraged to focus IT resources to complete the electronic laboratory report application (eDWR) that will allow laboratory data to flow to SSWR2 which will ultimately improve public health protection.

4. Until the eDWR is operating, another possible recommendation would be to suggest the state initiate a voluntary private laboratory-to-state reporting program.
5. However, if eDWR remains impossible, other systems should be developed to ensure good data quality in SSWR2.
6. Better IT support should be sought. To effectively support drinking water IT needs, IT staff dedicated to drinking water program activities are needed.
7. Because WaterTrack is rapidly becoming obsolete, MDEQ should begin planning for its revision/replacement. Funds and resources should be identified to address this issue.
8. Implementation of CDS will address some discrepancies found during this review related to federal reporting, will improve compliance and will free up staff time to focus on public health protection issues, such as maintaining a field presence at systems.

E. Sample Collection, Analysis, and Laboratory Certification

Michigan systems and contract operators collect most samples. Some LHDs will collect samples for systems, but this is an exception.

System operators are responsible for delivering samples to the laboratories for analysis. Most are hand-delivered and the rest sent via overnight mail.

The Michigan state lab performs about 90 percent of analyses for chemical monitoring for all systems, and about 30 percent of TCR analyses for CWSs and 60 percent for the NCWSs. Radionuclide samples are all analyzed by out-of-state labs.

Laboratory certification is handled by a separate unit in the same department. The laboratory certification staff were intended to be funded entirely by laboratory certification fees, but those funds have fallen short of requirements. This shortfall has been absorbed by general program funding.

Sampling and Laboratory Certification Successes and Challenges

- None.

Recommendations

1. None.

III. Program Implementation

This section outlines program implementation, successes and challenges from the previous and current reviews, and recommendations that may help the state improve their program.

A. General Program

As shown in Table 3, Michigan does not yet have primacy for the Long-Term 2 Enhanced Surface Water Treatment Rule (LT2 ESWTR), the Stage 2 DBPR, the Lead and Copper Rule Minor Revisions (LCR MR) or Short-Term Revisions (LCR STR), or the GWR. Extension agreements are in place for LCRMR, LT2 ESWTR, Stage 2 DBPR, and GWR. Region 5 and Michigan did not agree on the requirements of LCRMR, especially regarding the minimum number of samples required, and so elected to postpone primacy until the next round of LCR revisions. In 2003, the Michigan Attorney General determined that MDEQ did not have the authority to enforce U.S. EPA's interpretation of a site as a faucet at NTNCWSSs, thus Region 5 was unable to process the State's LCRMR primacy package. However, the LCR STR resolved this issue. Operator Certification ERG was approved July 1, 2002. Stage 2 DBPR, LT2 ESWTR, LCR STR and GWR became effective December 4, 2009. The Region received the primacy package for these rules in March 2010, and will combine it with the LCRMR primacy package. These two primacy packages are currently under review by Region 5.

Table 3: Primacy Status in Michigan		
Rules	Primacy Revision Application or Program Update	
	Status	Comments
New PWS Definition	Primacy	
Administrative Penalty Authority	Primacy	
CCR Rule	Primacy	
TCR	Primacy	
Phase II/V	Primacy	
LCR	Primacy	
SWTR	Primacy	
IESWTR	Primacy	
Stage 1 DBPR	Primacy	
LCR Minor Revisions	Extension Agreement	R5 has been holding this, regarding the minimum of five samples. Addressed in LCR-STR
PN Rule	Primacy	
Revised Radionuclides Rule	Primacy	
Arsenic Rule	Primacy	
Filter Backwash Rule	Primacy	
LT1 Rule	Primacy	
Variances and Exemptions Rule	Not using small system rule	
Operator Certification Program	Approved	
Operator Certification ERG	Approved	7/1/2002
Stage 2 DBPR	In Process	promulgated 12/4/2009
LT2 Rule	In Process	promulgated 12/4/2009
Ground Water Rule	In Process	promulgated 12/4/2009
LCR Short-Term Revisions	In Process	promulgated 12/4/2009

Region 5 has granted MDEQ permission to disinvest in the following primacy activities. Region 5 acknowledges that MDEQ is directing their limited resources to implementing and enforcing drinking water regulations that directly affect public health. The final negotiated Disinvestment Acknowledgement documents have allowed MDEQ to temporarily disinvest in the following non-public

health related primacy activities (those specific to individual rules are discussed in greater detail in those rule sections):

- Tier 3 Public Notification (PN) – MDEQ does not commit to track Tier 3 PNs nor report Tier 3 PN violations to SDWIS; however all violations requiring a Tier 3 PN will be notified of the PN requirement;
- Late reporting of sample results – for all rules, if a water system monitors on time, but misses the reporting deadline, MDEQ does not commit to issuing or reporting a violation for the late reporting of sample results, nor does MDEQ request Tier 3 PN in these instances;
- LCRMR milestone data – MDEQ commits to improve reporting of milestone data to SDWIS/Fed as resources allow;
- Consumer Confidence Reports (CCRs) content and certifications – MDEQ does not commit to issuing violations for late reporting of a CCR if the water supply can prove the CCR was distributed by the deadline, nor does it commit to reviewing CCRs for content. MDEQ does not commit to reporting violations to SDWIS/Fed for insufficient content or follow-up with the system for revisions, nor does it commit to tracking submission of CCR certification forms or to reporting violations for failure to submit a certification form. However, MDEQ continues to require CCRs from all community water systems;
- Minimum number of LCR samples – Since MDEQ and EPA differed on the definition of a “sample site” at NTNCWSs, MDEQ was unable to enforce the minimum number of LCR samples as defined by EPA. Interim action was agreed to in the LCRMR Extension Agreement. Taking fewer than the minimum number of five samples at NTNCWSs has been allowed under the LCRSTR since 2007;
- Collection of LCR sample results in June through September for NTNCWSs – MDEQ does not commit to ensuring NTNCWSs collect samples during the June-September time period;
- Calculations of running annual averages (RAAs) for disinfectant residuals – MDEQ does not commit to calculating the RAA or to ensuring systems submit the RAA when all monthly averages are known to be below the maximum residual disinfectant level; however MDEQ will enforce failure to collect disinfectant residuals. A July 1 deadline for receipt of CCRs – MDEQ allows a 10-day grace period for receipt of CCRs to account for mail processing;
- Sanitary survey violations – MDEQ does not commit to reporting historic and current Total Coliform Rule sanitary survey violations to SDWIS;

- Review of LCR site-sampling plans –MDEQ does not commit to issuing violations for failure to submit the lead and copper reporting form, but MDEQ will continue to issue violations for failure to conduct the required lead and copper monitoring; and
- GWR corrective actions follow-up – MDEQ commits to issuing violations for failure to perform required corrective action(s), but does not commit to tracking or issuing violations for failure to notify the state within 30 days of corrective action completion. Additionally, in circumstances where on-site verification of corrective action is necessary, MDEQ does not commit to conducting the verification within 30 days of notification, but will instead verify during the next routinely scheduled visit.

For the above disinvested activities, MDEQ does not track failures to adhere to these rules, nor do they assign and report violations or conduct any enforcement activities. Although Region 5 recognizes that MDEQ does not implement these aspects of SDWA, that recognition does not constitute approval by Region 5 or EPA Headquarters. All instances where the federal rules were not correctly implemented were treated as discrepancies.

MDEQ has no way of tracking how many systems have certified operators who operate more than five systems, because there are a number of private companies that provide operator services. There are expectations for operators, however, such as the amount of time they must spend on site, that constrain how many systems an operator can take on.

General Successes and Challenges

- Michigan has several requirements that are more stringent than are federally mandated.
 1. All subpart H systems are required to filter.
 2. VOC waivers are not granted for CWSs. However, Michigan does grant waivers for VOCs to NTNCWSs, as described in 141.24(f)(7), and State Rule 716(9).
 3. CWSs are required to monitor in the first three quarters of the year for entry point monitoring that is on an annual or less frequent schedule.
 4. Schools and daycare facilities are required to complete and deliver reports similar to CCRs.
- The public water supply program has regulatory authority to require monitoring by September 30 of each year (or at any other time deemed necessary by program staff). Administrative fines authority, coupled with the MDEQ's administrative fines policy, allows for administrative fines to be assessed if water supplies fail to monitor as required. This policy requires MDEQ to

properly document and remind water supplies of their monitoring requirements before penalties can be assessed.

Recommendations

1. MDEQ should reconsider the disinvestment activities. MDEQ's actions and policies should be as stringent as federally mandated rules and policies. All instances where the federal rules were not correctly implemented were treated as discrepancies.

In comments to the draft report, MDEQ noted that: *Unless federal requirements decrease or money/resources increase, program disinvestments will remain necessary.*

In addition, Region 5 commented that *the Region believes that Michigan has prioritized implementation of its drinking water program as defined in its Annual Resources Deployment Plan, with regard to public health protection. To trade state activities such as field surveillance and technical assistance for federally required activities such as CCR implementation threatens public health protection. Disinvested activities do not affect public health.*

2. In the future, when MDEQ is able to obtain sufficient resources to fully implement its drinking water program, MDEQ will return to implementation of non-public health related primacy activities, as agreed.

B. Inventory

MDEQ's inventory information is maintained in SSWR2 and WaterTrack. Sanitary surveys are the primary source of inventory information, but population data updates are frequently gleaned through the process of annual fee assessments. A calculator of two times the number of service connections can be used for mobile home parks, but only if an estimate is required.

Inventory Successes and Challenges

- There is no program-wide official procedure for updating inventory information in the databases. All staff have been trained and are supposed to be entering this information as it changes. Some district offices have an established process for this, others less so. For NCWSs, some county program coordinators are better about inputting information than others. For LHDs, the responsibility might fall to a clerical person and it's difficult for Lansing to determine how much sanitary surveys are scrutinized for changes to inventory.
- With the advent of the GWR, MDEQ hopes to improve the process of inventory updates.

- Two discrepancies were identified for inventory, one for an active system that should never have been added to the inventory and one for population numbers that were not accurately reflected in SDWIS/Fed. The population differences were also identified in the previous review and are partly an unavoidable result of a decentralized program. MDEQ staff indicated that they continue to remind staff in the district offices and LHDs that changes to essential inventory information should be updated in SDWIS/State or WaterTrack immediately following the sanitary survey. The CWS program has begun investigating methods of tracking sanitary survey information that would result in automated updating of SDWIS/State, but no decisions have yet been made due to the resource shortage crisis in Michigan. Also, annual fees sometimes necessitate more frequent updates to population numbers than can be provided by sanitary surveys. Therefore SDWIS populations may be updated more frequently than sanitary surveys and therefore do not always match.
- The only piece of information missing from the grant-withholding data is one ZIP code. This is because the owner address is in Canada and SDWIS/Fed will not accept the Canadian ZIP code.

Recommendations

1. MDEQ should pursue improving inventory updates and find methods to establish standard practices for inventory updates.

C. Sanitary Survey

Primarily hard copies of sanitary surveys in the system files were reviewed. CWSs are scheduled for sanitary surveys every three years, except for the mobile home parks when they were in a separate program that scheduled them for once every five years. Now that the mobile home parks have been absorbed into the greater CWS program, MDEQ is slowly moving them to a three-year schedule. NCWSs are scheduled for once every five years, but all CWSs will move to a three-year schedule with GWR.

Sanitary surveys for CWSs are all performed by state staff where the NCWS program uses LHD staff as their authorized agents.

For CWSs, district office staff review the sanitary surveys, a process that is usually between the employee and the supervisor, according to the custom of that office. In the past, full sanitary surveys were done only for complex systems and the rest received “evaluations.” MDEQ is implementing a new policy under GWR, where all CWSs will be treated the same as those subject to the suite of SWTRs. A review of the survey by a “senior employee” will be required. For NCWSs data from the surveys are captured in WaterTrack, which Lansing reviews for completeness. Sanitary surveys are also reviewed during the annual evaluations and some will be field verified.

Standard templates are required for the CWSs, with slightly different versions for different types of systems. The templates are Excel spreadsheets that take into account the eight elements required by the interim enhanced surface water treatment rule (IESWTR). A new policy prohibits districts from modifying the templates without consultation. A committee composed of Lansing and field staff evaluates the templates and procedures, so modifications are made in a more centralized manner.

CWSs usually receive notice of an impending survey about one week to one month in advance. Some district offices schedule all the surveys for a given quarter at once. Many NCWSs receive no forewarning, especially those with food service licenses, as those inspections are done simultaneously and must be unannounced.

The number of staff conducting sanitary surveys for CWSs has increased somewhat, because analyst-level staff are helping with the smaller, simpler systems. CWS staff that perform sanitary surveys also are responsible for compliance determinations, permitting, routine surveillance visits, drinking water state revolving fund work, design, and review of SWTR monthly operating reports (MORs). Depending on the district, some staff might also be working on storm water or NPDES-related work.

The LHDs have been getting squeezed economically and staff conducting sanitary surveys has decreased significantly. For NCWSs, there are usually drinking water-devoted staff in the LHD. Part of the agreement with the state requires a coordinator dedicated to drinking water work. Depending on the county, staff might also be involved in sewage, campgrounds, food licensing, etc. Additional rules have increased workload over the last five years. In addition, the LHDs have been burdened lately by dealing with the H1N1 pandemic.

Staff are primarily trained in sanitary surveys through on-site mentoring. EPA Region 5 has also provided training.

Both CWS and LHD staff are expected to generate a letter to the water system regarding the sanitary survey within 30 days. MDEQ assigns the date of the sanitary survey as the date the letter is generated; the survey is not considered completed until then. Whether deficiencies have been corrected is usually determined in a follow-up site visit. The district might input deficiencies into an Access add-on that will eventually be moved into SSWR2, but there is no requirement that Lansing be notified of system sanitary deficiencies. This will change when GWR takes effect. NCWSs are given dates by which to comply. Lansing NCWS staff can run a query on WaterTrack to determine which compliance dates have been met.

The most common deficiencies observed for CWSs are those for general operation and maintenance issues that have been deferred and required planning activities. For NCWSs, minor cross-connection issues are most frequently observed.

Recalcitrant systems that do not correct deficiencies can be fined, though this rarely happens. LHDs have the option of revoking food licenses.

TNCWSs need not have a licensed operator in Michigan, unless chemicals are added.

Sanitary Survey Successes and Challenges

- Sanitary surveys assess useful information for capacity development, including financial assessments to identify expenses and project revenue to meet needs. If systems are deficient, they are checked to see if rates are adequate to support standard operations and capital improvements. Also, Type 1 water systems must conduct a reliability study every five years, which projects demand over a ten-year period.
- MDEQ considered using the Electronic Sanitary Survey (ESS), but rejected it because the ESS did not keep up with SSWR2 upgrades. Now the program is reconsidering either the ESS or something similar, in order to create greater consistency, expedite inventory changes into the databases and prevent staff from spending time and resources on unnecessary work.
- MDNRE would also find it useful if sanitary survey information was queryable.
- All CWSs are meeting the schedule for sanitary surveys, except for a handful that were outside by a few months. NTNCWSs and TNCWSs were 4 percent short in 2008 and 3 percent short in 2007.
- MDEQ reviews sanitary survey frequency quarterly for subpart H systems. For a while, the frequency was reviewed monthly because staff noticed that systems were getting behind schedule. Now that the frequency has improved, some districts have reduced the review to annual. NCWS sanitary survey frequencies are reviewed in the annual evaluation, but LHDs that have had issues are asked to provide quarterly updates.
- The NCWS program has noted a drift away from emphasis on sanitary surveys in the LHDs; they are no longer considered to be the core of the program.
- The NCWS program has been unable to provide adequate ongoing sanitary survey and basic drinking water public health training to LHDs due to resource limitations.
- The NCWS program, in particular, would appreciate any and all training for LHD staff performing sanitary surveys.
- MDEQ is working on identifying criteria for significant and “other” deficiencies. So far the state is not following the federal criteria, but is working with a combination of health risk and length of time the deficiency has been outstanding. MDEQ is considering a “cumulative” approach that quantifies “other” or small deficiencies that may eventually represent a significant problem.

- Lansing Operations Division cannot fully control the quality and consistency of sanitary surveys for CWSs; an unavoidable result of a decentralized program. Some districts will send surveys to Lansing for review, but others are less willing.
- MDEQ has disinvested in assigning and reporting violations for failure to have a sanitary survey according to the federal schedule. This is because sanitary surveys are conducted by MDEQ staff and are not the responsibility of the water supply.
- Four sanitary survey discrepancies were identified, two for CWSs and two for NTNCWSs, all because surveys were more than five years apart.

Recommendations

1. MDEQ should continue to work to improve sanitary survey frequency.
2. MDEQ should assign and report violations for failure to have a sanitary survey according to the federal schedule. Prior to IESWTR/LT1SWTR for surface water systems, and the GWR for ground water systems, it was the responsibility of the system to have a sanitary survey conducted within the required frequency regardless of whether the state took responsibility to conduct the sanitary survey. Thus, it was required that a sanitary survey violation be assessed. However, the salient point is that the system did not have a sanitary survey conducted within the required frequency. This is a public health issue.

D. Consumer Confidence Report Rule

CCRs are tracked electronically, with the receipt date entered into an MS Access add-on to SSWR2.

Consumer Confidence Report Rule Successes and Challenges

- MDEQ has disinvested in reviewing CCRs for content and therefore does not assign or report violations to SDWIS/Fed for insufficient content. MDEQ also does not track or enforce submission of CCR certification forms.
- MDEQ has also disinvested in the July 1 deadline for receipt of CCRs. Instead, a 10-day grace period is allowed.

MDEQ notes in comments to the draft report: *We continue to argue July 1 is not the deadline. The rules say “mail by,” not “deliver by.” As such, the MDEQ allows a 10-day grace period to account for mail processing time.*

- Four discrepancies were identified, all for systems that missed either the July 1 deadline or the October 1 deadline.

Recommendations

1. MDEQ should review CCRs for content and assign and report violations to SDWIS/Fed for insufficient content.
2. MDEQ should enforce submission of CCR certification forms and assign and report violations to SDWIS/Fed.
3. MDEQ should not allow a 10-day grace period for receipt of CCRs, because this policy is less stringent than the federal regulations.

E. Total Coliform Rule

If a total coliform positive sample is detected, the labs have no responsibility under the law to notify the state. Often the state lab will comment on the analytical results that the system should notify the state. When district offices and LHDs become aware of the detection, staff will contact the system with instructions. For *E. coli* positive results, the state lab has policy to contact district staff and the system, following a telephone-tree until they contact a person rather than a messaging system.

Repeat sampling is generally conducted within 24 hours of a total coliform positive sample. MDEQ encourages this and the team noted that this timeline was usually met. MDEQ had been allowing a waiver at staff discretion of the increased five routine samples in the month following a total coliform positive sample, but found that the LHDs were applying the waiver too frequently, so this is no longer allowed.

Invalidation of a total coliform positive sample is rarely granted. Water systems must complete a standardized form to apply for it and only lab error is considered to be a valid reason for invalidation.

Total Coliform Rule Successes and Challenges

- MDNRE expressed concern over TCR monitoring for NCWSs and ensuring proper follow-up to positives and MCL violations. Properly responding to TCR violations consumes significant resources. MDEQ, however, regards this as a core public health function for MDNRE and LHD staff because most NCWS operators do not have the expertise to identify and resolve the problems. MDNRE states that they “continue to focus on establishing and maintaining the multiple barriers that minimize these contamination events.”

- NCWS policy requires site visits within 48 hours of acute TCR MCL violations. Although no equivalent CWS procedure exists, CWS staff are also encouraged to conduct site visits under these circumstances.
- Site sampling plans are reviewed during sanitary surveys, but only if the system indicates changes have been made. For NCWSs, WaterTrack has the capability to record sample sites, but LHDs have not used it much. MDEQ anticipates that the plans will be reviewed more and in greater detail with the GWR.
- MDEQ is encountering some issues with entering CWS TCR samples into SSWR2. Sometimes duplicate samples are received via email from the lab or the system. Because all TCR samples are entered as sample summaries, with no sample IDs, duplicate samples can be entered into SSWR2 with no ability to determine if they are duplicates.
- Nine TCR discrepancies were identified, two for MCL violations.
- One monitoring and reporting (M/R) and two MCL violations assigned by MDEQ and reported to SDWIS/Fed were verified by the team.

Recommendations

1. The LHDs should receive more training on determining compliance with the TCR MCLs. There appears to be confusion in applying the rules. For instance, unless a system is deactivated or a source is taken off-line, federal monitoring provisions apply and are not superseded by Precautionary Measures instituted by the state.

In comments to the final report, MDNRE notes: This first recommendation does not have much basis in Successes and Challenges or in the list of discrepancies. Nor is it helpful. The TCR discrepancies in this review do not show confusion in determining compliance. Rather, they show that the NCWS Program's approach is not the same as what the reviewers expect. The ongoing training most needed is about investigating and addressing instances of TC contamination.

2. At least one round of repeat sampling should always be conducted following a total coliform positive TCR sample, even if a monthly MCL violation has been assigned, so that compliance with the acute MCL can be determined.
3. To maintain data quality and prevent errors and confusion, TCR samples should be retained as individual sample results and not as sample summaries.
4. MDEQ should review site-sampling plans on a regular basis as resources allow.

F. Phase II/V Rule

Analytical results from WaterTrack were reviewed for the NCWSs and from the hard-copy files for the CWSs.

Phase II/V Rules Successes and Challenges

- MDEQ allows NTNCWSs that are not schools or daycares and that have non-vulnerable populations to have nitrate values of 20 mg/L without receiving MCL violations, if the systems post PN and provide bottled water as allowed under 40 CFR 141.11(d). The systems must demonstrate that they have no access to a source that meets the standard.
- Michigan employs a “statewide waiver” program for SOC systems in which systems are classified as least vulnerable, moderately vulnerable or highly vulnerable. Monitoring requirements for CWSs are based on this vulnerability status. According to the waiver/entry point monitoring schedule provided by the Lansing office, moderately vulnerable systems must monitor for SOC twice every three years and least vulnerable systems once every three years.
- NTNCWSs are reduced to six-year monitoring for both VOCs and SOC if results are non-detect in the prior three-year compliance period.
- One SOC discrepancy was identified for a system with multiple entry points that did not monitor at all points. The system has since been notified to correct its monitoring.
- One CWS received a VOC discrepancy for failing to take quarterly samples following a detection.
- MDEQ requires confirmation samples for nitrate MCL exceedances, and compliance is based on the average of the two samples.
- About 80 systems were in violation of the arsenic standard at the time of the review. MDEQ is using an interim bottled water program for 60 of the NCWSs which minimizes exposure to elevated arsenic. MDEQ oversees the bottled water program compliance and is also working toward compliance with the remaining CWSs and NCWSs.
- Overall, 19 discrepancies were identified for IOC, VOC, SOC and nitrate. Almost all resulted from confusion over waiver status, number of wells and entry points and sample identification.
- Nine M/R violations assigned by MDEQ and reported to SDWIS/Fed were verified by the team.

Recommendations

1. As previously discussed under Section IIB. Waiver Information, the MDEQ waiver program should be revisited to ensure that all systems are monitoring correctly. Documentation of waiver status should be clearly represented for all systems.
2. All detections should be met with quarterly monitoring to determine that the source is reliably and consistently (R&C) below the MCL. This issue was also identified in the previous review.

G. Filter Backwash Recycling Rule

A Filter Backwash Recycling Rule (FBRR) notification was required of only one or two systems in the state. Neither was included in the current review sample.

FBRR Successes and Challenges

- None.

Recommendations

1. None.

H. Stage 1 and Stage 2 Disinfectant and Disinfection By-Products Rules

Most Michigan systems do not calculate RAAs for Stage 1 DBPR for systems, but rather submit their raw data to the state. No TNCWSs use chlorine dioxide for disinfection, thus none are subject to Stage 1 DBPR. Michigan requires consecutive systems to monitor for this rule, unless there is an agreement for the parent system to also monitor for TCR as part of the combined distribution system. Most consecutive systems are now monitoring as part of early implementation of Stage 2 DBPR.

MDEQ asks systems on annual or triennial haloacetic acids (HAA5) and total trihalomethanes (TTHM) monitoring to sample in the warmest period of June 1 to September 30. M/R violations are assigned if CWSs fail to do so, but the NCWS program is unlikely to assign violations in these instances.

MDEQ does not have a standard description of significant change that would require profiling and benchmarking. Most systems were waived from profiling under applicability monitoring. Under LT2 ESWTR, systems will have to complete profiling and benchmarking for viruses. Otherwise only a significant change in chlorination practices would require systems to revisit profiling and benchmarking.

Stage 1 and Stage 2 Disinfectant and Disinfection By-Products Rules Successes and Challenges

- Monitoring plans for CWSs were reviewed at the onset of Stage 1 DBPR and have not been revisited since, unless a system change requires it. The NCWS program only implemented this program a couple of years ago. About 60 NCWSs were subject to Stage 1 DBPR and MDEQ assisted them with monitoring plans.
- The previous review recommended that MDEQ ensure that systems are meeting the disinfectant residual reporting requirements. The report reminded the state that, within 10 days of the end of each quarter, systems are required to report to the state the monthly average of all samples taken in each month for the last 12 months, the average of all monthly averages for the last 12 months, and whether this average exceeds the MRDL of 4.0 mg/L. Alternatively, the state may calculate the averages for systems.

MDEQ responded that it does issue violations for failure to correctly monitor for DBPR, but does not issue violations for late reporting, as outlined in its disinvestment agreement. Also, according to disinvestment agreements with Region 5 MDEQ does not assign or report violations for failure to report an RAA, nor do MDEQ staff calculate the RAA if all monthly averages are known to be below the maximum residual disinfectant level. The disinvestment agreement, however, specifies that MDEQ will enforce failure to collect disinfectant residuals.

The decision not to calculate these values leads to a tendency for the chlorine residual data not to be scrutinized. In one case, TCR samples were reported on the MORs for August 5, but the chlorine residual was reported for August 15. When the team identified this as a discrepancy, because TCR and chlorine residual samples were not taken at the same time and place, it was determined this was a typo on the operator's part. However, these data had clearly not been reviewed for compliance determination purposes or the error would have been detected sooner. For the same system in another month, the operator neglected to report a chlorine residual sample entirely, which was not detected and corrected until after the team inquired.

- In many cases, chlorine residuals are not being taken at the same time and place as TCR samples. MDEQ staff explained that often district engineers will recommend additional chlorine residual sampling for operational information. Systems are frequently encouraged to sample and report additional chlorine residual information. None of this is problematic in itself, and can improve the understanding of a system's chlorination practices. However, this practice does not comply with Stage 1 DBPR requirements. The rule demands that chlorine residuals be taken at the same time and place as TCR samples or according to a system sampling plan. Compliance with Stage 1 DBPR should be determined accordingly and other chlorine residual sampling be considered special or investigative monitoring.
- In parallel with the TCR data-entry issues already discussed, entry point chlorine residuals can be erroneously entered as distribution system compliance samples.

- MDEQ performs total organic carbon (TOC) compliance calculations for systems, but will no longer do so in the future if all finished TOC results are less than 2.0, as part of the FY 2010 disinvestment agreement. This approach would not conform to federal regulations.
- Stage 1 DBPR received the most discrepancies of all the rules, with 19 identified, all for disinfectant residual monitoring. MDEQ has disinvested in calculating the RAA for disinfectant residuals, TTHM and HAA5, and TOC removal ratios.

Recommendations

1. It is clear from the discrepancies found, that MDEQ should prioritize determining how to improve chlorine residual compliance. Chlorine residual results for compliance with Stage 1 DBPR should be kept separate from other chlorine samples, RAAs should be calculated and compliance determined according to the federal rule. It should be noted that SSWR2 can perform these calculations.

I. Radionuclides Rule

MDEQ had historically conducted entry point sampling for radionuclides, so those data were used for grandfathering. MDEQ coordinates with its Hazardous Waste Division on residual disposal options. The two divisions participated in a pilot project that identified basins with radioactivity. The two divisions will also work together on media disposal.

No Michigan systems have been deemed vulnerable to Gross Beta.

Radionuclides Rule Successes and Challenges

- There are no labs in Michigan that are certified for radionuclide analysis, so samples are sent out of state. The labs tend to be very slow and yield widely varying results. Some systems have begun sending samples to two labs and getting very different analytical results. This poses a problem for MDEQ because systems will then argue that the lower results should be used for compliance.
- Less than 10 systems were out of compliance under the interim radionuclides rule. These systems remedied the problem by deactivating the exceeding wells.
- One system has installed treatment for radium. This system was reviewed as part of the sample and no discrepancies were identified for radionuclides.
- Four discrepancies were identified, all for one system that did not monitor all sources correctly.

- One M/R violation assigned by MDEQ and reported to SDWIS/Fed was verified by the team.

Recommendations

1. MDEQ should ensure that PWSs monitor for all sources under the Revised Radionuclides Rule.

J. Lead and Copper Rule

The state calculates 90th percentiles for the systems. Michigan has traditionally allowed NTNCWSs to collect fewer than the minimum of five samples, as discussed in Section III.A. in the discussion on the disinvestment activities and MDNRE and plans to continue to do so, since it is allowed under the LCRSTR. The number of taps is verified during sanitary surveys.

Lead and Copper Rule Successes and Challenges

- Action-level exceedances (ALEs) at schools or childcare facilities are prioritized by drinking water staff as those are hot-button issues, but those systems do not receive any other special attention or procedures.
- Systems are encouraged to notify the customer of high samples. Some only distribute the information in response to inquiries, but many municipalities do so as a matter of course.

MDNRE indicated in comments to the final report that these “high values” should be defined as those exceeding the action level.

- WaterTrack does not calculate 90th percentiles, unless one sample exceeds one-half of the action level. In that case, a potential violation will be identified and staff will use WaterTrack to calculate the 90th percentile. This practice does not meet the requirements of Federal Regulations, since it is required that all 90th percentiles be calculated.
- In several cases, 90th percentile sample values or ALE values were not entered into SDWIS/State in a timely fashion and thus were not reported to SDWIS/Fed in time to be included before the data freeze. These calculations are done manually by MDEQ staff and are not automated.
- MDEQ disinvested in requiring annual and triennial LCR monitoring to be conducted during June through September for NTNCWSs.
- MDEQ disinvested from assigning violations if a system does not include the reporting form with LCR samples that describes site-selection criteria and reasons for sampling-site changes.

As a result, MDEQ and LHD staff do not review site-sampling plans that are submitted with samples.

- According to disinvestment agreements with Region 5, MDEQ does not commit to 100 percent reporting of LCRMR milestone data. MDEQ did commit in Fiscal Year 2007 to increase NTNCWS milestone data to 50 percent (40 percent was achieved); to 80 percent in 2008; and to general improvement in 2009. MDEQ notes that by the end of 2009, 88% of NCWS milestone data and 95% of CWS milestone data were reported. However, some data gaps remain.
- Michigan has always required NTNCWSs to sample at a minimum of five LCR taps, but has not been able to enforce this requirement. While NTNCWSs may take fewer than the minimum of 5 tap samples as allowed under LCRSTR, these revisions were not published in the Federal Register until 2007 and cannot be applied retroactively.

The previous review in 2005 determined that Michigan did not have the legal authority to enforce the requirement that all NTNCWSs collect five samples (according to a letter from the Michigan Attorney General). Through a Primacy Extension Agreement dated March 2002, the state agreed to notify Region 5 of any instance where a system failed to collect the required number of samples. Discrepancies were identified where 12 of the 20 NTNCWSs that were reviewed did not collect the federally required number of samples, and that the state had not notified EPA Region 5 of this occurrence. These 12 instances were treated as data flow discrepancies in the report, in that the state did not provide required data to EPA.

For this review, tighter protocols prohibit the team from classifying these instances as actual data flow errors. They have been classified as compliance determination discrepancies, because compliance was not determined according to the federal rule, by either the state or the Region.

- Overall, 17 discrepancies were identified. Some were because 90th percentiles were not calculated or reported. Most were for NTNCWSs that either did not sample in the summer months or failed to take a minimum of five samples.
- Fifteen lead or copper sample results and ALEs were reported correctly to SDWIS/Fed and two violations assigned by MDEQ and reported to SDWIS/Fed were verified by the team.

Recommendations

1. All 90th percentiles must be calculated, according to federal regulations.
2. Milestones should be reported to SDWIS/Fed, as required by federal regulations. MDNRE has committed to report LCRMR milestones, as resources allow.

3. All systems on annual or triennial monitoring should sample in the summer months of June to September, or an alternate designated four-month timeframe.
4. If a system is repeatedly not conducting its annual or triennial lead and copper monitoring, the state should consider placing the system on six-month monitoring until it has two, clean six-month rounds of monitoring.”

K. Surface Water Treatment Rule, Interim and Long Term 1 and 2 Enhanced Surface Water Treatment Rules

Michigan has numerous surface water systems and eight surface water or purchased surface water systems were included in this review’s statistical sample.

Systems complete and submit MORs on hard copies which are reviewed by district and LHD staff. Some districts are entering MOR data into SSWR2. MDEQ would like to input all facility analyte levels (FANLs) codes, so more compliance can be automated, but the process is time-consuming.

Michigan regulations do not allow systems to avoid filtration. There are no finished water storage facilities that are uncovered.

All ground water under the direct influence of surface water (GWUDI) determinations were completed in 1994. Systems, usually NCWSs, with chronic issues are re-evaluated.

Surface Water Treatment Related Successes and Challenges

- Systems are required to note when plants are offline, so compliance can be determined. MDEQ encountered some MORs where this information wasn't readily available, so a field was added to the standardized forms to track this for CWSs. MORs for NCWSs are less likely to note this.
- No discrepancies were identified for any of the surface water treatment rules.

Recommendations

1. None.

L. Public Notification

The team only reviewed Tier 1 and Tier 2 PN violations. Proof of PN is entered as a date in the MDEQ databases.

Public Notification Successes and Challenges

- MDEQ has disinvested in tracking Tier 3 PN and assigning or reporting violations for failure to conduct or provide proof of PN to SDWIS/Fed. MDEQ has agreed to notify water supplies of all PN requirements. However, the program does not commit to tracking Tier 3 PN, nor to assigning or reporting violations for failure to conduct or provide proof of PN to SDWIS/Fed.
- One PN discrepancy was identified, for a PN violation assigned with an incorrect date.

Recommendations

1. MDEQ should track PN for all three tiers, according to federal regulations.

**Appendix A
Status of Previous Recommendations**

Questions on Michigan's Corrective Actions since the October 2005 Review
The final report for the Michigan Department of Environmental Quality (MDEQ)
October 2005 review identified major and minor implementation concerns.
Questions follow on how the recommendations of the report and from Region 5 were implemented.

Description of Issue and Recommendation	Questions	State Response
<i>Introduction/General</i>		
Recommendations from last review.	What steps have the region and state taken since the last review to address recommendations found in the report?	Furthered training and revised guidance for follow-up on TCR positives and made some adjustments to inventory data mapping (NCWS). Lower priority program activities that MDEQ does not commit to conducting (such as issuance of reporting violations), are now detailed in program disinvestment documents and through the PWSS ARDP. Additional review of program data and compliance determination is conducted. Additional staff guidance and changes to data tracking was created to address some of the more common review findings.
Recommendations from last review.	Are findings from reviews included in discussions between the state and region, for instance when the PWSS Grant or annual work plans are negotiated?	Yes, some findings are discussed with EPA Region 5 when negotiating the PWSS Grant, setting program targets, etc. Examples: (1) Data clean-up goals (such as the source treatment flags mentioned below) were negotiated with the Region, and (2) we worked with the Region to set targets for improving sanitary survey frequency.

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Description of Issue and Recommendation	Questions	State Response
It was recommended in the previous review that MDEQ ensure that all violations they assign are reported to SDWIS/Fed and that they rescind any erroneous violations from SDWIS/Fed.	How was this issue addressed?	Periodic reviews of compliance determination ensure that most valid violations are detected and reported in a timely fashion. Efforts to improve training in the use of central databases are helping to keep unreported violations to a minimum. Large time lags in data exchange, the complexity of some rules, and sporadic database and server catastrophes make it difficult to keep state and federal databases entirely in sync.
<i>Inventory</i>		
It was recommended in the previous review that MDEQ report changes for administrative contact name or address as soon as the new information is identified in sanitary surveys.	How was this issue addressed?	We continue to remind staff that changes to essential inventory information should be updated in SDWIS/State or WaterTrack immediately following the sanitary survey. The CWS program has begun investigating methods of tracking sanitary survey information that would result in automated updating of SDWIS/State (no decisions have yet been made). Lastly, according to the Region, the requirement to have a person's name listed under AC in the database was to have been reevaluated by EPA's Data Sharing Committee in 2006. We don't know what was decided, but assume this issue has been given lower priority.
It was recommended in the previous review that MDEQ report changes in population as soon as the new information is identified in sanitary surveys.	How was this issue addressed?	This should be occurring by same process as administrative contact updates (see response above), however annual fees sometimes necessitate more frequent updates than sanitary surveys are conducted. Therefore, SDWIS populations may be updated more frequently than sanitary surveys and therefore do not always match.

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Description of Issue and Recommendation	Questions	State Response
It was recommended that MDEQ ensure that the grant withholding information, especially source treatment flags, were updated as soon as possible in SDWIS/Fed. MDEQ noted that it was committed to work on correcting the source treatment flag data element in SDWIS/Fed during FY 2006, which was documented in the state's FY 2006 Annual Resource Deployment Plan under the PWSS program.	Were these values updated and is all grant withholding information now complete?	Source treatment flag errors generated when transferring data to SDWIS/Fed have been corrected. The state has continued to run periodic treatment flag QC reports and works towards correction of any additional errors. We also work with the Region 5 SDWIS/Fed coordinator to ensure grant withholding issues are addressed.
<i>Sanitary Surveys</i>		
It was recommended that MDEQ ensure that sanitary surveys are conducted at the required frequency and report violations to SDWIS/Fed when surveys are conducted more than five years apart.	Are sanitary surveys conducted on schedule and, if not, are violations now assigned in these instances?	We have worked to achieve sanitary survey frequencies required by rule. A concerted effort was made to bring all Subpart H systems back into compliance with the three-year survey requirement. We also worked to bring manufactured housing communities and NCWSs into compliance with the five-year requirement. In the instances when sanitary surveys are not conducted on time, we DO NOT issue violations. It has always been the role of MDEQ to conduct these surveys and we will not issue violations against water supplies because we could not meet the requirement. This item has been identified in our disinvestment documents.

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Description of Issue and Recommendation	Questions	State Response
<i>Consumer Confidence Reports (CCR)</i>		
Some offices were allowing "grace periods" for the receipt of CCRs and certifications. It was recommended that MDEQ ensure that systems that deliver or certify CCRs late receive violations.	Are violations now assigned in these instances?	Michigan has allowed a 10-day grace period for receipt of CCRs because rule language says "mail by" July 1, not "submit by" July 1. Because of differing mail room practices in each field office, postmark dates are also not reliable. As a result, a grace period was allowed to account for mail processing. CCRs received after July 10 were issued violations. This grace period was formalized in the FY07-FY09 disinvestment documents. Michigan has also disinvested in issuing violations for late submittal of CCR certification forms.
<i>Total Coliform Rule (TCR)</i>		
It was recommended that MDEQ ensure that all systems report TCR analytical results on time each month and that violations are reported to SDWIS/Fed when they fail to do so.	Are violations now assigned in these instances?	Although MDEQ encourages supplies to report monitoring results on time, we generally do NOT issue violations for late reporting. This was formalized in FY07-FY10 disinvestment documents.
It was recommended that MDEQ ensure that systems collect sufficient repeat and routine samples following a total coliform-positive result.	How was this issue addressed?	CWSs: SSWR2 is used by the CWS program to track and ensure compliance with routine/repeat TCR monitoring. Unless special circumstances exist, staff are expected to issue violations for any failure to conduct required monitoring. NCWSs: Beginning in the Fall of 2005, with district meetings involving LHDs, the NCWS Program has provided training and revised its guidance documents related to follow-up on positive bacteriological and <i>E. coli</i> positive results.

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Description of Issue and Recommendation	Questions	State Response
It was recommended that MDEQ ensure that that TCR MCL violations are assigned by the local health departments when warranted.	How was this issue addressed?	NCWSs: See above. Additionally, the TCR discrepancies from the April 2006 DV Final Report noted that the problem was not improper follow-up on positives and MCLs, but mostly one of poor documentation by the LHD. The state continually encourages complete documentation in quarterly reviews of data and in annual evaluations of the LHDs.
<i>Phase II/V</i>		
The previous review recommended that, in the event of a detect, MDEQ should ensure that quarterly sampling is conducted to determine whether the contaminant is R&C below the MCL, even if other causes for the detections are suspected.	Do all systems now monitor correctly?	MDEQ staff should conduct follow-up monitoring if a contaminant is detected, even if a suspected source has been identified. Staff have been reminded of this requirement.
The previous review recommended that systems that do not monitor according to schedule should receive M/R violations, because some systems failed to monitor for nitrates and either did not receive M/R violations or received them late.	What steps were taken to ensure that compliance determinations of this type are done properly and on time?	NCWSs: The program continues with quarterly and annual reviews of compliance determination by LHDs. Reviews emphasize the use of WaterTrack's Unreported Historical Violation Report to identify where a violation determination was missed. No nitrate M/R issues were found for the CWS review.

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Description of Issue and Recommendation	Questions	State Response
<i>Stage 1 DBPR</i>		
The previous review recommended that MDEQ ensure that systems are meeting the disinfectant residual reporting requirements. Within 10 days of the end of each quarter, systems are required to report to the state the monthly average of all samples taken in each month for the last 12 months, the average of all monthly averages for the last 12 months, and whether this average exceeds the maximum residual disinfectant level (MRDL) of 4.0 mg/L. Alternatively, the state may calculate the averages for systems.	How was this issue addressed?	DEQ does issue violations for failure to correctly monitor for DBPR, but we do NOT issue violations for late reporting. Also, if all individual chlorine residuals are below the drinking water standard, we do NOT issue violations for failure to report an RAA, nor do we calculate the RAA. This was formalized in the FY07-FY10 disinvestment documents.
<i>Lead and Copper Rule (LCR)</i>		
The previous review recommended that MDEQ ensure that PWSs collect enough tap samples based on population served and that violations are reported to SDWIS/Fed for all systems that fail to do so.	Are these violations assigned and reported correctly?	CWSs: Not applicable - The CWS program DOES issue and report violations for failure to collect the sufficient number of lead/copper samples. NCWSs: The required number of samples is not always based on population if the system has just one service connection and fewer available drinking water taps than the population chart number. Otherwise, yes these violations are reported correctly.

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Description of Issue and Recommendation	Questions	State Response
The review recommended that MDEQ continue to work with Region 5 and SAIC to ensure that they can report all ALEs and lead 90th percentile sample results for systems serving more than 3,300 customers to SDWIS/Fed.	Are these values now reported consistently to SDWIS/Fed?	CWSs: Since the last review, 90th percentile data required for federal reporting has been transferred to SSWR2 and is properly reported to SDWIS/Fed with routine quarterly reporting. NCWSs: There are only a couple of NCWSs greater than 3,300. Yes, the sample results have been reported since the last review, but reporting of these has not been automated due to other priorities.
It was recommended that MDEQ assign and report violations when PWSs fail to collect annual or triennial samples on time.	Are these violations assigned and reported correctly?	The program does strive to issue and report these violations as required.
It was recommended that MDEQ ensure that systems sample in the summer months of June through September or receive a violation. Alternately, another four-month compliance period could be assigned to the systems.	How was this issue addressed?	CWSs: Yes, the CWS program ensures June-September monitoring for systems on annual or triennial monitoring. NCWSs: Sampling between June-September is not enforced and an alternative four-month period is not established. This is a low priority item and has been included in our FY07-FY10 disinvestment documents.
<i>Interim Enhanced Surface Water Treatment Rule (IESWTR)</i>		
The previous review recommended that MDEQ ensure that PWSs collect adequate turbidity and chlorine residual samples, and that violations are assigned and reported to SDWIS/Fed for systems that fail to do so.	How was this issue addressed?	CWSs: Staff were reminded/retrained on the need to account for IESWTR rule requirements. Some districts began tracking this data in SDWIS/State to assist with this effort, but not all districts had the resources to take this step. NCWSs: N/A.

**Appendix B
Summary of Discrepancies Identified by Rule**

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Rule	Compliance Determination (CD)		Data Flow (DF)	
	M/R	MCL/TT	M/R	MCL/TT
Inventory	CWSs: 2	-	-	-
Sanitary Surveys	CWSs: 2 TNCWSs: 2	-	-	-
Consumer Confidence Reports	CWSs: 4	-	-	-
Total Coliform Rule	CWSs: 3 NTNCWSs: 1 TNCWSs: 3	TNCWSs: 2	-	-
Nitrate/Nitrite	CWSs: 1	-	-	-
Inorganics (IOCs)	CWSs: 1 NTNCWSs: 1	-	-	-
Volatile Organics (VOCs)	CWSs: 4	-	-	-
Synthetic Organics (SOCs)	CWSs: 1	-	-	-
Stage 1 and Stage 2 DBPR	CWSs: 19	-	-	-
Surface Water Treatment Rules (SWTR, IESWTR, LT1 ESWTR)	-	-	-	-
Filter Backwash Recycling Rule	-	-	-	-
Radionuclide Contaminants	CWSs: 4	-	-	-
Lead and Copper (LCR)	CWSs: 3 NTNCWSs: 14	-	-	-
Public Notification	CWSs: 1	-	-	-

Appendix C

Summary of Discrepancies Identified by System

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0001718	DANSVILLE, VILLAGE OF	CWS	CCR	7/1/08	CCR not delivered by 7/1 as required. Why wasn't a violation assigned?		CCR was emailed 6/7/08 as indicated on the certification form, however a hard copy could not be located and the email was deleted. A replacement report was requested and received 7/24/08.	Discrepancy stands.
MI0002310	FLINT, CITY OF	CWS	CCR	10/1/08	CCR not certified by 10/1 as required. Why wasn't a violation assigned?	Certification received 10/2/08. (Realize state has disinvested from tracking this requirement.)	PROGRAM DISINVESTMENT	Discrepancy stands.
MI0005740	ROCKLAND TOWNSHIP	CWS	CCR	10/1/08	No record found that CCR was certified by 10/1. Why wasn't a violation assigned?	No CCR certification was provided. Can you provide a copy of the certification?	PROGRAM DISINVESTMENT	Discrepancy stands.
MI0005740	ROCKLAND TOWNSHIP	CWS	CCR	7/1/08	CCR not delivered by 7/1 as required. Why wasn't a violation assigned?	CCR was date stamped 7/7/08, no date provided when CCR was distributed to consumers.	PROGRAM DISINVESTMENT	Discrepancy stands.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0001718	DANSVILLE, VILLAGE OF	CWS	DBPR	4/1/09	System failed to sample during compliance period. Why wasn't a violation assigned?	No chlorine residual samples found for April '09. Also, three chlorine residual samples found for May '09 while only two chlorine residual samples were taken.	A mistake on the April MOR. Spoke with the operator and he cross-referenced his bench sheet and sent in a corrected MOR. The routine chlorine residual collected with the monthly bacteriological sample is listed on the MOR. Extra residuals were a suggestion by the district engineer for operational purposes.	Discrepancy stands. An M/R violation should have been assigned for failure to monitor and then returned to compliance.
MI0001718	DANSVILLE, VILLAGE OF	CWS	DBPR	7/1/08	More TCR samples were recorded than chlorine residual samples. Expect distribution system chlorine residuals to be taken at the same time and place as TCR samples. Why no M/R violation?	Chlorine sample collected 8/15/08 and TCR sample collected 8/5/08. Expect chlorine residual monitoring to occur at the same time and place as TCR monitoring.	A typo on the MOR, should have been 8/5/08. Spoke with the operator and has been corrected with a replacement MOR. See attachment.	Discrepancy stands. An M/R violation should have been assigned and then returned to compliance.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0002310	FLINT, CITY OF	CWS	DBPR	7/1/08, 10/1/08, 4/1/09	More chlorine residual samples were recorded than TCR samples. Expect distribution system chlorine residuals to be taken at the same time and place as TCR samples. Why no M/R violation?	In July through October 2008 and April through June 2009, more chlorine residual samples were collected in the distribution system than TCR samples. (In November 2008, the reverse occurred.)	It appears there has been a calculation error during the audit, the number of residuals and sample results do match up. See attached.	Discrepancies stand. The data provided matches the data recorded on site for chlorine residual numbers. However, TCR sample numbers were not provided. According to the team's findings, the chlorine residual numbers do not match the TCR sample numbers.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0004170	MASON, CITY OF	CWS	DBPR	4/1/09	Running annual average for chlorine residuals not calculated - why wasn't a violation assigned?	Found monthly averages on the system's MORs, but did not see the RAA calculated. Can you provide this calculation for the July 2008 through June 2009?	PROGRAM DISINVESTMENT	Discrepancy stands.
MI0004152	MATHIAS TOWNSHIP	CWS	DBPR	7/1/08, 10/1/08, 1/1/09, 4/1/09	System did not record distribution system chlorine residual samples taken at the same time and place as TCR samples for MRDL compliance. In addition, no RAA was calculated. Why weren't violations assigned?	For 12 months ending 6/30/09.	The operator does collect the free chlorine residual, which is 0.01 or less, and is submitting that information to be added to his MOR. He has been advised to collect a total residual if he cannot detect a free residual and record that note on his MOR.	Discrepancies stand.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0005740	ROCKLAND TOWNSHIP	CWS	DBPR	4/1/09	Running annual average for chlorine residuals not calculated - why wasn't a violation assigned?	For July 2008 through June 2009.	PROGRAM DISINVESTMENT RAAs provided by state, but system is calculating the RAA on an annual basis, not as a running annual average calculated quarterly.	Discrepancy stands.
MI0005740	ROCKLAND TOWNSHIP	CWS	DBPR	7/1/08, 10/1/08, 1/1/09	Sampling results reported late.	Distribution system chlorine residual results for July 2008 through January 2009 reported 2/27/09. Results for February 2009 through June 2009 reported 11/3/09.	PROGRAM DISINVESTMENT State provided missing data. System appeared to monitor correctly, but is reporting data chronically late.	Discrepancies stand.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0006445	SUGAR LOAF	CWS	DBPR	4/1/09	Sampling results were received late. Why wasn't a violation assigned?	Chlorine residual results were marked as received more than 10 days after the end of the compliance period in May 2009. In addition, no RAA calculated.	PROGRAM DISINVESTMENT In addition to the MOR, chlorine data were received on separate laboratory summary sheets. All laboratory summary sheets were received on time except 5/09. Monthly averages were calculated. The RAA was not calculated (all monthly averages were below 1 ppm). Auditor used MORs for determination. The laboratory summary sheets were shown to the auditor.	Discrepancy stands, sampling results received late in 5/09, and no RAA was calculated.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0006647	TREETOPS RESORT (TREETOPS NORTH)	CWS	DBPR	7/1/08, 10/1/08, 1/1/09, 4/1/09	More chlorine residual samples were recorded than TCR samples. Expect distribution system chlorine residuals to be taken at the same time and place as TCR samples. Why no M/R violation?	For all months except 11/08, saw either more chlorine residual samples than TCR, collected on different days than TCR, or tested for free rather than total chlorine. Also, all but 11/08, 3/09, and 4/09 reported late and no RAA.	Treetops is required to take only 1 TCR sample per month. It appears that they collected additional chlorine samples as a means to monitor their system. Treetops did not collect chlorine residuals at the same time as the TCR samples. <i>State does not agree that taking more residuals than required should be a discrepancy. Systems should be encouraged to monitor their system's performance frequently.</i> Late reporting and no RAA calculation are PROGRAM DISINVESTMENTS.	Discrepancies stand.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0001790	DELTA CHARTER TOWNSHIP	CWS	INV	1/1/09	The population listed in state records differs from the number in SDWIS/Fed by a number that affects monitoring - why the difference?	SDWIS/Fed shows a population of 20,000. State updated population on 8/22/08 sanitary survey to 22,300, but this number was not entered into SSWR2 until 10/28/09. 2008 LCR samples show population as 29,682.	Consecutive system monitoring. The 8/22/08 sanitary survey identifies the 29,682 population as census population, however a portion of the township is not served by the water system. The population of 22,300 is an estimate based on 2.5 people per 8,904 service connections. Due to consecutive system monitoring, the number of samples required does not change as indicated in the attached 8/22/08 sanitary survey cover letter. SSWR2 has been corrected.	Discrepancy stands. The state has, however, corrected the inventory numbers in SDWIS/Fed.
MI0001363	PIER 33 WATER WORKS, L.L.C.	CWS	INV	1/1/08	System has never served water to the public. Why is the system present in SDWIS/Fed inventory?	System is a condo complex that has never had any of its units occupied.	Pier 33 was placed on the SDWIS inventory in error.	Discrepancy stands.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0040203	WINDMILL PARK	CWS	IOC	1/1/05	System failed to sample during compliance period. Why wasn't a violation assigned?	No IOC samples or sampling schedule found for well 3. In addition, sample results for well 4 indicate that samples were collected from an incorrect site. Where is system required to collect their Phase II/V samples from?	Well 3 & 4 comprise one monitoring location. Historical monitoring was allowed at a representative location in the distribution system. When LDO assumed monitoring oversight in 2007, it was decided not to issue a violation to the system because they were monitoring as they had in the past. The operator/owner was informed that two points of entry will be monitored in the future. The situation was corrected.	Discrepancy stands.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI2820397	TRAVERSE BAY CHRISTIAN SCHOOL	NTNCWS	IOC	1/1/05	A violation was reported to SDWIS/Fed. The team could find no reason for the violation. Why wasn't it rescinded from SDWIS/Fed?	Violation (begin date 1/1/05) for failure to sample IOCs (Phase II) in SDWIS/Fed - system sampled 6/26/07.	Recision in process. Violation was removed from WaterTrack 4/4/08, after the end of the three-year domain (window) allowable for this violation's 1/1/05 begin date. A special update of SDWIS/Fed must be designed and implemented.	Discrepancy stands. Violation not rescinded in a timely manner.
MI0003525	KALAMAZOO LAKE SEWER & WATER AUTHORITY	CWS	LCR	10/1/08	System collected only 10 of 20 required LCR samples in 2008. Why no violation assigned?		The population was increased to above 3,300 on the 2007 Sanitary Survey. The required number of samples was never changed in the Monitoring Database and therefore KLSWA's monitoring schedule only indicated that 10 samples were required. This has been fixed in the database and that change will be reflected in their 2010 monitoring schedule.	Discrepancy stands.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0004170	MASON, CITY OF	CWS	LCR	1/1/09	90th percentile exceedance for copper is not present in SDWIS/Fed. Why not?	For samples collected in March 2009. Does state plan to set additional optimal water quality parameters since system continues to exceed the copper action level after OWQPS were set in 2008?	90th percentile was not entered into SDWIS/State in a timely manner - will be submitted during November 2009. As the water quality of the system has changed due to the installation of a radium removal treatment plant, the MDEQ is recommending the water supply conduct another corrosion control study.	Discrepancy stands.
MI0004170	MASON, CITY OF	CWS	LCR	1/1/09	90th percentile lead result for systems serving >3,300 population is not present in SDWIS/Fed. Why not?	For samples collected in March 2009.	90th was not entered into SDWIS State in a timely manner - will be submitted during November 2009.	Discrepancy stands.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI1420178	APOSTOLIC LIGHTHOUSE	NTNCWS	LCR	10/1/05	System failed to take five required samples during compliance period. Why wasn't a violation assigned?	System only took one sample in 2005.	PROGRAM DISINVESTMENT Only one available drinking water tap at this system. Only one sample required, as per Revised LCR.	The LCR Short-Term Revisions, which would permit collecting fewer than five tap samples were not published in the Federal Register until October 10, 2007. The regulation may not be applied retroactively. Discrepancy stands. ¹

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI2420261	COUNTY CENTER PARK ASSOCIATION	NTNCWS	LCR	10/1/03	LCR samples were collected outside of the summer months of June through September. Why wasn't a violation assigned?	For samples taken 1/23/03. Systems must take samples in the months of June - September or an alternate four-month compliance period chosen and documented by the state. Also, system did not sample again until 2007, which is more than three years.	PROGRAM DISINVESTMENT June through September sampling is an MDEQ disinvestment.	Discrepancy stands.
MI2320093	DIMONDALE ELEMENTARY SCHOOL	NTNCWS	LCR	10/1/06	LCR samples were collected outside of the summer months of June through September. Why wasn't a violation assigned?	For samples taken in 2006 (December) and 2009 (February). In addition, no 90th percentiles calculated in database.	PROGRAM DISINVESTMENT June through September sampling is an MDEQ disinvestment.	Discrepancy stands.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI7220381	H.L. MERCY CENTER	NTNCWS	LCR	1/1/08	A violation was reported to SDWIS/Fed. The team could find no reason for the violation. Why wasn't it rescinded from SDWIS/Fed?	Why were two 51 violations assigned, one with a begin date of 1/1/08, and another with a begin date of 7/1/07? Saw two rounds of samples collected in February 2008 and December 2008.	For LCR violations in WaterTrack, the begin date reflects the beginning of the monitoring period for which no sampling occurred. In SDWIS/Fed, the begin date for the same violation is the day after the failed monitoring period. In this case, the violations in WaterTrack have begin dates of 1/1/07 and 7/1/07. Samples collected were too few in each semi-annum.	Discrepancy stands. Only one "51" should have been reported to SDWIS/Fed, with a begin date of 7/1/07 for failure to collect the first round of LCR samples in January through June 2007.
MI0320604	HAMILTON HIGH SCHOOL (NEW)	NTNCWS	LCR	10/1/04	90th percentile values were not available in WaterTrack for the 2004 and 2007 sampling events.	Expect to see 90th percentiles calculated as part of the reporting requirements of the LCR.	For small systems where 90th percentile values are not required to be reported to SDWIS/Fed, if no single sample exceeds half the action level standard, no calculation is performed.	Discrepancy stands, 90th percentile values are required to be calculated for each system.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI3320174	HARLAN BIO PRODUCTS FOR SCIENCE, INC.	NTNCWS	LCR	10/1/07	LCR samples were collected outside of the summer months of June through September. Why wasn't a violation assigned?	Samples were collected in 11/6/07 which are outside of the summer months.	PROGRAM DISINVESTMENT June through September sampling is an MDEQ disinvestment.	Discrepancy stands.
MI6322202	HURON VALLEY SCHOOLS ADMIN	NTNCWS	LCR	10/1/06	LCR samples were collected outside of the summer months of June through September. Why wasn't a violation assigned?	Samples were collected 11/29/06 which are outside the summer months.	PROGRAM DISINVESTMENT June through September sampling is an MDEQ disinvestment.	Discrepancy stands.
MI4720192	PLAYLAND DAY CARE & NURSERY	NTNCWS	LCR	10/1/04	LCR samples were collected outside of the summer months of June through September. Why wasn't a violation assigned?	System sampled 12/28/04.	PROGRAM DISINVESTMENT June through September sampling is an MDEQ disinvestment.	Discrepancy stands.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI3420086	THRESHOLD ACADEMY	NTNCWS	LCR	10/1/08	90th percentile was not calculated in the state database. 90th percentile calculations must be completed either by the system or the state.	For 12/9/08 sample.	For small systems where 90th percentile values are not required to be reported to SDWIS/Fed, if no single sample exceeds half the action level standard, no calculation is performed.	Discrepancy stands, 90th percentiles are required to be calculated for all systems.
MI3420086	THRESHOLD ACADEMY	NTNCWS	LCR	1/1/09	A violation was reported to SDWIS/Fed. The team could find no reason for the violation. Why wasn't it rescinded from SDWIS/Fed?	LCR "51" violation (1/1/09) not found in state database. System completed initial monitoring (should have SOX'd in January-June 2008).	Recision in process. Violation was removed from WaterTrack 11/3/09 and will be removed from SDWIS/Fed with next update file, November 2009. (This deleted violation and the 1/1/09 violation in SDWIS/Fed are the same; the WaterTrack db does not assume the violation begins the day after the missed monitoring period).	Discrepancy stands.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI2820397	TRAVERSE BAY CHRISTIAN SCHOOL	NTNCWS	LCR	1/1/08	Violation was assigned in the state records (violation list) but not found in SDWIS/Fed or confirmed by the team. Why is this violation in the state records?	For LCR M/R violation date 1/1/08. There are multiple "52" violations for this system, issued in error because system never complied with two clean six-month rounds of initial monitoring. System should have received a "51" violation in 1999 and remained outstanding.	PROGRAM DISINVESTMENT MDEQ Noncommunity Program implemented the Minor Revisions LCR in 2001. Prior to this, only one sample per building was required. Initial tap sampling was completed on 9/9/1998 and 2/11/1999. The Region does not support the issuance of an open-ended "51" violation due to state interpretation of unclear regulatory requirements, as verified by the 2002 Michigan AG statement and the 2007 LCR STR.	Discrepancy stands. Because this system did not complete initial sampling (system did not collect enough samples for compliance), only one 51 violation should have been reported. Additional 52 violations are not required until the system returns to compliance by collecting two correct consecutive six-month rounds of samples.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI2820397	TRAVERSE BAY CHRISTIAN SCHOOL	NTNCWS	LCR	10/1/99	System failed to collect enough samples during compliance period. Why wasn't a violation assigned?	System only collected one of five required samples in June - September 1999 sampling event. There are multiple "52" violations for this system, issued in error because system never complied with two clean six-month rounds of initial monitoring.	PROGRAM DISINVESTMENT So in the case of annual violations, the begin date in SDWIS/Fed will be one year later than the begin date in WaterTrack, All the Type 52 violations for this system in SDWIS are correct. The Region does not support the issuance of an open-ended "51" violation due to state interpretation of unclear regulatory requirements, as verified by the 2002 Michigan AG statement and the 2007 LCR STR.	Discrepancy stands. System did not collect enough sample to complete initial monitoring. A "51" violation should have been reported to SDWIS/Fed.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI2820397	TRAVERSE BAY CHRISTIAN SCHOOL	NTNCWS	LCR	1/1/07, 1/1/09	A violation was reported to SDWIS/Fed. The team could find no reason for the violation. Why wasn't it rescinded from SDWIS/Fed?	For LCR M/R violation date 1/1/07 and 1/1/09. There are multiple "52" violations for this system, issued in error because system never complied with two clean six-month rounds of initial monitoring.	PROGRAM DISINVESTMENT Also, for LCR violations in WaterTrack, the begin date reflects the beginning of the monitoring period for which no sampling occurred. In SDWIS/Fed, the begin date for the same violation is the day after the failed monitoring period. The Region does not support the issuance of an open-ended "51" violation due to state interpretation of unclear regulatory requirements, as verified by the 2002 Michigan AG statement and the 2007 LCR STR.	Discrepancies stand. Because system did not complete initial monitoring requirements, only one "51" violation should have been reported to SDWIS/Fed, and left outstanding, rather than assigning and reporting numerous "52" violations.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0040203	WINDMILL PARK	CWS	Nitrate	1/1/07	System failed to sample during compliance period. Why wasn't a violation assigned?	Sampling schedules found for wells 1 and 2 only. No nitrate samples found in 2007 for wells 1, 2, and 3. Nitrate samples collected from well 4 are noted as being collected from an incorrect site. Why were samples accepted for compliance?	Historical monitoring was allowed at a representative location in the distribution system. When LDO assumed monitoring oversight in 2007, it was decided not to issue a violation to the system because they were monitoring as they had in the past.	Discrepancy stands.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0006647	TREETOPS RESORT (TREETOPS NORTH)	CWS	PN	1/5/09	Violation was assigned, but with incorrect dates - can you explain? Violation begin date is 40 days after notification (or 30 days to do PN and 10 days to report to state).	PN for 11/08 TCR MCL was posted with boil water notice on 12/4/09, but not reported to state until 1/12/09. State requested notice in 11/25/08 email and again in 1/9/09 letter. Doesn't 11/25/08 email count as request for PN?	The TCR MCL occurred on 11/25/09. A combination PN/Boil Water Advisory was prepared by DEQ staff and e-mailed to Treetops on 11/25/08. The violation period in SDWIS is 11/1/08 to 11/30/08. The validation date for the violation is 1/6/09 which is the date when the violation was entered into SDWIS. A follow-up letter was sent to Treetops on 1/9/09 (recorded as an SIE code in SDWIS) which is 40 days after 11/30/08. Copies of both the PN/Boil Notice (dated 11/25/08) and an all Clear Notice (dated 12/4/08) are in the file. Perhaps the all clear was mistaken as the PN/Boil Notice.	Discrepancy remains. Date was mistaken by state staff.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0040203	WINDMILL PARK	CWS	RAD	1/1/07, 4/1/07, 7/1/07, 10/1/07	System failed to sample during compliance period. Why wasn't a violation assigned?	No radionuclides samples found for wells 1, 2, and 3. (Found samples for well 4 collected in 5/1/02.)	Historical monitoring was allowed at a representative location in the distribution system. The sample collected 5/1/02 was used as grandfathering data. When LDO assumed monitoring oversight in 2007, it was decided not to issue a violation to the system because they were monitoring as they had in the past. The operator/owner was informed that two points of entry will be monitored in the future. The situation was corrected.	Discrepancies stand.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0040203	WINDMILL PARK	CWS	SOC	1/1/05	System failed to sample during compliance period. Why wasn't a violation assigned? No SOC samples found for wells 1,2, and 3. Schedule indicates that samples due from wells 1 and 2, no sampling schedule for wells 3 and 4 found.	Sample results for well 4 indicate that samples were collected from an incorrect site. Where is system required to collect their Phase II/V samples from?	Historical monitoring was allowed at a representative location in the distribution system. When LDO assumed monitoring oversight in 2007, it was decided not to issue a violation to the system because they were monitoring as they had in the past. The operator/owner was informed that two points of entry will be monitored in the future. The situation was corrected.	Discrepancy stands.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0006647	TREETOPS RESORT (TREETOPS NORTH)	CWS	SS	1/1/07	Two sanitary surveys found, but they were done more than five years apart - why no M/R violation?	Found surveys for 2002 and 2008.	PROGRAM DISINVESTMENT A sanitary survey was conducted on 12/5/02 and the next conducted on 06/3/08. Because MDEQ is responsible for conducting sanitary surveys, violations are not issued against the supply if a sanitary survey is conducted late.	Discrepancy stands.
MI0040203	WINDMILL PARK	CWS	SS	1/1/01	Two sanitary surveys found, but they were done more than five years apart - why no M/R violation?	Surveys were conducted in 1996 and 2007.	PROGRAM DISINVESTMENT Because MDEQ conducts sanitary surveys, violations are not issued against the water supply if frequency not met by MDEQ. See disinvestment documents for further explanation.	Discrepancy stands.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI6120415	OVERBOARD INN	TNCWS	SS	1/1/05	Two sanitary surveys found, but they were done more than five years apart - why no M/R violation?	Found surveys for 2000 and 2006. For 2000 found date only; no hard copy found.	PROGRAM DISINVESTMENT Hard copy of the 11/16/2000 survey letter and field form were/are in the file provided, stapled to the back of the 7/26/2006 survey letter. There may have been a temporary network issue related to Wellogic Wednesday afternoon that was preventing sanitary survey info from appearing in WaterTrack.	Discrepancy stands. Sanitary surveys are more than five years apart.
MI6620023	TULPPO'S, INC.	TNCWS	SS	1/1/03	Two sanitary surveys found, but they were done more than five years apart - why no M/R violation?	Found only 1998 and 2005 surveys in the files.	PROGRAM DISINVESTMENT Survey 23 months late. MDEQ assumes responsibility for any late sanitary survey and will not issue a violation against the water system owner as per MDEQ 2009 Disinvestment document.	Discrepancy stands.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0000505	BEAR CREEK ESTATES	CWS	TCR	3/1/09, 5/1/09	Sampling results were received late. Why wasn't a violation assigned?	March results received April 15, May results received June 15, more than 10 days after the end of the compliance period.	PROGRAM DISINVESTMENT Correct, data were received on the 15th. Data are entered into database after the 15th. The samples were collected on time, and no violation issued.	Discrepancies remain. Systems are required to submit results to the state within 10 days of the end of the compliance period.
MI0006445	SUGAR LOAF	CWS	TCR	5/1/09	Sampling results were received late. Why wasn't a violation assigned?	TCR results were received more than 10 days after the end of each month.	PROGRAM DISINVESTMENT TCR data received on the lab TCR reporting summary sheet. All were received on time except for 5/09 because lab report was late. Auditor used MOR for determination. Information was shown to the auditor. Reporting violation not issued.	Discrepancy stands, results were received late.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI2320093	DIMONDALE ELEMENTARY SCHOOL	NTNCWS	TCR	4/1/09	A violation was reported to SDWIS/Fed. The team could find no reason for the violation. Why wasn't it rescinded from SDWIS/Fed?	Violation was reported for 4/1/09 but a sample (TC negative) was taken in May. Was the sample reported late?	Recision in process. Violation was removed from WaterTrack 7/30/09 and will be removed from SDWIS/Fed with next quarterly update file, November 2009.	Discrepancy stands.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI4720623	MCDONALDS	TNCWS	TCR	9/1/08, 10/1/08, 11/1/08	System reported an insufficient number of required routine samples. Why wasn't an M/R violation assigned?	Did not collect enough repeat samples: collected three instead of four on 10/1/08; collected two instead of nine on 10/1/08; and collected two instead 12 on 11/1/08.	First positive sample on 9/30/08, four repeats collected 10/1/08. System is not serving water to the public while on precautionary measures. Ample repeat and routine follow-up samples collected throughout. Further comment: This water system does not operate like a community water supply with multiple sources that, individually, go off- and on-line when hit with a positive sample while the other sources continue to provide water to the public. Should water samples be collected from the bottled water? What is the point of collecting samples at an increased frequency from bottled water while the well is out of commission? Moreover, there were 32 samples collected between the initial POS and the RTC (SOX) dates. No M/R violations are warranted.	Discrepancies stand. No documentation of missing samples provided. It's also not clear how a restaurant is avoiding serving water to the public. The provision of bottled water, however, does not exempt a system from required monitoring.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI4720623	MCDONALDS	TNCWS	TCR	9/1/08, 11/1/08	Pattern of total coliform positives indicates an MCL should have been assigned - why wasn't one assigned?	TC+ sample on 9/30/08. Repeat positive on 10/1. MCL should have been assigned for September. Also four TC+ samples in November. Expect an MCL violation for November also.	MCL was assigned for October. WaterTrack was designed to assign as the begin date the month in which the second positive occurs, since that's when it is known a violation exists. The system was taken out of service during the time the contamination was being investigated and resolved. "Precautionary Measures" require alternate water, PN posting, and two safe samples taken in absence of chlorine at least eight hours apart.	Discrepancies stand. The MCL violations should be linked to the month in which the first positive sample was collected. Violations should also be assigned regardless of the fact that alternate water was being used.
MI0000505	BEAR CREEK ESTATES	CWS	VOC	10/1/05	System detected one or more contaminants, but appropriate quarterly monitoring not found. Why no M/R violations?	Toluene was detected in the 8/24/05 sample, no additional quarterly samples collected.	Correct, no additional quarterly samples were collected after toluene was detected on 8/24/05.	Discrepancy stands.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0000700	POWELL TOWNSHIP	CWS	VOC	1/1/05, 1/1/06	System failed to sample during compliance period. Why wasn't a violation assigned?	Monitoring schedule indicates that annual sampling was required in 2005 and 2006, no VOC samples found.	We have enclosed the VOC collected 10/18/2004 - there were no detections in that sample and the Township continued with reduced monitoring frequency that was in effect at that time (every three years). A 12-month monitoring frequency was found (typographical error) on the 2005 and 2006 sampling schedules however the Next Due date was 9/30/2007, which was correct as it was based on a 36-month sampling frequency and a previous sample date in 2004 with no detects. The typo concerning the monitoring frequency was corrected in the 2007 sampling schedule.	Discrepancies stand. Expect the system to monitor according to the sampling schedule on record.

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PWSID	PWS Name	System Type	Rule	Violation or Compliance Begin Date(s)	Question	Supporting Details	State Response	Discrepancy Resolution
MI0040203	WINDMILL PARK	CWS	VOC	1/1/05	System failed to sample during compliance period. Why wasn't a violation assigned? No VOC samples found for wells 1,2, and 3. Schedule indicates that samples due from wells 1 and 2, no sampling schedule for wells 3 and 4 found.	Sample results for well 4 indicate that samples were collected from an incorrect site. Where is system required to collect their Phase II/V samples from?	Historical monitoring was allowed at a representative location in the distribution system. When LDO assumed monitoring oversight in 2007, it was decided not to issue a violation to the system because they were monitoring as they had in the past. The operator/owner was informed that two points of entry will be monitored in the future. The situation was corrected.	Discrepancy stands.

¹ As noted in the 2005 review, MDEQ was requiring NTNCWSs to sample all taps in the building or at least the required minimum number of samples regardless of the number of buildings that make up the NTNCWSs so that "no less than five samples would be taken." However, MDEQ could only initiate enforcement if the system samples less than one sample per building since a Michigan Attorney General legal opinion stated that MDEQ cannot enforce against an NTNCWS that takes fewer than the minimum number of samples. The Region and the MDEQ entered into a primacy extension agreement for the Lead and Copper Rule Minor Revisions (LCRMR) on March 14, 2002. Thus, during the 2002 data verification review, the above provisions were agreed to by the MDEQ and the Region, so no discrepancies were applied. The LCRMR extension agreement stated that the MDEQ would not take formal or informal enforcement for monitoring violations at NTNCWSs that consist of fewer than five buildings and that collect at least one sample per building (but fewer than the minimum number of samples required by the LCRMR), but would refer these systems to Region 5 for enforcement.