

**Michigan Department of Environmental Quality
Office of Drinking Water and Municipal Assistance**

**ANNUAL REPORT ON
CAPACITY
DEVELOPMENT
PROGRAM
FISCAL YEAR 2016**

December 2016

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List of Acronyms

ACO	Administrative Consent Orders
Act 399	Safe Drinking Water Act, 1976 PA 399, as amended
AWWA	American Water Works Association
CCR	Consumer Confidence Report
CDP	Capacity Development Program
CWS	Community Water System
DDBPR	Disinfectants and Disinfection Byproducts Rule
DWGIS	Drinking Water Geographic Information System
DWRF	Drinking Water Revolving Fund
eDWR	Electronic Drinking Water Reporting
EN	Enforcement Notice
ETT	Enforcement Tracking Tool
FAP	Financial Action Plan
FY	Fiscal Year
GWR	Ground Water Rule
LHD	Local Health Department
MDAG	Michigan Department of Attorney General
MDEQ	Michigan Department Environmental Quality
MEHA	Michigan Environmental Health Association
MGMT	Michigan Groundwater Management Tool
MSU-CEE	Michigan State University, Department of Civil and Environmental Engineering
MHC	Manufactured Housing Community
MOR	Monthly Operation Reports
NCWS	Noncommunity Water Systems
NTNCWS	Nontransient Noncommunity Water Systems
ODWMA	Office of Drinking Water and Municipal Assistance
OTCP	Operator Training and Certification Program
PWS	Public Water System
RTCR	Revised Total Coliform Rule
SDWA	Federal Safe Drinking Water Act
SDWIS	Safe Drinking Water Information System
SWIPP	Surface Water Intake Protection Program
SWPP	Source Water Protection Program
TMF	Technical, Managerial, and Financial
USEPA	United States Environmental Protection Agency
WHPA	Wellhead Protection Area
WHPP	Wellhead Protection Program

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1. Introduction

The 1996 Amendments to the federal SDWA added provisions for each state to develop a CDP. The objective of the CDP is to enhance public health protection by helping water systems develop and maintain the TMF capacity they need to consistently deliver a safe, reliable, and abundant supply of drinking water to all customers.

The purpose of this document is to demonstrate to the USEPA that the state is implementing a capacity development strategy as required in the SDWA, Section 1420(c)(1)(C), or risk losing 20 percent of the annual DWRf allotment that the state is otherwise entitled to receive under the SDWA, Section 1452.

This report corresponds to the criteria set forth in the USEPA's memo "Reporting Criteria for Annual State Capacity Development Program Implementation Reports" dated June 1, 2005. The report is due to the USEPA within 90 days of the end of the reporting period. Michigan's reporting period is the state fiscal year that ends on September 30, so this report is due by December 31 of each year. Elements discussed in this report are:

- New Systems
 - Identify legal authority.
 - Identify control points.
 - List of new systems.
- Existing Systems
 - Identify tools and activities.
 - Identify systems.
 - Identify needs and provide assistance.
 - Review implementation and address findings.
 - Modify strategy.

2. New Systems Program

2.1 Identify Legal Authority

The legal authority remained unchanged during the reporting period. The CDP is implemented by the MDEQ, ODWMA, through amendments to Act 399, by application of capacity development policies and guidance documents and through cooperation and partnerships with other agencies.

2.2 Identify Control Points

The control points remained unchanged during the reporting period. As outlined in the *New Community Water System Capacity Guideline Document*, dated May 1, 2000, new systems must demonstrate TMF capacity before serving water to the public. The new systems program relies on two control points: construction permits, which are required by law, and final inspection, which is required by policy. Generally, a construction permit is issued based on the technical capacity of the proposed system. For CWS, the financial and managerial capacity requirements may still be pending while the system is under construction. Approval to commence operation is not granted until after an acceptable final inspection and approval of a financial plan and operations plan that address financial and managerial capacity. For

NTNCWS, the ODWMA has delegated the authority to the LHDs to review, approve, and issue construction permits. When water systems begin the permit application process, the LHD helps them outline their TMF capacity. Prior to receiving approval to commence operation, the NTNCWS must submit a TMF, contingency plan, and designate a certified operator.

2.3 List New Systems

The list of CWS and NTNCWS that became active during the last three fiscal years is in Appendix A. Each year, the list indicates which systems, if any, scored 11 or more (indicator of noncompliance) on the ETT during the reporting period. New system compliance data is more meaningful when compared to all systems of the same classification, as summarized in the following table.

FY 2014 to FY 2016	CWS		NTNCWS	
	New	New & Existing	New	New & Existing
Number of systems on ETT Tracker Report	12	1378	48	1298
Number of systems with ETT score of 11 or more	0	20	0	8
Systems with ETT score of 11 or more (percent)	0	1.5%	0%	0.6%

No systems that became active during the last three fiscal years scored 11 or more on the ETT.

3. Existing Systems Program Tools and Activities Used

The *Capacity Development Strategy for Existing Public Water Systems*, dated August 1, 2000, lists the programs, tools, and/or activities to help systems acquire and maintain capacity. This section describes each of the major program elements, the target audience, and a discussion of how each helps to achieve and enhance capacity.

3.1 Sanitary Surveys to Evaluate Systems

Target: CWS and NCWS

Capacity of existing systems is assessed through sanitary surveys, on-site surveillance visits, and through the construction permit process.

For NCWS, sanitary surveys are conducted every five years. Construction permits and inspections are required when new wells are installed or treatment is added. While a change in classification from transient to NTNCWS results in a capacity assessment of the existing system, these systems are not included in the list of new systems in Appendix A.

For CWS, sanitary surveys are conducted every third year by ODWMA field staff. This frequency coincides with the requirements of the series of Surface Water Treatment Rules and the GWR. Sanitary surveys no longer result in systems being rated satisfactory, marginal, or deficient. Each of the eight required sanitary survey components is rated individually and entered into SDWIS. The required components include the source, treatment, distribution system, finished water storage, pumps and controls, monitoring and reporting, system management and operation, and operator compliance. Each component may be rated as a

significant deficiency, minor deficiency, recommendations made, or no deficiencies/recommendations.

The ODWMA staff detail their findings and recommendations in a letter to the system. These letters may include a list of milestones with dates by which the items are expected to be addressed. Options for capacity assistance may also be offered, such as recommending a financial assessment or contacting available technical assistance providers for specific assistance. These evaluation letters help systems understand the severity of the deficiencies and prioritize response activities.

The following table summarizes data on CWS sanitary surveys, visits, and construction permits in recent years.

CWS Evaluations, Visits, and Construction Permits			
	FY 2014	FY 2015	FY 2016
Number of Sanitary Surveys Conducted	475	457	377
Number of Significant Deficiencies	3	7	11 at 7 systems
Number of Minor Deficiencies	179	99	85
Number of Visits **	1,729	1,835	1,677
Number of Construction Permits Issued	888	922	1,011
Number of Water Main Permits	708	748	838
Average Number of Days to Issue Simple Water Main Permits*	10	10.7	13.7

* We strive to issue simple water main permits within two weeks.

** Includes Sanitary Surveys

The frequency of surveillance visits above are as follows:

Type of CWS	Smaller/Less Complex	Larger/More Complex
Wholesale customer supplies	Once per year	Once per year
CWS with no treatment*	Once per year	Once per year
CWS with treatment*	Twice per year for systems employing treatment other than "complete treatment"	Four times per year for systems employing "complete treatment"

*Treatment employed for public health protection.

Excludes water softeners or other point of entry aesthetic treatment.

In addition to scheduled surveillance visits and sanitary surveys, field staff visit water systems to investigate problems discovered as a result of routine monitoring or that arise as a result of emergencies. If water system issues need to be elevated to local officials, the community leadership may include field staff on the agenda of council or board meetings.

3.2 One-on-One Technical Assistance and Consultation

Target: CWS and NCWS

The ODWMA and LHD field staff are the primary implementers of the CDP. Water system operators develop a relationship with field staff that are the primary contact for capacity development. Each CWS is served by ODWMA staff from one of the eight district offices, and each NCWS is served by staff from one of the 44 LHDs under contract with the ODWMA. A primary objective of the ODWMA field staff and the LHD is to provide excellent customer service from the construction permit process for new infrastructure through the continual assessment and oversight process during operation. Field staff achieves that objective through assistance to systems during site visits, at meetings and conferences, during training events, and consultation by telephone and e-mail. Field staff attends, participates, and presents at periodic regional operator meetings to discuss upcoming regulations, regional issues, and to network with operators and managers.

The NCWS Program staff of the ODWMA maintains communication with each of the 44 LHDs during the year. This communication occurs routinely via phone calls, e-mail, joint office and field work, and group and individual training. Also quarterly data reviews and annual evaluations of each of the 44 LHD's performance are conducted to assure and maintain water system compliance.

PWS Program field staff serves as consultants to provide technical assistance to water systems. The following examples illustrate this assistance:

- The Karegnondi Water Authority Team, made up of expert water treatment engineers from the ODWMA, worked with the Flint Water Treatment Plant staff to help them achieve consistent levels of treatment for disinfection and corrosion control. They also began working with Genesee County in the development of a pilot study to determine the optimal corrosion control treatment for their water treatment plant that is under construction.
- In concert with the city of Flint, the DEQ implemented a side-by-side operations, management, and training plan. The training includes hands-on experience for City and state staff and includes real-world operational situations, such as dosage calculations, backwashing filters, flushing hydrants, handling customer complaints, etc. It also allows for the building of a relationship between ODWMA staff and City water operators during a time when their interaction is not strictly one of regulatory oversight.
- The city of Grant operator is fairly new and requested help with understanding persistently low chlorine residuals near the water tower. MDEQ staff developed a hydraulic water model to study the conditions present in the water distribution system, and found the typical cycling of the tower insufficient to draw “new” water into the tank. In addition, staff conducted a chlorine demand curve analysis on the source water, wherein known concentrations of chlorine are added to raw water and free/total residuals measured and plotted to understand breakpoint chlorination. These efforts resulted in a better technical understanding of the water system for both the operator and the MDEQ.
- A Cadillac District engineer worked with the Northport Condominium Association and their consultant on the preliminaries for the construction of a new surface water treatment plant. The engineer assisted the small association as they developed a sound

basis of design, the appropriate capacity development documents, and a reliable membrane filter treatment plant design.

- An Upper Peninsula District engineer responded to a copper action level exceedance and assisted Sherman Township, Keweenaw County staff in the selection, installation, set-up, and operation of optimal corrosion control treatment. Selection of appropriately sized feed pump and stock dilution settings proved challenging because this is a very small water system with 48 customers (only about 20 year round). The initial round of sampling shows improving results.
- A Saginaw Bay District engineer worked closely with Bay County as they developed and refined their corrosion control study as this new system began serving Bay City and 20 consecutive customer systems.
- The Allegan County Services Center (ACSC) is a limited treatment water system with only chlorine treatment. The water system served by two wells and a 50,000 gallon elevated water storage tank. The water system serves seven buildings consisting of approximately 370 employees and 101 full-time residents. The ACSC has had on-going issues with high lead results over the last few years, culminating in an in-depth effort by the MDEQ's Kalamazoo District Office staff and the Allegan County Health Department to help ACSC identify fixtures and plumbing that needed replacement and take further actions to protect public health.
- Dimondale Elementary School had a lead action level exceedance. MDEQ and LHD staff met on site with the certified operator and school officials to assess how water flows through the building, perform a source and plumbing assessment, and identify all drinking water taps. Investigatory sampling for lead and copper occurred at all drinking water taps. With this information, fixtures and connecting plumbing were identified for removal. New materials meeting the 2014 lead free definition are being installed. Subsequent sampling has demonstrated reduced levels of lead in the drinking water after fixture replacement. In this situation, removal of the lead components appears to be a successful alternative to installation of corrosion control treatment which would be an ongoing operational expense and added responsibility for the small school.
- MDEQ staff conducted a sanitary survey of a new NTNCWS, Lil Sprouts Child Development, in conjunction with the Central Michigan District Health Department. The daycare center was moving locations and needed to move into the new location as soon as possible. In meeting with the system owners and managers, we were able to provide information on becoming a NCWS, including a capacity development application. In completion of the introductory sanitary survey, the system promptly took steps to address a couple items of concern and initiated sampling by the end of the day. The value in training both the sanitarians and the system managers/owners at the same time proved well worth the time. One item assessed after our site visit was a question on the existing well construction. A water well record found in the Wellogic database showed a 5-inch plastic well, however the only well head found on the premise was 4-inch steel. Through contact with the water well contractor, we learned he had installed a flowing well adapter and a 4-inch steel casing atop of the PVC to confine the flow to within the casing. Information was relayed to their well record for future reference.

These examples are only a few instances of the one-on-one technical assistance provided by staff to help water systems gain TMF capacity.

3.3 Other PWS Program Efforts

PWS program staff develops and distributes individual monitoring schedules for each CWS and NCWS as a tool to help systems comply with monitoring and reporting requirements. These schedules are based on each system's applicable monitoring waivers and schedule. To supplement the schedule, staff may enclose or provide an Internet link to the following, depending on that year's monitoring requirements:

- Lead and Copper Report and Consumer Notice of Lead Result Certificate. This form provides a fill-in-the-blank version of the consumer notice for the convenience of systems with limited computer ability.
- Drinking Water Lead and Copper Sampling Instructions. The system may provide this document to the occupants that will be performing the sampling. The FY 2016 instructions were expanded considerably to add detail and clarification.
- Bacteriological Sample Siting Plan. This form incorporates RTCR and GWR-triggered source monitoring requirements. **In 2016, the CWS made a concerted effort to get all supplies to complete new Bacteriological Sample Siting Plans to reflect the changes of the RTCR.**
- Stage 2 DDBPR Sampling Site Plan.
- List of approved laboratories.
- Annual Pumpage/Usage Report For Community Water Supply (applicable to CWS that do not submit MORs with monthly pumpage).
- Cross Connection Report. Systems use this form to demonstrate ongoing implementation of their Cross Connection Control Program. Approximately 350 MHCs began implementing cross connection control programs for the first time in 2016.
- CCR Certificate of Distribution.

Methods and additional opportunities to communicate PWS monitoring and reporting requirements include:

- Reminder phone calls, e-mails, or post cards.
- Reminder letters. Systems that have not completed their annual or less frequent monitoring receive a reminder within 30 to 90 days before the deadline to prevent a violation.
- Lead and copper reminder letters. Lead and copper monitoring is so complex that this reminder letter also serves as monitoring guidance.
- Lead and Copper 90th percentile letter or action level exceedance letter. These letters outline the results of the system's monitoring and remind systems of further requirements, such as distributing the Consumer Notice of Lead Result, for conducting water quality monitoring or installing corrosion control treatment.
- CCR reminder letter. Each spring, ODWMA field staff reminds systems of the annual requirement and provides tools to comply: (1) A variety of templates are made available including the Internet link to the USEPA *CCRwriter*, as well as (2) The guidance documents *Preparing Your CCR* and *Reporting TOC on the CCR*, as applicable.

- Violation letters, discussed in Section 3.4 below, include requirements to post public notice, when applicable. Templates for typical monitoring and reporting violations, and many state drinking water violations, are available to field staff. Staff either provides the template for the system to edit and place on its own letterhead, or staff may prepare the final public notice for the system to distribute.
- The NCWS program e-mail Listserve called GovDelivery. This was used in FY 2016 to inform NCWS owners and operators that staff was available to speak to professional organizations about the RTCR and other issues of interest to small systems.
- As a follow up to the RTCR notification letter sent to NCWS by the DEQ, many LHDs did their own mailing and all 44 LHD performed some sort of educational outreach to their NCWS systems.
- The RTCR fact sheet targeted to NCWS was updated to reflect that the RTCR became effective April 1, 2016. This is located on our noncommunity Web site.

Tools to help systems manage operational requirements include:

- MOR templates. Staff reviews each MOR to assure compliance with treatment techniques and to evaluate treatment processes for optimal operating practices.
- The NCWS RTCR Level 1 Assessment Form was placed on our website as a fillable form using Word or Adobe PDF in April 2016.
- Privately-owned CWS Stipulation to Conditions. While it is clear in the administrative rules that new systems must demonstrate TMF capacity before commencing operation, the 2009 amendments to Act 399 clarified that these requirements also apply to new owners of existing systems. The Stipulation to Conditions that owners must sign covers the minimum elements to ensure owners are able to provide an adequate supply of drinking water.
- Water well site inspections and approvals. The LHD and ODWMA field staff conduct inspections and approvals of water wells serving the NCWS and CWS, respectively.
- Guidance documents: The ODWMA staff develops and distributes guidance documents as needed. Examples include:
 - *Water Well Disinfection Manual*.
 - *Seasonal Public Groundwater Supply Handbook (May 2015)*.
 - *Suggested Practices* outlines design, construction, and operation criteria for CWSs.
 - The *Cross Connection Rules Manual* outlines program requirements. Several of the programmatic recommendations in this manual were incorporated into Act 399 rules in 2015.
 - *New Community Water System Capacity Guideline Document* developed in 2000 guides field staff and owners of proposed or new systems through the process. It includes a capacity assessment checklist, a financial workbook, policies related to new systems, and templates and forms for planning purposes.
 - Source water protection guidance documents.
 - NCWS program guidance documents include the *Noncommunity Staff Reference Manual*, and the *WaterTrack Operators Manual* for LHD staff (both had updates published in FY 2016).
 - The *Level 5 Drinking Water Operators Guide* for those individuals pursuing certification to operate a small PWS.

- Additional brochures and informational publications were produced to address the issue of lead and copper in household drinking water.
- New marketing URLs were created to help PWS owners and operators and the public more quickly access our websites. Specifically, www.michigan.gov/drinkingwater and www.michigan.gov/deqlab were created.
- USEPA tools. In addition to state-developed products, the field staff distributes, as needed, USEPA tools and guidance documents, promotes the Check Up Program for Small Systems and other system capacity development and sustainability tools, and promotes USEPA Webinars.

Field staff hosts and presents material at meetings, conferences, and training sessions throughout the year for LHD field staff, consulting engineers, and local decision makers.

Ongoing activities include serving as instructors at several operator training courses throughout the year, speaking at other meetings and conferences related to drinking water, and attending USEPA sponsored Webcasts. Specific activities in FY 2016 include:

- The ODWMA field staff presented the *MDEQ Update* at each of the eight Michigan Section, AWWA, regional meetings updating participants on new rule implementation. New rules updates and training was also presented at periodic ODWMA drinking water staff meetings. The Field Operations Section chief also presented the *MDEQ Update* at the annual conference of the Michigan Section, AWWA.
- The MDEQ contributes to a quarterly newsletter, *Water Works News*, with the Michigan Section, AWWA. The newsletter is distributed to members and all CWS, including approximately 700 privately-owned CWS that might not otherwise receive drinking water-related information.
- The NCWS Program staff participates in association conferences relevant to NCWS systems, such as the Michigan Chapter of the Association of Recreational Vehicles and Campgrounds, the Michigan School Business Officials, the Michigan Ground Water Association, the Michigan Association of Local Environmental Health Administrators, and the MEHA Annual Education Conference.
- The ODWMA program staff worked with the Michigan Department of Health and Human Services, Oral Health Program, to administer a Fluoride Grant Program to promote public water system fluoridation by offering grants to water systems wishing to purchase new or replacement fluoride feed equipment. Four water systems were awarded grants in FY 2016 totaling \$30,902.
- To continue to offer quality training to ODWMA staff and water systems, the ODWMA takes advantage of USEPA and AWWA Webinars. Certified operators can meet continuing education requirements with USEPA or AWWA sponsored Webcasts. The ODWMA promotes Webinars and encourages field staff to forward information to water systems so they can participate at their site. Six ODWMA staff attended the USEPA Corrosion Control Treatment Workshop in September 2016. The ODWMA will continue to take advantage of other opportunities to interact with water systems and their consulting engineers, municipal leaders, and others interested in drinking water issues.

3.4 Enforcement

Target: CWS and NCWS

Evaluations and compliance information become the basis for enforcement. When a system violates a requirement, they should receive a letter that clearly states what was violated, when the violation occurred, how to return to compliance, and when to respond. By doing so, it is believed that enforcement will be viewed as more predictable; therefore, systems will make a greater effort to comply and avoid enforcement.

When systems fail to return to compliance, escalated enforcement, including enforcement notices, ACOs, unilateral department orders (MDEQ order), and referrals to the MDAG, or USEPA Region 5 can be initiated. Before escalated enforcement is used, many systems return to compliance when they are assessed administrative fines for monitoring and reporting requirements. Water systems generally return to and remain in compliance with monitoring and reporting requirements after receiving a fine. During FY 2016, 11 CWS received a fine at least one time for at least one monitoring or reporting violation. Small systems received the majority of the fines, which is expected as large systems typically have the resources and systems in place to ensure monitoring is timely and performed correctly.

When a fine is not applicable or does not prevent further violations, the ODWMA moves to an escalating series of enforcement actions that include an EN, ACO, and in rare cases an MDEQ Order or referrals to the MDAG or the USEPA. However, field staff prefer technical assistance over enforcement to bring systems back into compliance. This year, ODWMA referred 13 MHCs to the Michigan Department of Licensing and Regulatory Affairs with recommendations against reissuing licenses. This resulted in some MHCs returning to compliance. Copies of EN are sent to the Liquor Control Enforcement Section for systems that have liquor licenses and the Michigan Department of Agriculture and Rural Development or local health department for systems having food licenses. Seventeen ENs were issued in FY 16. The district-initiated ACOs are no longer used as they often bypassed enforcement staff. Now all ACOs are developed and sent by an enforcement specialist in Lansing with assistance from district staff, improving consistency across the state. ODWMA entered into 11 ACOs in FY 16.

Some water systems are not willing to enter into an ACO. In those cases, the ODWMA must escalate the enforcement level to an MDEQ Order or a referral to the MDAG or the USEPA. There were no MDEQ orders; however, there were three referrals to the MDAG in FY 2016. Under the provisions of the contract to implement the NCWS program, each LHD is required to conduct enforcement necessary to address NCWS in noncompliance. The ODWMA field staff assists the LHD upon request, and in extreme cases, the ODWMA central staff may take the enforcement lead or refer it to the USEPA, Region 5, when state resources are unavailable. Typical tools used by the LHD include administrative fines, informal hearings, local license suspension procedures, and bilateral compliance agreements.

3.5 OTCP

Target: CWS and NCWS

A properly certified operator must be responsible for each of the 1,378 CWS and 1,298 NTNCWS, and at the 85 transient NCWS that employ treatment for either public health purposes or aesthetic reasons. Operators maintain their certification by meeting continuing education requirements through training offered in a variety of venues.

3.5.1 Training

The ODWMA, OTCP, provides over 30 training courses each year and approves continuing education credits for nearly 80 organizations and training providers that offer other opportunities for continuing education, including online courses. The OTCP has also approved a list of hands-on training or “HOT” programs that can provide operators with at least 50 percent practical experience in a three-or-more-hour training session.

Many of the training courses coordinated by the OTCP are taught by ODWMA field staff under a joint funding agreement between the MDEQ and the Michigan Section, AWWA. The ODWMA treatment specialist schedules instructors and also instructs both the Basic and Advanced Cross Connection Control seminars and the Water Treatment and Distribution System 2.5-day Short Courses.

During on-site visits or other consultation opportunities, field staff discusses the certification status of the operator and may suggest training sessions to hone skills or prepare for the examination required to obtain or to upgrade certification.

The OTCP annually reports to the Legislature on the program activities as a result of fees that are now collected for the program. The report details training programs offered, number of examinations provided, number of certifications given to operators, and funding balances from the operator fees. The OTCP also prepares an annual report to USEPA on program activities.

3.5.2 Small CWS and NCWS Training

This training is now conducted primarily by ODWMA staff, with only a few LHDs continuing to conduct this training voluntarily. Staff of the NCWS program conducted training in five locations for Level 5 operators in FY 2016. One hundred twenty operators attended. The primary topic was the RTRC.

Training targeted towards LHD staff is conducted to inform, explain, and discuss new and updated program issues and procedures. They relay this information to the owners and operators of NCWS. This training occurs in many ways, including formal educational events and during the program evaluation process. Formal educational events with the LHDs in FY 2016 included:

- In January 2016, ODWMA staff hosted a Noncommunity Drinking Water Workshop and provided funding for every LHD to participate. This two-day workshop consisted of USEPA Region 5 updates, WaterTrack migration to SDWIS Prime, RTRC training, and lead and copper monitoring. 100 regulators attend this annual training.

- MDEQ staff hosted four sites for training LHD staff new to the NCWS program. The primary focus was SDWA and how to then enter compliance information into the Watertrack program. Thirty LHD staff participated.
- MDEQ staff hosted two Sanitary Survey training events in FY 2016, with 30 LHD staff participating. This included the importance of LHD staff spending time during the survey with the owner and operating discussing capacity development such as planning for future needs.
- MDEQ staff spoke at the MEHA and the Michigan Groundwater Association about sampling for lead and copper at schools connected to CWS and to raise awareness about the risks of lead in drinking water, the Michigan School Sampling Protocol, and Lead Free plumbing.

In addition to these formal training events for the LHDs, the MDEQ attended or hosted numerous meetings to discuss the impacts of the RTCR on LHDs and NCWS owner and operators. In September, we hosted a meeting discussing the impacts of the RTCR and brainstorming ways to improve compliance for the NCWS.

Training of NCWS owners on the RTCR continued in FY 2016. Five training sessions were held, in addition to the formal trainings described in above.

For those who could not attend these RTCR meetings, two informational videos are still available on our Web site for viewing by owners and operators, and regulators new to the program. The videos have been viewed hundreds of times since being posted. We are aware of these videos being utilized to compliment the instruction provided to certified operators by entities other than the State.

For the past several years, ODWMA staff has conducted training specifically for small CWS. Topics in FY 2016 covered implementation of lead and copper requirements, the RTCR, cross connection inspections, and well maintenance. Topics change each year to keep the participants interested and informed of new requirements. Nearly 100 operators attended at one of two locations offered in 2016.

3.6 DWRF

Target: CWS and Nonprofit NCWS

The 1996 Amendments to the SDWA authorized the creation of a revolving fund to provide low-interest loans for repairs or enhancements to help water systems comply with the SDWA. The capacity development provisions of the SDWA are funded through the DWRF allotment. Michigan's DWRF is co-administered by the MDEQ and the Michigan Finance Authority. The MDEQ handles all programmatic issues, while the Finance Authority serves the DWRF Program with its financial expertise. Prior to the creation of the DWRF, project financing for CWS was left largely to the local unit of government or to individuals investing in their own systems.

In FY 2016, \$35.9 million in low-interest loans were committed for seven projects bringing the total, since the fund's inception in 1998, to \$893 million for 284 projects. Some systems receive commitments from the DWRF but may not be ready to proceed with the project until they are able to assure the revenues will be generated to repay the loan. In these cases, the system

remains on the priority list for the next year. Of the projects committed, 250 have been completed for a total cost of \$675.8 million, and the loan payments are revolving back into the fund.

Commitments in FY 2016 include projects for water main replacement, tank repairs, and metering improvements. Many of the projects involve replacing aging distribution infrastructure. An example for FY 2016 is:

- A city of Grand Rapids project involved construction of a 500,000-gallon elevated storage tank and associated 16-inch-diameter water main to maintain system reliability and reduce energy consumption in the North Walker Pressure District. The project's cost is estimated to be \$2,830,000.

Michigan's drinking water program relies heavily on proper water system design and construction to prevent jeopardizing the safety of both the source and finished water. To that end, additional priority points are given to those DWRP projects in communities that are participating in a SWPP.

3.7 Source Water Protection

Systems are continuing to take steps to protect their drinking water sources.

3.7.1 Groundwater Source Protection

Target: CWS and NCWS

Minimum isolation areas around drinking water wells are established in Part 127 of the Public Health Code Act 368 of 1978, Water Supply and Sewer Systems, and in the rules, Act 399. Programs in the MDEQ, such as the Groundwater Discharge Permit Program and the On-Site Waste Water Program, reference these isolation distances as they review applications for discharge permits or site approvals to assure the facility or activity will be protective of the drinking water source. Act 399 requires the isolation area around a proposed CWS water well site be owned or controlled by the CWS.

To expand beyond this long-standing but minimal concept of source water protection, the ODWMA staff is actively encouraging municipalities to conduct WHPP activities. Municipalities are encouraged to apply for a WHPP grant using a 50 percent local match to fund activities involved in protecting their public water supply well capture zones (based on a 10-year time-of-travel). Of the 1,083 CWS in Michigan using groundwater as a source of drinking water, 221 are substantially implementing source water protection activities. As a result, 65 percent of the population of the state served by groundwater is in communities taking action to protect their groundwater sources or purchase water from communities involved in protecting their sources. The WHPP grants for FY 2016 awarded over \$493,000 to 47 communities as compared to the WHPP grant cycle for FY 2015 that awarded \$525,000 to 45 communities.

The ODWMA has an ongoing contract with the MSU-CEE, under which MSU-CEE developed the MGMT. MGMT is a software platform that utilizes spatially compiled groundwater data and allows for the automated analysis of groundwater flow. As a tool in groundwater modeling, the software allows for the interactive analysis of groundwater flow based on available data. The MGMT software has been employed by the MDEQ in conjunction with existing groundwater

databases, such as those generated during the Ground Water Inventory and Map project in 2003, to analyze and assess groundwater flow and delineate wellhead protection areas for community and non-transient, non-community public water supplies throughout Michigan. In FY 2016, MGMT was updated to the ArcGIS 10.2 language platform and two updated wellhead protection area delineations were completed.

The DWGIS application has been updated to include chemistry data from the water supply chemical monitoring database (WaterChem), geocoding (*i.e.*, assign latitude/longitude coordinates based on street addresses) the records, and creating a file format making the data amenable to spatial display in DWGIS. DWGIS has been modified to include a multi-function query tool capable of generating customized reports from the water chemistry database. This effort should provide an extraordinarily useful tool in conducting desktop analyses of chemical occurrence in the groundwater and for comparing sites of environmental contamination with WHPAs. This new version of DWGIS will be live sometime in January 2017.

The SWIPP of ODWMA, is in the process of redefining “Substantial Implementation,” allowing smaller systems to obtain this source water protection status, and increasing Michigan’s population that is protected by these implemented activities. Nonmunicipal water systems can obtain substantial implementation by using a self-assessment to identify specific risks to their drinking water sources. Once risks have been identified, corrective actions can be put in place to reduce risk of contamination. This process allows these systems to obtain substantial implementation since they have limited control of their WHPA as compared to municipal systems that may have local control by land use planning and ordinances.

3.7.2 Water Withdrawal Legislation

Target: CWS, NCWS, and Other Interested Parties

The Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, was amended in 2006 and again in 2008 in response to increased water use demands, pressure to divert water outside the Great Lakes Basin, and an increase in groundwater use conflicts. The legislative amendments were intended to enhance the state's ability to manage the water resources of Michigan.

Since 2006, any proposed new or increased large quantity withdrawal, defined as a water withdrawal of 70 gallons per minute or more, requires an environmental assessment and approval prior to making use of the water resource. The new system capacity assessment checklist was amended to address large quantity water withdrawals and ensure authorization is obtained prior to ODWMA district staff issuing an Act 399 construction permit. A staff person in Lansing coordinates with district, and other department staff, through the process of obtaining a water withdrawal permit for a large quantity withdrawal for public water supplies.

3.7.3 Surface Water Source Protection

Target: CWS and NCWS Using Surface Water

The SWIPP is the surface water counterpart to the WHPP. Under this program, communities develop partnerships with surrounding communities to identify and take action to protect the area around the intake. The seven communities that have completed a SWIPP serve small to

medium-sized populations. There were three new SWIPPs submitted in FY 2016 which were prepared for Detroit's Lake Huron, Belle Isle, and Fighting Island intakes. As with an approved WHPP, an approved SWIPP will result in additional priority points being awarded to DWRf applicants, encouraging more CWS to develop a plan. A matching grant program, equivalent to that used in the WHPP, was incorporated into the administrative rules in 2009. SWIPP grant applications were available for the first time in May 2014 when approximately \$100,000 was made available to surface water systems for FY 2015. The city of Ann Arbor and city of Grand Haven applied to complete or update protection program plans.

Monitoring of surface water sources can alert utility personnel of changes in water quality in time to respond quickly and avoid public exposure to contamination. To achieve this quick response at CWS in the connecting channels between Lakes Huron and Erie, the ODWMA worked with federal and local governmental agencies to install a continuous, real-time water quality monitoring network in the St. Clair River, Lake St. Clair, and Detroit River. In FY 2016, six of the original thirteen drinking water treatment facilities continue to be equipped with a range of analytical devices. The monitoring system includes data transmission, data visualization, automated notification/alarm service, data archiving, and a publicly accessible Web site for data retrieval. In addition, rapid toxicity test equipment is being used to monitor water distribution systems in Southeast Michigan served by these surface water intakes. Nearly instantaneous communication is key to protecting surface water intakes in the Lake Huron to Lake Erie corridor because of the rapid rate of flow, periodic chemical spills, and corresponding changes in water quality.

The city of Monroe, along the shores of Lake Erie, recently purchased and installed a Phycocyanin blue-green algae sensor to help monitor or alert staff of algal blooms occurring. Elevated levels indicate the possibility of toxins being produced that may deteriorate drinking water quality and increase public health concerns. This sensor also allows operators to implement treatment changes and begin to monitor for microcystin if needed. The city uses Abraxis Testing Equipment to routinely test for microcystins in the raw and treated water.

In another area of source water protection, an ODWMA staff person coordinates the notification to district staff about proposed Aquatic Nuisance permits to surface waters that may impact drinking water sources. Some permits have been streamlined by previous applications when it has been known to not impact a drinking water source. Other permits applications may present a concern and requires further communication between district staff and a CWS to resolve the issue.

3.8 Financial Assessments

Target: CWSs Municipally Owned or Subject to Association Bylaws

To help existing CWS improve financial capacity, the ODWMA conducts financial assessments of systems that serve a population of less than 10,000 that are willing to participate and could benefit from a financial assessment. As a result, systems that are concerned about current and future challenges are making progress toward that end by improving their financial capacity. Funding for these assessments is from the technical assistance to small systems set-aside of the DWRf. Systems serving more than 10,000 people may also participate in the program, but the funding would be drawn from the capacity development set-aside.

A financial expert in the DWRP Program conducts the assessment of the community's existing financial health and develops a FAP. The assessment is a review of financial and legal documents and an on-site meeting with system representatives.

An FAP is a tailor-made, comprehensive plan to strengthen the system's financial situation based on the assessment. Short- and long-range goals are identified in the FAP followed by a step-by-step process to reach the goals. Information on obtaining funding is provided with the FAP. The system is expected to carry out the FAP, and the ODWMA is available to assist when requested. An outline of a typical assessment report is included in Appendix B.

In the last five years asset management has become an integrated component of the FAP, including tutorials on CUPSS software and the MDEQ asset management workbook. With the recent MDEQ initiatives for asset management planning, communities are becoming more interested in the financial assessment process and asset management. **In January 1, 2018, CWS with populations greater than 1,000 will be required to have an asset management program.** In planning for this upcoming requirement, communities around the state are using the financial assessment program to gain understanding of asset management and become familiar with the various tools available to them. A key component of the drinking water asset management program is an ongoing review of a community's rate methodology to insure sufficient revenues are being generated to cover system expenses.

As mentioned in a previous section, new owners or developers are required to demonstrate TMF capacity before approval to commence operation or assume this role from a previous owner. In FY 2016, two systems submitted financial capacity information and were determined to have sufficient resources to address water system costs.

3.9 Security and Emergency Response

Target: CWS

The MDEQ's Water Security and Emergency Management Program are responsive to the various federal programs and the needs of the public water systems. Planning, training, and coordinating are all a part of the effort to emphasize emergency management for all hazards; terrorism and malevolent acts, as well as weather-related incidents and accidents.

The USEPA eliminated the Water Sector Security funding as of FY 2010. The USEPA and other federal, state, and local agencies sponsor emergency preparedness exercises; however, field staff did not participate in any of these during FY 2016.

Field staff will continue to be involved in safety and security enhancements through the construction permit process and the operation of new systems as well as during inspections.

3.10 Electronic Reporting and Data Management

Target: CWS and NCWS

Electronic reporting and data management are tools to help the central office identify and analyze statewide trends in contaminant levels, treatment, distribution operations, and compliance. This ability will allow the ODWMA to focus assistance more effectively.

3.10.1 eDWR

Target: CWS and NCWS

The ODWMA is working to develop electronic reporting systems to provide convenience and accuracy for data reporting. The eDWR system will provide for online submittal of drinking water laboratory results and treatment plant operational data. The ODWMA is also evaluating the USEPA's new Compliance Monitoring Data Portal as a means to accomplish this goal. The collection of data will allow the ODWMA to query certain parameters to assess capacity on a system wide and statewide basis. Although competing priorities have delayed the launch of this tool, progress is still being made toward implementation. Future plans include providing other required reports online.

3.10.2 Tracking Compliance Using SDWIS

Target: CWS and NCWS

The federally supported database for tracking drinking water compliance activities (SDWIS/State), stores analytical results entered either manually or via an electronic reporting tool as discussed above. This allows for more automated compliance determinations, which is particularly necessary when staff resources are stretched. In FY 2005, the CWS Program began tracking Total Coliform Rule compliance monitoring in the SDWIS, and in FY 2010, this was expanded to include Lead and Copper Rule tracking. In FY 2012, the CWS Program began to enter Stage 2 DDBPR Schedule 1 and Schedule 2 monitoring schedules to track compliance and adding GWR monitoring. FY 2013 expanded tracking to include DDBPR Schedule 3 and 4 monitoring. Surveillance visits and sanitary survey data was also added to the SDWIS this year. In FY 16, the CWS implemented the switch to RTCR in SDWIS, and began tracking Level 1 and 2 assessment compliance schedules, as well as the site visit data associated with the assessments.

The NCWS program is preparing to migrate data from a legacy database to SDWIS/State. To prepare for the upcoming release of SDWIS Prime and to allow the Noncommunity Program to effectively report compliance data to USEPA, a second instance of SDWIS-State will be installed on the State's servers. The legacy database, WaterTrack, is no longer sufficient to meet reporting requirements, as described below.

3.10.3 WaterTrack

Target: NCWS

The LHD staff use the WaterTrack database to track NCWS inventories, certified operator information, sanitary survey reports, capacity development, construction permits, monitoring results, monitoring violations, maximum contaminant level violations, and NCWS compliance reports. The information is monitored by the MDEQ staff that oversees the NCWS Program. WaterTrack uses an outdated platform, is largely unsupported, and does not contain capability to track all current rule requirements. The MDEQ actively participates in the discussions regarding the development of the SDWIS Prime. While awaiting its release, the MDEQ provides alternative tracking methods when available.

4. Identify Existing Systems in Need

The strategy used to select and prioritize systems for assistance is outlined in the *Capacity Development Strategy for Existing Public Water Systems*, dated August 1, 2000, and remains unchanged. Briefly, the ODWMA looks at all of the following criteria:

- Compliance information.
- Quarterly ETT scores.
- Sanitary surveys and results of surveillance visits.
- Construction permit bans and correspondence from the ODWMA addressing potential bans.
- Operation and maintenance concerns.
- Field staff input.

The sanitary surveys and surveillance visits are ongoing, while identifying which systems may need capacity assistance.

5. Identify Capacity Development Needs and Provide Assistance

The MDEQ continues to recognize and identify capacity development needs and provide assistance in these areas identified. A new capacity development need is for training in new rules including capital improvement planning, asset management, and understanding the new responsibilities of owners and operators under the RTCR. The ODWMA believes the areas identified below continue to be a focus and recognizes the needs that exist at the national level while participating in workgroups to tackle them.

5.1 New Rules Implementation and Training

Several additional activities are ongoing:

The MDEQ continues to provide LHD training through many avenues. Staff is active in participating as speakers at regional MEHA seminars, locally sponsored Environmental Health meetings, and the MEHA Annual Educational Conference. The MDEQ also continues to provide Webinars as topics arise. We have archived some of these trainings on a Web site for future viewing. This activity is in addition to the training mentioned in Section 3.3 of this report.

The MDEQ is reviewing Operator Training courses on an on-going basis to update information and improve their quality. Operator Certification reviews and updates certification examinations to ensure questions reflect new or changing regulations. During FY2016, RTCR questions were added to certification exams and existing TCR questions were updated for continued accuracy.

The MDEQ staff has also provided guidance for publicly owned or operated systems that are now required to have Capital Improvement Plans in place by January 1, 2016. These plans are expected to project and assess which projects (including asset improvements, repairs, replacements and such) need to be completed in the future. These plans will cover 5-year and 20-year planning periods to encompass all foreseeable needs of the CWS.

Michigan's CWS serving more than 1,000 people must develop and implement an asset management program by January 2018. This requirement is intended to improve the technical, managerial and financial capacity of the water systems. Too many utilities are not budgeting for the full cost of water service. Many establish maintenance budgets based on estimates of past reactionary activities and do not fully anticipate the growing needs of their aging infrastructure. The requirements for these asset management programs include developing an inventory of assets, criticality assessment, level of service goals, a capital improvements plan, and the funding structure and rate methodology. The asset management programs will provide a tool for water systems to ensure that all of the stakeholders have the same vision, and there is adequate funding to sustain those goals. We are currently developing guidance and training sessions to assist the water systems in complying with these requirements.

5.2 Follow Up on Needs Identified

Areas identified are continuing to be addressed.

5.2.1 Implement New Federal Rules

The ODWMA program and field staff has continued to host and participate in training on new rules. As mentioned earlier, new rule information was presented at each of the eight Michigan Section AWWA regional meetings, during visits to LHDs by NCWS staff, in Webinars, and in YouTube videos.

5.2.2 Capture Sanitary Survey Data

Detailed sanitary survey data is captured on individual Excel spreadsheets for every CWS. To create a tool to enhance decision making, the CWS program staff is continuing to investigate options to capture that data in a format that can be queried.

Currently, CWS staff tracks basic survey data, specifically survey date, rating of the eight required elements, and significant deficiency tracking in a central database. The ODWMA has transferred this basic survey tracking and all surveys conducted since FY 2013 have had information entered into SDWIS/State. NCWS sanitary survey data is tracked in WaterTrack.

5.2.3 Implement Newly Revised Nonfederal Provisions of the Administrative Rules

The ODWMA is continuing to implement nonfederal provisions of the administrative rules that were revised along with the adoption of the new federal rules in 2009. These revisions are listed below:

- Improve capacity in very small systems.
- Provide oversight to NCWS that treat to improve aesthetics.
- Diversify the type of operator training received and update operator certification rules.
- Enhance planning by requiring a capital improvement plan for publicly owned CWS by January 1, 2016.
- Provide a source water protection grant program for surface water systems.
- Enhance technical capacity.

In 2013, the ODWMA drafted new provisions in the Administrative Rules for cross connections, asset management, and operator certification. Meetings were held in June 2013 to communicate the proposed rule concepts and to receive comments from stakeholders. A final public hearing was held in February 2014 and rules were promulgated in October 2015. A brief description of each provision is listed below:

- Cross Connections - Administrative rules currently require community water supplies to establish a program to control cross connections in the water supply system. The proposed rules establish a minimum frequency to test backflow prevention devices and requires testing be conducted by a certified individual.
- Asset Management - The proposed rule clarifies that an asset management program is an integral part of developing an adequate capital improvements plan and requires the implementation of an asset management program for supplies that serve more than 1,000 people. In addition, the proposed rule extends the requirement for an asset management program and a capital improvements plan to privately owned community water supplies that serve more than 1,000 people.

5.2.4 Encourage Asset Management

As the infrastructure funding gap continues, field staff is stressing asset management concepts during interactions with CWS and their local decision makers. Good water system operation and management cannot be mandated, though the ODWMA hopes the proposed rules will foster better water system management. ODWMA staff will be tracking the preparation of Asset Management Plans at water supplies and monitoring the success of these requirements.

5.3 Participate in National Workgroups

Program staff in the ODWMA is involved in national workgroups with other states, USEPA headquarters and regional offices, and others to improve implementation or affect change to federal regulations and national policy.

An ODWMA manager has been participating in a National Drinking Water Infrastructure Needs Survey workgroup and with a perchlorate workgroup consisting of USEPA and state representatives assessing the need for a drinking water standard.

6. Review Existing Systems Program Implementation and Address Findings

Sanitary surveys are the primary tool to evaluate capacity and identify needs for specific systems. A long-standing MDEQ policy dictates sanitary survey frequencies for all types of CWS and NCWS. Follow-up on deficiencies in any system has been a long-standing practice and is required of the LHD under contract with the MDEQ. As stated in last year's edition of this report, the ODWMA was driven by the federal GWR and the requirement to identify and pursue resolution of significant deficiencies to draft two policies. The first policy sets frequencies for sanitary surveys and the second sets criteria to identify significant deficiencies and establishes procedures to resolve them. There have been seven significant deficiencies identified in FY 2015. All but one CWS have met their deadlines or escalated enforcement is in place with an acceptable compliance schedule to resolve the deficiencies. The other CWS has begun to address deficiencies, but has not agreed to enter into an ACO.

Between sanitary surveys, ODWMA field staff makes routine on-site visits to review the technical, managerial, and sometimes financial aspects of a CWS and to establish channels of communication with the CWS. The knowledge and familiarity gained by both parties as a result of routine visits are keys to maintaining a cooperative relationship in achieving mutual goals. The frequency of these visits has been dictated in policy based on long-standing practice. Requests for financial assessments continued to remain minimal this year; however, those that have participated have made significant improvements. Rather than attempt to increase the number of financial assessments, the ODWMA has continued to follow up with previously assessed water systems informally during routine on-site visits by field staff and more formally by the financial expert that conducted the original assessment. A brief assessment of this effort was mentioned in Section 3.8 of this report.

7. Modify Existing Systems Program Strategy

The strategy remained unchanged during the reporting period. The MDEQ is continuing to implement the original strategy of moving from capacity assessment through assistance to development.

8. Summary

Michigan is continuing to implement a program for new systems and a strategy for existing systems as set forth in May and August 2000, respectively. The new systems' program retains the legal authority and the control points established in 2000. A list of new systems in the last three years is included in this report. There were no new systems appearing on the FY 2014 through FY 2016 ETT.

The sanitary survey process has identified major and minor deficiencies to be corrected each year. For the FY 2014 reporting period, sanitary surveys identified an average of 35 percent of the systems having deficiencies. In FY 2015, the percentage of systems identified with deficiencies dropped significantly to 23 percent, and in FY 2016, the percentage dropped to four percent.

The strategy for existing systems established in 2000 has remained the same, though the specific tools and activities used to implement the strategy have been added, removed, or altered as needed. The drinking water program continually identifies systems in need of capacity development primarily through the sanitary survey process, and that will now be supplemented by the information gained through Asset Management Plans. During the reporting period, needs were identified and discussions were held to determine what areas could be enhanced. A review of implementation of various activities of the strategy occurred and changes were made. The strategy was not modified.

Appendix A: List of New Systems

New system compliance data is more meaningful when compared to all systems of the same classification, as summarized in the following table. No systems that became active during the last three fiscal years scored 11 or more on the ETT.

FY 2014 to FY 2016	CWS		NTNCWS	
	New	New & Existing	New	New & Existing
Number of systems on ETT Tracker Report	12	1378	48	1298
Number of systems with ETT score of 11 or more	0	20	0	8
Systems with ETT score of 11 or more (percent)	0%	1.5%	0%	0.6%

PWSID	PWS Name	PWS Type	First Reported Date to SDWIS
MI0000072	AKRON TOWNSHIP	CWS	2/24/15
MI0000465	BAY AREA WATER SYSTEM	CWS	11/27/15
MI0001019	BYRAM RIDGE	CWS	8/20/15
MI0001253	CEDAR HILL ASSISTED LIVING	CWS	11/13/14
MI0001631	COPPER MEADOWS	CWS	12/17/13
MI0001648	COUNTRY LIVING ADULT FOSTER CARE	CWS	8/20/15
MI0003696	LAKE ANGELA CONDO APTS #6	CWS	2/12/14
MI0005712	RIVERWALK DEVELOPMENT	CWS	11/18/15
MI0005901	SALINE VALLEY FARMS	CWS	5/21/15
MI0006072	VICINIA GARDENS	CWS	6/12/14
MI0006448	SUMMERSET MEADOWS	CWS	11/18/15
MI0062942	HALE CREEK MANOR	CWS	8/13/14
MI0320667	Lakeshore Little People's Place	NTNCWS	8/26/14
MI0320670	Consumers Energy	NTNCWS	6/2/16
MI0320672	Burnips Equipment	NTNCWS	9/26/16
MI0320673	Schipper Farms	NTNCWS	9/26/16
MI0520163	ECHO QUALITY GRINDING	NTNCWS	11/26/13
MI0520167	BELLAIRE FAMILY HEALTH CENTER	NTNCWS	11/24/15
MI0520179	SAINT-GOBAIN (Office/Production)	NTNCWS	9/26/16
MI0520180	SAINT-GOBAIN (Warehouse)	NTNCWS	9/26/16
MI0820412	MENSCH MANUFACTURING, LLC	NTNCWS	5/22/15
MI0820415	Education Station	NTNCWS	9/26/16
MI1320420	Woodworth-Homer LLC	NTNCWS	5/22/15
MI1320421	The Dermatology and Skin Center	NTNCWS	8/26/14
MI1320428	Freedom Motors	NTNCWS	2/25/15
MI1320429	Oakridge Complex Building 601	NTNCWS	5/22/15
MI1620474	AQUA GLOBAL LLC	NTNCWS	8/26/14
MI1820297	Mid Michigan Health Park	NTNCWS	5/22/15
MI1820301	Clare-Gladwin RESD Magnus Center	NTNCWS	6/2/16
MI1920666	Addie's Acres AFC	NTNCWS	11/24/15
MI2521615	Ultra Dex Tooling Bldg2	NTNCWS	8/25/15
MI3020309	COUNTRYSIDE MONTESSORI SCHOOL	NTNCWS	11/26/13
MI3320214	Dart Container Bldg 7	NTNCWS	2/27/14
MI3320215	Dart Container - Bldg 6	NTNCWS	2/27/14
MI3320224	Patterson Vet Clinic	NTNCWS	6/2/16

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MI3420278	IMPACT OPERATIONS LLC	NTNCWS	11/25/14
MI3920511	Weber Specialties	NTNCWS	11/24/15
MI4120980	ELITE APPLE COMPANY	NTNCWS	11/26/13
MI4120983	MICHIGAN APPLE PACKERS COOPERATIVE	NTNCWS	2/27/14
MI4120988	STEEL 21	NTNCWS	11/25/14
MI4120991	ENWORK	NTNCWS	2/25/15
MI4120996	ENVISION ENGINEERING	NTNCWS	6/2/16
MI4620672	Medina Dairy	NTNCWS	11/24/15
MI4720670	TRUCK TECH	NTNCWS	11/24/15
MI5320219	Indian Summer CO-OP	NTNCWS	5/22/15
MI5420437	US MARBLE	NTNCWS	11/25/14
MI5720125	ELLEN'S EQUIPMENT	NTNCWS	3/3/16
MI6120466	Cameron-Dyna Torque, INC	NTNCWS	8/25/15
MI6120508	Eagle Precision Cast Parts	NTNCWS	8/25/15
MI6322907	KENNEDY INDUSTRIES	NTNCWS	8/25/15
MI6322910	BARRON INDUSTRIES	NTNCWS	2/25/15
MI6322911	MAVERICK BUILDING SYSTEMS	NTNCWS	2/25/15
MI6322914	CENTRAL CONVEYOR	NTNCWS	3/3/16
MI6420330	Heaven Sent Natural Spring Water	NTNCWS	11/26/13
MI6920240	ELL-TRON MANUFACTURING CO	NTNCWS	3/3/16
MI7020663	SERENITY REHAB	NTNCWS	11/24/15
MI7220462	McDonalds #1	NTNCWS	11/25/14
MI7620249	COUNTRY VIEW LLC	NTNCWS	11/26/13
MI8120629	TRINITY PRESCHOOL	NTNCWS	9/26/16
MI8320306	LACROSS - BUCKLEY LLC	NTNCWS	9/26/16

Notes:

The following supplies were listed as new in the ETT Scores Tracker. However, they are actually existing supplies as explained below and therefore not new for the purpose of capacity development and not included in the above table.

MI0002926, GUN PLAIN TOWNSHIP is an existing consecutive supply. The PWSID was newly assigned (and thus appeared as a new supply on the ETT Scores Tracker) to distinguish the existing separate distribution systems between Gun Plain Township and its neighbor, Lake Doster MI0002925. No new infrastructure was brought online with this newly assigned PWSID.

MI0004042, MANITOU LAKE APARTMENTS is a newly discovered water supply that has existed since at least the 1970s.

MI0006803, VILLA NOUVA ASSOCIATION is an existing water supply that was referred to the CWS program from the local health department.

MI0004158, MARY'S CITY OF DAVID is an existing water supply that was referred to the CWS program from the local health department.

MI0002836, GRATIOT AREA WATER AUTHORITY was created to provide water to Alma and to St. Louis. The Authority is responsible with the water plant, which was originally Alma's plant. No new infrastructure was brought online with this newly assigned PWSID.

MI0006484, SUNSET BEACH ASSOCIATION was regulated as Type III from 1972 to 1994, at which time it became a Transient Non-Community supply with the WSSN 20385-16. It was converted from a Type II to a Type I in 2016. No new infrastructure was brought on line with the classification change.

Appendix B: Outline of a Typical Financial Assessment and FAP

Financial Assessment

Introduction: Population, location, transportation routes, and community characteristics; description of the water system and major projects or concerns such as expansion, securing loans, and meeting new drinking water standards; and major financial shortfall such as the need for a rate methodology.

Requested Information: Budget, last two years of audited records, water use and water rate ordinances, latest rate ordinance or resolution, recent rate or feasibility study, and contract or service agreements with outside customers.

Submitted Information: List of information provided.

Analysis: Summary or highlights of each of the documents provided by the supply.

On-Site Meeting: Date and attendees; and list of items discussed, such as the financial concerns, the billing method, and major recent projects.

FAP

Goal One: Develop the financial capability to fund present and future needs.

Task 1: Develop a capital improvement projects plan.

- Step 1: List anticipated water projects.
- Step 2: Estimate the cost of each project to be funded.
- Step 3: Project the anticipated date the project is to begin.
- Step 4: Calculate the dollar amount necessary to be set aside annually.
- Step 5: Establish a line item in the budget for capital improvement expenditures.

Task 2: Develop and implement a rate setting methodology.

- Step 1: Identify water system expenses.
- Step 2: Identify replacement expenses and fund the replacement account.

Goal Two: Establish the legal and managerial capability to protect the water system.

Task 1: Develop a penalties section in the water ordinance.

Task 2: Adopt the amendment to the ordinance.

Goal Three: Implement an asset management program.

Task 1: Investigate and establish an asset management program that will identify and analyze the utility assets, develop a rate methodology to sustain the system, and implement a capital improvement plan.

Tools Included With FAP

Sample resolution, sample water use and rate ordinance, service agreement checklist, DWRf informational brochure, project plan preparation guide, and securing a DWRf loan fact sheet, Asset Management Program Workbook, Asset management Program Guide.