Michigan Department of Environmental Quality
Water Bureau

ANNUAL REPORT TO EPA ON CAPACITY DEVELOPMENT PROGRAM – FY 2008

December 2008

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List of Acronyms

Act 399	Safe Drinking Water Act, 1976 PA 399, as amended
ACO	Administrative Consent Orders
AWWA	American Water Works Association
CCR	Consumer Confidence Reports
CDP	Capacity Development Program
CUPSS	Check Up Program for Small Systems
CWS	Community Water Systems
DWRF	Drinking Water Revolving Fund
eDWR	Electronic Drinking Water Reporting
ERG	Expense Reimbursement Grant
FAP	Financial Action Plan
FY	Fiscal Year
GWIM	Groundwater Inventory and Mapping
LHD	Local Health Departments
MDEQ	Michigan Department of Environmental Quality
MHC	Manufactured Housing Community
MIGWWP	Michigan Interactive Groundwater for Wellhead Protection
MMBA	Michigan Municipal Bond Authority
MOR	Monthly Operations Reports
MRWA	Michigan Rural Water Association
NCWS	Noncommunity Water Systems
NTNCWS	Nontransient Noncommunity Water Systems
OTCU	Operator Training and Certification Unit
PWSID	Public Water System Identification Number
RCAP	Rural Community Assistance Program
RUS	Rural Utilities Service
SDWA	Federal Safe Drinking Water Act
SDWIS/Fed	Safe Drinking Water Information System/Federal
SDWIS/State	Safe Drinking Water Information System/State
SNC	Significant Noncomplier
SWIPP	Surface Water Intake Protection Program
SWPP	Source Water Protection Program
TMF	Technical, Managerial, and Financial
UP	Upper Peninsula
USDA-RD	United States Department of Agriculture – Rural Development
USEPA	United States Environmental Protection Agency
VA	Vulnerability Assessments
WB	Water Bureau
WHPP	Wellhead Protection Program

1 Introduction

The 1996 Amendments to the federal Safe Drinking Water Act (SDWA) added provisions for each state to develop a Capacity Development Program (CDP). The objective of the CDP is to enhance public health protection by helping water systems to develop and maintain the technical, managerial, and financial (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 United States Environmental Protection Agency (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 Drinking Water Revolving Fund (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 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 (FY) that ends on September 30, so this report is due by December 30 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 Water Bureau (WB) of the Michigan Department of Environmental Quality (MDEQ) through amendments to the Safe Drinking Water Act, 1976 PA 399, as amended (Act 399), by application of capacity development polices 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 Community Water Systems (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 nontransient noncommunity water systems (NTNCWS), the WB has delegated the authority to the local health departments (LHD) to review, approve, and issue construction permits. When water systems begin the permit application process, the LHD helps them outline their financial and managerial capacity. Prior to receiving approval to commence operation, the NTNCWS must submit a financial plan and a managerial plan that includes a contingency plan and designation of a certified operator.

2.3 List New Systems

Lists of CWS and NTNCWS that became active during the last three fiscal years are in Appendix A. The lists indicate which systems appeared on a Significant Noncomplier (SNC) list during those years. Appearance on a SNC list is primarily due to a failure to collect samples during the first monitoring period for lead and copper or due to a single missed sampling event of disinfection byproducts. Missed monitoring is not taken lightly by the staff. However, violations incurred by new systems are the result of the inevitable learning curve with monitoring requirements, despite field staff's best efforts. When adjusted for this learning curve, the percent of new systems appearing on a SNC list in recent years is less than systems overall, as indicated in the following table:

	CWS		NTNCWS	
	New	**New & Existing**	**New**	**New & Existing**
Number of systems	26	1,415	96	1,488
Number of systems on a SNC list	4	130	16	171
Adjusted number of systems*	1	118	5	131
Percent of systems on a SNC list	4%	8%	5%	9%

*Omitted systems that appeared on a SNC list for only one of the following: a single failure to sample lead and copper in the initial monitoring period, or a single failure to sample disinfection byproducts, or a single failure to issue the Consumer Confidence Report (CCR).

Finally, the violations incurred by new systems are much less serious than those incurred by systems overall, which include chronic monitoring violations and violations of state drinking water standards.

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 Noncommunity Water Systems (NCWS)

Capacity of existing systems is assessed through sanitary surveys, on-site surveillance visits, and through the construction permit process. The following table summarizes data on these efforts in recent years in the CWS Program.

CWS Evaluations, Visits, and Construction Permits			
	FY 2006	**FY 2007**	**FY 2008**
Number of Sanitary Surveys Conducted	438	515	498
Percent Rated Satisfactory	79	83	84
Percent Rated Marginal	10	12	10
Percent Rated Deficient	7	4	4
Percent Not Rated	4	1	2
Number of Visits	1,541	1,673	1,716
Number of Construction Permits Received and Issued	1,753 / 1,727	1,431 / 1,407	1,221 / 1,129
Of Permits Issued, Percent Issued Within 10 Business Days of Receipt	69	69	70

The data reflect the following:

- Greater efforts are being made to more accurately track sanitary surveys and send the letter of findings to the system within 30 days of the on-site visit. Some letters of findings are still outstanding in a small number of the above sanitary surveys.

- An effort was made to complete sanitary surveys of CWS that treat surface water or groundwater under the influence of surface water. By the deadline goal of December 2007, all but 4 of the 71 treatment plants were complete and 2 of those were completed shortly thereafter.

- The number of construction permit applications received has declined significantly in recent years, likely due to a downturn in the state's economy.

Sanitary surveys result in systems being rated satisfactory, marginal, or deficient. Ratings are based on compliance with health based standards, monitoring and reporting requirements, qualified operator requirements, and requirements in Act 399 or TMF sufficiency, such as well construction, general and contingency plans, and financial requirements for privately-owned systems. The WB staff conducts sanitary surveys at CWS once per three years. This frequency coincides with the requirements of the series of Surface Water Treatment Rules and the Ground Water Rule. The WB 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 surveillance visits listed in the previous table are conducted by field staff according to internal policy that requires the following frequency:

Type of CWS	Smaller / Less Complex	Larger / More Complex
Wholesale customer supplies	Once per three years • <1,000 population • No treatment* or no storage/repumping facilities • No current history of water quality problems	Once per year • >=1,000 population • With treatment* or storage/repumping facilities • Current history of water quality problems
CWS with no treatment*	Once per three years <50 service connections or fewer than 200 residents	Once per year Other CWS with no treatment*
CWS with treatment*	Twice per year CWS using "Limited Treatment," which includes any of the following: phosphate, chlorine, fluoride, or iron removal treatment	Four times per year CWS using any of the following: • "Complete Treatment" • Surface water source • Unique treatment such as nitrate or arsenic removal

* 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. If water system issues need to be elevated to community meetings, the local leadership may invite field staff to answer questions or to make presentations on WB requirements and recommended changes to the water system. For example, the WB staff noted deficiencies in the storage tank in the city of Wakefield in Gogebic County. The community was reluctant to raise rates to make the repairs. The WB staff participated in a meeting with local decision makers and stressed the importance of making the repairs in order to avoid potentially expensive enforcement action. The political will was mustered to apply for an Economic Development Commission grant with a small match.

3.2 One-on-One Technical Assistance and Consultation

Target: CWS and NCWS

Field staff are the primary implementers of the capacity development program. Water system operators develop a relationship with field staff who are the primary contacts for capacity development. Each CWS is served by WB staff from 1 of 8 district offices, and each NCWS is served by staff from 1 of 44 LHD under contract with the WB. A primary objective of district 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 achieve 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 attend, participate, and present at periodic regional operator meetings to discuss upcoming regulations, regional issues, and to network with operators and managers.

The NCWS staff maintain communication with each of the 44 LHD during the year. This communication occurs during the formal quarterly reviews and annual evaluations of each of the 44 LHD's work in achieving and maintaining water system compliance. Training of LHD staff is conducted extensively during these visits and as needed to inform, explain, and discuss new and updated program issues and procedures. The

NCWS staff provides policies, procedures, guidance, templates, and forms to LHD staff to implement the drinking water program and updates those, as needed. The NCWS staff also often present topics at groundwater and other environmental health conferences.

Field staff also partner with other technical assistance providers to communicate with systems. Some communities are more comfortable working with a nonregulatory agency, even when the WB is able to provide the same assistance or service. For example, town council members or a water system owner may be more receptive to a message relayed by a technical assistance provider rather than from a regulator of the WB or the LHD. This scenario was particularly apparent in the villages of Camden and Waldron in Hillsdale County where both communities had deficiencies, but were reluctant to accept assistance from the Rural Utilities Service (RUS) of the United States Department of Agriculture – Rural Development (USDA-RD) due to the required match of the grant component of the funding. A technical assistance provider organization met with the village council members educating them on the importance of correcting deficiencies and helping them to realize that the WB staff recommendations were best for their systems. As a result, both communities accepted RUS funding and are moving forward with developing and implementing capital improvements plans.

Meeting the revised arsenic standard has been particularly difficult for small water systems. Most did not treat their water and did not generate sufficient funds to install treatment to remove arsenic. Instead of levying fines on systems that are striving to comply, the field staff are providing technical assistance and consulting to find and implement solutions to bring systems into compliance as quickly as possible. Based on initial compliance monitoring conducted in 2005, 164 NTNCWS and 108 CWS exceeded the revised standard, almost all serving less than 3,300 residents. Many of the NTNCWS that exceeded this revised standard are now serving bottled water to remove the public health threat as they work toward compliance. Other solutions involve connecting to an existing public water supply meeting the standard, drilling new wells, or installing arsenic treatment systems. Many systems entered into Administrative Consent Orders (ACO) with the MDEQ, which included a schedule to comply with the revised arsenic standard. Several of these CWS have applied for DWRF or RUS loans to help finance their arsenic remediation. Others have undergone rate studies and raised water rates in order to pay for changes to meet the arsenic standard. Field staff have been involved in all of these scenarios. Successes this year include the following:

- The village of Dryden in Lapeer County and the city of Linden in Genesee County began operation of their new arsenic removal systems. To solve the arsenic issue, Dryden also needed to install a new well, which also solved a water supply capacity shortfall.

- The village of Mattawan in Van Buren County received bonding and completed installation of two iron removal plants that also reduce arsenic levels in September 2008. The operators reported that the water tastes better.

- A privately-owned adult foster care facility in Southeast Michigan not only solved the arsenic issue, but achieved system reliability with a second well and came into compliance with all well construction requirements. The compliance schedule of the arsenic ACO included installing all the required appurtenances

with the wells. The result is the equivalent of a new water system meeting all CWS requirements.

To increase reliability, gain efficiencies, and improve water quality, field staff serve as consultants to encourage regionalization, foster consolidation and create partnerships among water systems.

- A youth facility in Oakland county is striving to comply with the new arsenic standard by connecting to municipal water. A WB staff member participated in discussions and efforts to bring water from the municipality through a proposed development to serve the youth facility in exchange for a fire egress easement. Progress has slowed due to the downturn in the economy, but the developer intends to resume the project when funds become available, and the municipality has committed to provide water, also when funds become available.

- Numerous manufactured housing communities (MHC) have connected to municipal water meeting the revised arsenic standard rather than mediate the high arsenic levels in their own systems. When the distribution system of the MHC remains privately owned instead of transferring to the local municipality, the WB staff have encouraged the municipalities to require the MHC to install a backflow prevention device as a condition to connecting.

- Every valve in the distribution system was either broken or its location was unknown in the 600 unit MHC of North Morris Estates in Genesee County. Each time work was performed, the entire water system was shut down and a precautionary boil water notice was issued. The WB staff interceded between the community and the nearby city of Mount Morris to use a valve locator. The MHC located all the valves, replaced half and repaired the remainder. Sections of the system can now be isolated when work is performed while inconveniencing the least possible number of customers.

Field staff also serve on committees and join organizations as a forum to communicate and work with water systems.

- A WB staff member has joined the Technical Advisory Committee of the Detroit Water and Sewerage Department because of its collaborative initiatives among the consecutive systems, such as developing model contracts, prioritizing projects, updating the 50-year old Master Plan, rate review, and emergency preparedness.

- Operator groups exist across the state, such as the St. Clair River Operators, West Michigan Surface Water Treatment Plant Operators, and the Detroit Customer Systems. The WB staff are regular presenters at some of these meetings, giving an MDEQ update to attendees. Other times staff are invited to present on specific issues, as needed. In the Upper Peninsula (UP), the WB staff organize the operators meeting held twice each year; one focuses on distribution issues and the other on treatment. Almost all UP municipal water systems are represented at these meetings.

3.3 Other Public Water System Program Efforts

Helping systems to comply with requirements is an ongoing effort throughout each year. The following are tools used on a regular basis:

- Monitoring schedules: The WB and LHD staff develop and distribute monitoring schedules each year for every CWS and NCWS based on each system's applicable monitoring waivers and schedule in the standard monitoring framework. When certain monitoring is due in an upcoming calendar year, the field staff provide applicable resources, such as a list of radiological laboratories across the country that perform analyses and lead and copper report forms. Field staff follow up with reminder letters and reminder telephone calls as resources allow. Each year WB staff mail a reminder to CWS with the specific contaminant groups for which sample results have not yet been received by the WB. This effort has prevented many monitoring and reporting violations and subsequent issue of administrative fines.

- Well site inspections and approvals: The LHD and the WB field staff conducts inspections and approvals of wells serving the NCWS and CWS, respectively.

- Privately-owned CWS requirements: WB staff advise owners, managers, and operators of new privately-owned systems or new owners of existing systems about the requirements of operating a water system in compliance with regulations. Under Michigan administrative rules, new privately-owned CWS are subject to requirements to ensure they are able to provide an adequate supply of drinking water. Proposed systems must stipulate in an ACO to certain requirements; obtain a local government's refusal to accept ownership of the system, establish an escrow account available to the WB for immediate repair or maintenance of the system, and agree to seek MDEQ approval before transferring ownership. The order ensures private owners understand their responsibilities prior to establishing the water system. The WB is drafting administrative rules to increase the minimum required escrow amount, which has been unchanged since 1979, and streamline the ACO process.

- CCR: As resources allow, WB staff assist water systems in preparing CCRs, particularly new systems and systems with personnel turnover. Technical assistance providers also lend this service to small systems. The CCR reminder letters, which are mailed up to 3 months before the due date, provide helpful tips and hints to prepare the CCR based on new regulations and guidance. The LHD inform the NTNCWS of the administrative rule requirement to prepare a water quality report that contains a summary of compliance monitoring data for NTNCWS that serve K-12 schools and day care centers.

- Monthly Operation Reports (MOR): Field staff help operators to complete the MOR. Staff review each MOR to assure compliance with treatment techniques and to evaluate treatment processes for optimal operating practices. For example, in FY 2008 the field staff created electronic MOR templates for the following three communities that previously were completing their MOR by hand and were willing to move to an electronic format: the city of Hartford in Van Buren County and the village of Schoolcraft and city of Galesburg, both of Kalamazoo County. These templates help the water system to more accurately

track and report the operational and compliance data for WB field staff to evaluate treatment and operation.

- Forms and templates: Forms available on the Internet include Annual Pumpage/Usage Reporting Form, Cross Connection Reporting Form, Bacteriological Sampling Site Plan, Lead and Copper Reporting Form, and the CCR Certification Form. Field staff also provide templates for the CCR, MOR, contingency plans, disinfectants and disinfection monitoring plans, public notices, and public education for lead in drinking water.

- Guidance documents: The WB staff develop and distribute guidance documents as needed. This year's efforts include:

    - A committee of district engineers completed updating two manuals. The guidance manual *Standard Practices for Waterworks Design, Construction, and Operation for Type I Public Water Supplies* is used by staff when reviewing plans and specifications for construction projects. Water systems and their consulting engineers can access it on the Internet as they design improvements and apply for construction permits. Also updated was the *Cross Connection Rules Manual* used by CWS in conducting a program to prevent backflow from contaminating their water systems. CWS were provided a copy and notified that the new version is available at no cost on the Internet.

    - The NCWS staff completed a comprehensive study guide for individuals pursuing certification to operate an NCWS called the *Level 5 Drinking Water Operators Guide*. It may also be useful for operators of small CWS. Topics range from regulatory authority through source protection and system construction to monitoring and operation oversight. The guide is available on the Internet.

- USEPA tools: In addition to these state-developed products, the field staff distribute, as needed, USEPA developed tools and guidance documents. Specifically, the Cadillac district field staff have promoted the Check Up Program for Small Systems (CUPSS) software program to three systems that are interested in initiating asset management programs. The Grand Rapids district field staff have assisted some water systems in developing a hydrant flushing program and explored using the CUPSS program to help with that effort.

- Additional forums: Field staff host and present material at meetings, conferences, and training sessions throughout the year for water system personnel, consulting engineers, and local decision makers. Ongoing activities include hosting USEPA and American Water Works Association (AWWA) sponsored Web casts, serving as instructors at several operator training courses throughout the year, and speaking at meetings and conferences of the Michigan Section, AWWA and its committees. For example:

    - Due to Michigan's slump in the economy, budgets are tight for travel and training. To continue to offer quality training to WB staff and water systems, the WB takes advantage of the Web casts sponsored by the USEPA and others. Drinking water related USEPA and AWWA

sponsored Web casts are a convenient and inexpensive way to disseminate information and provide a means for operators to meet their continuing education requirements provided attendance is documented and certified by a responsible person. In FY 2008, 9 different USEPA or AWWA Web casts were hosted by WB staff totaling 33 sessions and 185 participants from water systems, technical assistance providers and WB central and field staff. Several participants attended multiple Web casts. The quality of the Web casts has ranged from excellent to fair, and the WB will continue to host if the quality trends toward excellent.

- In previous fiscal years, feedback from field staff revealed that plans and specifications submitted with the construction permit applications are many times incomplete or of poor quality. As a result, WB central staff held workshops for consulting engineers on applying for water system construction permits. Plans and specifications and construction permit applications were discussed. The workshops were an opportunity to review the basics of applying for a construction permit and to review some typical mistakes that delay the permit process. The workshop in FY 2007 was so successful that the WB repeated the training in FY 2008.

- The MDEQ cosponsors a quarterly newsletter with the Michigan Section, AWWA. The newsletter is distributed to AWWA members and all CWS owners, including approximately 700 privately owned CWS that might not otherwise receive drinking water related information. The MDEQ share of the distribution cost is funded by the capacity development set-aside of the DWRF through a Joint Funding Agreement with the Michigan Section, AWWA.

- The WB staff met with stakeholders twice concerning administrative rules, first to receive input on concepts to include in the rules, and second to present the draft rules. Subsequently, stakeholder organizations have invited WB staff to further discuss the proposed rules to these groups.

The WB 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 systems fail to return to compliance, escalated enforcement, including ACO and MDEQ orders, 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 remain in compliance with monitoring and reporting requirements after receiving a fine. The following table shows the number of fines levied against CWS during recent years including those for failure to deliver a CCR or submit an MOR.

	FY 2006	FY 2007	FY 2008
Number of Fines Initiated	96	71	55
Number of Fines Initiated for Failure to Deliver a CCR	16	26	14
Number of Fines Initiated for Failure to Submit an MOR	4	2	0

The high number of fines in FY 2006 is directly attributed to noncompliance with the revised arsenic MCL. Fines were assessed for failure to increase arsenic monitoring to quarterly after the effective date of the revised arsenic standard, failure to issue a Tier 3 public notice for an arsenic monitoring violation, and failure to issue a Tier 2 public notice or repeat public notice after exceeding the revised arsenic standard.

When a fine is not applicable or does not prevent further violations, the WB moves to a Notice of Violation and ACO. However, field staff prefer technical assistance over enforcement to bring systems back into compliance or prepare to meet upcoming requirements, especially when options are particularly expensive or when acceptable alternatives are not readily available. As a result, only three cases needed further enforcement action in FY 2008; two water systems constructed without a permit and one water system failed to meet the schedule toward arsenic compliance agreed to in their ACO.

3.5 Operator Training and Certification

Target: CWS and NCWS

Due to amendments to Act 399, a properly certified operator must be available at each of the 1,415 CWS and 1,488 NTNCWS and at the 75 transient NCWS that employ treatment. Operators maintain their certification by meeting continuing education requirements through training offered in a variety of venues.

The occasional CWS without a certified operator are usually due to operator turnover, retirements, and the like. Field staff work with each of these water systems to pursue an interim certified operator while also pursuing a permanent replacement. There is continual turnover of certified operators in NCWS and the effort to retain certified operators at these small systems is an ongoing process. When the certified operator leaves, field staff work with each of these water systems to pursue an interim certified operator while also pursuing a permanent replacement. The majority of CWS without a certified operator are situations that just recently arose due to operator turnover, retirements, and the like.

3.5.1 Operator Training and Certification Unit (OTCU)

The OTCU of the MDEQ, Environmental Science and Services Division, provides over 30 training courses each year and certifies nearly 80 other organizations and training providers that offer other opportunities for continuing education including online courses. The OTCU also administers the Expense Reimbursement Grant (ERG) Program for operators employed by systems serving fewer than 3,300 people to cover approved training registration fees up to $300 per individual.

Many of the training courses coordinated by the OTCU are taught by WB field staff under a Joint Funding Agreement between the MDEQ and the Michigan Section, AWWA. Field staff time is significant as the sessions usually require overnight travel. During on-site visits or other consultation opportunities, field staff discuss 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.

3.5.2 Small CWS and NCWS Training

Under contract with the WB, 21 LHD provide continuing education for the lowest level operators. The intent is to provide training for NCWS, but any operator employed by a CWS with no treatment and limited distribution system may attend.

NCWS staff conducted train-the-trainer sessions for LHD staff. Topics range from current requirements and practices to discussions of new requirements and regulations. Surveillance visits and sanitary surveys are additional opportunities for the LHD staff to provide training for NCWS operators.

For the past several years, WB staff have conducted training specifically for small CWS. Many attendees are operators employed by more than one system or may also work at NTNCWS, so this targeted training is improving the operation and maintenance of many more systems than the number of operators attending. General topics covered new regulatory requirements, monitoring and reporting, communicating with the public, construction permit preparation, and operational issues. Special topics change each year to keep the operators interested. Special topics in the 2008 training were water main repair and asset management. A total of 77 operators attended one of two training sites in FY 2008. The ERG covered registration for 49 of those attendees.

Also in 2007 and 2008, the Cadillac District Office of the WB partnered with the cities of Mackinaw, Gaylord, and Cadillac in the northern Lower Peninsula to host training sessions. A county director of public works and the WB field staff served as instructors. Training focused on routine monitoring and reporting requirements and communicating with the public. Attendance increased from 56 operators in 2007 to 86 in 2008. The Cadillac District Office field staff intend to continue the training in the coming years.

3.6 DWRF

Target: CWS and nonprofit NCWS, though only municipal CWS are participating

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. This fund is similar to the State Revolving Fund created to assist water pollution control projects. The capacity development provisions of the SDWA are funded through the DWRF allotment.

Michigan's DWRF is coadministered by the MDEQ and the Michigan Municipal Bond Authority (MMBA.) The MDEQ handles all programmatic issues, while the MMBA 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. Michigan’s drinking water program relies heavily upon proper water system design and construction to prevent jeopardizing the safety of both the source and finished water. To that end, priority of DWRF projects favors those communities that are participating in a Source Water Protection Program (SWPP). When a system begins to develop the project plan to apply for a DWRF loan, field staff consults with the system and works with its consulting engineer to ensure the project plan addresses system priorities.

In FY 2008, $46 million in low-interest loans was committed for 21 projects bringing the total since the fund's inception in 1998 to $527 million for 190 infrastructure 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, 124 have been completed for a total cost of $311 million and the loan payments are revolving back into the fund.

Commitments in FY 2008 include projects to increase the system's capacity to reliably provide an adequate supply of water. Scio Township in Washtenaw County will install a transmission main to the city of Ann Arbor. Wolverine Lake Heights in Oakland County will install a connection to consolidate with the Detroit Water and Sewerage Department. In the UP, Ford River Township in Delta County plans to construct a second crossing under the Ford River and the city of Hancock in Houghton County will provide a second connection to the city of Houghton.

3.7 Source Water Protection

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

3.7.1 Groundwater Source Protection

Target: Municipal CWS and not for profit NCWS

The Michigan administrative rules requires a minimum area around proposed well sites to be owned or controlled by the CWS or the NCWS, otherwise a permit to construct the well will not be issued. To expand beyond this long-standing, minimal concept of source water protection, WB staff now encourage municipalities to also participate in Wellhead Protection Program (WHPP) activities and apply for a WHPP grant to fund the activities. The WHPP assists communities in protecting their groundwater sources. A WHPP minimizes the potential for contamination by identifying and protecting the area that contributes water to municipal wells and minimizes costly groundwater cleanups. Municipalities are encouraged to apply for a WHPP grant using a 50 percent local match to fund activities involved in protecting their wellhead capture zones. Of the 440 municipal systems in Michigan using groundwater as a source of drinking water, 225 are involved in some aspect of wellhead protection, such as performing a delineation, inventorying the potential sources of contamination, and planning for emergencies. Of those 225 systems, 181 have completed all the steps and have an approved WHPP. As a result, 84.4 percent of the population of the state served by municipal systems using groundwater is in communities taking action to protect their groundwater sources or purchase water from communities involved in protecting their sources. Due to a budget deficit, the Governor’s Executive Directive suspended all grant activities in 2007, including the federally funded WHPP. As a result, no new municipalities initiated a WHPP during 2007. However, during FY 2008 the city of Jackson received approval for its WHPP. The WHPP grants, although delayed until July 1, 2008, were again awarded to 43 communities totaling $699,247.20 to continue implementing their WHPP.

3.7.2 Tools as a Result of Water Withdrawal Legislation

Target: CWS, NCWS, and other interested parties

The Natural Resources and Environmental Protection Act, 1994 PA 451, was amended recently 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 are intended to help manage water resources and ensure withdrawals do not cause an adverse resource impact to the waters of the state. In preparation to comply with provisions that require a permit for withdrawals above a minimum threshold, the WB established baseline capacities for each CWS. Earlier mandates of the legislation were fulfilled by the WB partnering with the United States Geological Survey and Michigan State University (MSU) on the Groundwater Inventory and Mapping (GWIM) project to compile a groundwater inventory and make it available to the public. The GWIM data is available on the Internet and can be used in a myriad of ways. For example, CWS can target protection efforts by simultaneously viewing their wellhead protection area and sites of environmental contamination in the GWIM databases. The WB is continuing to work with MSU to further develop the GWIM site and provide greater interactive capabilities. These capabilities will include integration of the GWIM databases with the Michigan Interactive Groundwater for Wellhead Protection (MIGWWP) software, which will allow users to scientifically map the recharge area of a well instead of relying upon an arbitrary circle. This benefits small systems by providing delineations at virtually no cost for WHPP. An assessment tool is also being developed to help water systems locate potential well sites in areas that are likely not to cause an adverse resource impact to the waters of the state.

A pilot program using MIGWWP software began in FY 2007 to target source protection in small CWS and NCWS. During the first workshop, WB and LHD staff provided well delineations generated from MIGWWP to about 30 select water systems located in Eaton County. Participants used the MIGWWP output and their source water assessment data to complete a self assessment of their source protection practices. The self assessment tool is intended to help the operators identify activities that may increase the risk of a contamination incident and identify actions to reduce the risk. A second workshop was conducted in 2008 with about 50 attending and another two workshops will be held to round out the pilot program.

3.7.3 Surface Water Source Protection

Target: CWS and NCWS using Surface Water

The Surface Water Intake Protection Program (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 three communities that have completed a SWIPP serve relatively small populations. A funding source for SWIPP grants has been identified and a matching grant program equivalent to that used in the WHPP is being drafted into administrative rules, which may stimulate activities in a SWIPP by larger municipalities.

To further protect drinking water intakes, the WB 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. Thirteen drinking water treatment facilities are 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.

3.8 Financial Assessments

Target: CWS serving fewer than 10,000 people that are either municipally owned or subject to association bylaws

To help existing CWS improve financial capacity, the WB has partnered with another MDEQ division to conduct financial assessments of systems that serve a population of less than 10,000 and that could benefit from a financial assessment. As a result, several systems that are currently in compliance, but are concerned about future challenges such as complying with new rules, are making progress toward that end by improving their financial capacity. Funding for these assessments are 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 DWRF Program conducts the assessment of the community's existing financial health and develops a Financial Action Plan (FAP). The assessment is a review of financial documents and an on-site meeting with system representatives. A 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. Useful tools to help complete the steps are included with the FAP, such as a sample water use and rate ordinance and a service agreement checklist. The assessment is not designed to provide funding; however, financing options are discussed at the on-site meeting. Further information on obtaining funding is provided with the FAP, such as forms to help apply to the DWRF. The system is expected to carry out the FAP, and the WB is available to assist when requested. The FAP is also intended to be a guide for the field staff. An outline of a typical assessment report is included in the Appendix.

In FY 2008, 5 CWS underwent financial assessments and another 9 have agreed to participate in an assessment. Additionally, two systems that underwent an assessment in previous years have agreed to revisit the process a second time. One of the five systems in the program in FY 2008 is the village of Chesening in Saginaw County. The water/wastewater system operator's attention was distracted from the water system to address concerns in the wastewater system. The financial assessment is helping the community to evaluate water rates in order to fund sufficient staff dedicated to the water system.

Applying for a DWRF loan can be a daunting task for small cities and villages. However, some communities that undergo a financial assessment develop the financial acuity and motivation to apply for a loan through the DWRF or the RUS of the USDA-RD. For example, Ford River Township in Delta County underwent a financial assessment in 2005 and submitted a DWRF project plan in FY 2007. Funds were committed in FY 2008 to increase system reliability by constructing a second river crossing that will allow a well that exceeds the radium standard to be abandoned. Meters will also be installed in the entire system to promote conservation and enhance accountability.

3.9 Security

Target: CWS and NCWS serving 50,000 or fewer people

The USEPA water security grants are funding the following multiyear contracts to improve water system security and emergency response:

- Tabletop Exercises: Under the Bioterrorism Act of 2002, water systems serving populations greater than 3,300 developed Emergency Response Plans. The first contract is intended to provide training for water systems to develop and implement successful ERP incorporating malevolent acts of terrorism into local responsiveness planning and training. Under the Bioterrorism Act, departments of public works are considered part of a community first responders' network. The contract consists of two elements to train network participants:

    - Conduct tabletop exercises. Twenty-eight tabletop exercises have been held of the 30 scheduled to be completed by December 31, 2008. Participants believe these exercises are useful and should be conducted more frequently.

    - Conduct train-the-trainer conferences to prepare municipalities to conduct their own tabletop exercises. To date, 9 of 10 conferences have been held with a total of 109 participants and the tenth is scheduled.

  Some WB field staff and LHD personnel have participated in both tabletop exercises and train-the-trainer conferences to fulfill their role as primary contact for water systems during an emergency.

- Vulnerability Assessments (VA) and Capital Improvements Plans: The second contract involves on-site reviews of VA at systems serving populations greater than 3,300. This work includes a review of capital improvements projects, Reliability Studies, Master Plans, and the like, to determine if the security needs identified in the VA are being implemented or incorporated into future plans. The contractor is in the last phase of the project to determine if water systems have chanced policies, practices, and procedures as a result of the VA. The contract terminates December 31, 2008.

- Gas Chlorine Reduction Initiative: The intent of the final contract, completed March 31, 2008, was to encourage CWS and NCWS to switch from gas chlorine to a safer alternative disinfectant by providing information, cost-benefit analyses, contacts, support, and documentation. While gas chlorine currently meets the disinfection needs of water systems, it is more dangerous. The majority of the participating utilities now understand the need for changing from gas chlorine to a safer alternative inasmuch as the paradigm has changed from a cost-benefit analysis to a risk-benefit analysis. The WB field staff are also working with water systems to change to a safer alternative. The cities of Wayland and Otsego in Allegan County received deficiencies in their chlorine gas operation during a sanitary survey. Instead of correcting the deficiency, the WB preferred the water systems switch to liquid chlorine as a safer alternative. Both systems made the switch. Other systems are installing chlorine gas leak detectors to enhance the safety of their current gas operations.

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

3.10 Technical Assistance Providers

Target: CWS and NCWS

The efforts of other organizations to enhance system capacity is an integral aspect of the CDP. An index of technical assistance providers was developed and describes the services of each technical assistance provider agency. The index is a "yellow pages" that is periodically published in the Michigan *Water Works News* of water systems, community leaders, and MDEQ staff. Some of the provider organizations deserve highlighting due to their efforts to enhance capacity.

3.10.1 Michigan Rural Water Association (MRWA)

The MRWA helps rural communities serving fewer than 10,000 people with administrative, managerial, or operational concerns. Services include on-site visits, training courses, conferences, rates studies, and a resource library. Each field technician visits at least 35 rural or RUS eligible public water systems per month, but will provide assistance to any public water system. In FY 2006, field technicians spent 4,209 hours on 3,400 on-site visits; in FY 2007, 8 technicians spent 3,273 hours on 2,554 on-site visits; and in FY 2008, 7 technicians spent 3,149 hours on 2,640 on-site visits.

These on-site visits help utilities with questions regarding regulatory, operational, managerial, and financial concerns with operating a utility. Field technicians also work with water utilities to put together wellhead protection and source water protection plans. Each year the MRWA conducts about 90 operator training courses across the state. Promotional material for training includes a reminder that certified operators of small water supplies may be able to attend sessions without charge using the ERG. Some conferences and training conducted in FY 2006 through FY 2008 include the Conference for Municipal Utilities Management Personnel, Hands on Rate Study Workshop, Workplace Safety Conference, Project Management, Water Distribution and Water Limited Treatment Review Classes, and Permit Required Confined Space.

The MRWA receives referrals from several sources. Examples of referrals from WB staff include serving as a liaison between a municipality and the WB to ensure a flushing program was implemented; help with Cross Connection Programs in the city of Beaverton in Gladwin County, the village of Carsonville and the city of Brown City in Sanilac County, the villages of Forestville and Owendale in Huron County, and Sims-Whitney Water Authority in Arenac County; assistance to the city of Omer in Arenac County with the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule; and assistance to Alpena Township in Alpena County with the Stage 2 Disinfectants and Disinfection Byproducts Rule. The MRWA have also assisted with requests to prepare water reliability studies for Carsonville in Sanilac County and the village of Shepherd in Isabella County.

3.10.2 Rural Community Assistance Program (RCAP)

The RCAP provides free technical assistance to rural communities with low to moderate median household incomes serving fewer than 10,000 people, to develop, manage, and

operate water and wastewater systems affordably. RCAP staff work on-site with local community officials, community leaders, and system operators to assess capacity needs, review funding options, provide public education, prepare and facilitate public communication, help select consultants, and help apply for funding for capacity projects. Local officials are taking advantage of RCAP services to achieve financial solvency through rate studies as well as help with project selection, compliance with existing and upcoming rule requirements, capital improvements planning, financing options, and vulnerability assessments and emergency response planning.

The RCAP and the WB program and management staff met twice to discuss priorities and ways to collaborate efforts, specifically in assisting water systems serving fewer than 1,000 people in the low to middle median household income level. These meetings are expected to become a quarterly update.

The WB staff noted that RCAP's experience working with city boards and town councils complements the work of the WB with the water system personnel. The RCAP has helped communities muster the political will to accomplish what they previously could not, like raise rates, or set aside funds for a capital improvements project, or develop agreements with adjacent communities.

3.10.3 RUS

The RUS through the USDA-RD provides loans, grants, and loan guarantees to construct, extend, or rehabilitate water, sewer, solid waste, and storm sewer systems in rural communities serving 10,000 or fewer people. Priority is given to low income communities, those with MDEQ violations, systems with leverage from other funding sources, extending existing systems, and entities working together. Loans are monitored until they are paid in full. Small communities serving populations under 5,000 took advantage of RUS funding for drinking water projects in recent years: For FY 2008, 19 projects totaling $37,689,000; for FY 2007, 16 projects totaling $30,517,000; and for FY 2006, 17 projects totaling $18,444,000.

In the RUS, the ratio of grants to loans is weighted more heavily on loans and less on grants. The goal of the USDA-RD remains to help the most needy, low income communities, targeting those at 60 percent of the state median household income, $27,461 or less. However, with minimal grant funding, communities are paying more for water services. To ensure funding goes to communities that protect their source and manage their water system, applicants must have a wellhead protection plan, install water meters, and fund short-lived asset and replacement accounts. System security is receiving continued focus and applicants must complete VA and ERP before closing on loans, including systems serving fewer than 3,300 people that were not required to do so under the Bioterrorism Act.

The USDA-RD also administers the Technical Assistance and Training Grant Program that funds tax exempt private nonprofit organizations that have the proven ability, background, experience, legal authority, and capacity to provide technical assistance or training on a regional basis. Successful applicants are typically multijurisdictional groups, such as the National Drinking Water Clearinghouse, National Rural Water Association, and RCAP.

3.11 Electronic Reporting and Data Management

Target: CWS and NCWS

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

3.11.1 Electronic Drinking Water Reporting (eDWR)

Target: CWS primarily, though elements designed for laboratories that also serve NCWS

The successful implementation of the Internet-based reporting system for discharge monitoring reports prompted Michigan to expand the project to include eDWR. The eDWR system will provide for online submittal of drinking water laboratory results and treatment plant operational data. Participation will be voluntary, and a water system may choose at any time to no longer participate. The collection of data will allow the WB to query certain parameters to assess capacity on a systemwide and statewide basis. Although the pilot was originally planned for FY 2006, competing priorities have delayed implementation. Future plans include providing other required reports online.

3.11.2 Tracking Compliance Using Safe Drinking Water Information System/State (SDWIS/State)

Target: CWS

Beginning in FY 2007, the CWS program began the process of moving the tracking of compliance monitoring schedules from the program's legacy database to SDWIS/State. SDWIS/State is a federally supported database for tracking drinking water compliance activities. The database will store actual analytical results entered either manually or via e-DWR reporting discussed above. This will allow for more automated compliance determination, which is particularly necessary when staff resources are stretched. The project will take at least through FY 2009 to complete.

3.11.3 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, violations of maximum contaminant levels, and NCWS compliance reports. The information is monitored by the WB staff that oversee the NCWS program.

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 WB looks at all of the following criteria:

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

The sanitary surveys and surveillance visits are ongoing and the frequency with which systems are identified for capacity assistance is continual.

5 Identify Existing Systems Program Needs and Provide Assistance

The WB identified four general areas of needs: continued implementation of new rules, capturing sanitary survey data, updating existing state rules, and encouraging asset management.

5.1 Compliance With New Rules

The WB program and field staff have continued to participate in training on new rules. Staff training includes Web casts offered by the USEPA and AWWA and attendance at conferences and meetings where new rules are discussed. The WB hosted the USEPA GWR telecast workshop for regulators, in which four other USEPA Region 5 states participated. The WB staff have coordinated or presented training on new rules at multiple locations. Presentations on these rules have also been given at Michigan Section, AWWA meetings of the Research and Technical Practices Committee.

New training opportunities are needed for NCWS operators of systems that do not treat. To meet that need the NCWS program staff developed the *Level 5 Certified Drinking Water Operator Guidance Manual* as a tool for persons preparing to take the certification examination as well as existing operators who need guidance.

5.2 Capture Sanitary Survey Data

With the Interim Enhanced Surface Water Treatment Rule, the WB integrated the required eight elements into the definition of sanitary survey applicable to all water supplies. Currently sanitary survey data is captured on individual Excel spreadsheets for each CWS. As the new federal rules are implemented, especially the GWR, it could benefit the program to be able to query sanitary survey information. The WB program staff are investigating options to capture this data in another format.

5.3 Update Non-Federal Provisions of the Administrative Rules

The WB has begun the rulemaking process to adopt the new federal regulations. This provides an opportunity to update the nonfederal provisions of the administrative rules intended to achieve the following:

- Improve capacity in very small systems and in licensed facilities: There have been some significant program changes and increased concerns based on

experiences dealing with small systems and with licensed facilities, such as manufactured housing communities and nursing homes. The WB believes these facilities should provide the same level of health protection for their customers, be prepared to respond to emergencies, and should provide routine maintenance to the same level as other similar water systems. As a result, the WB is proposing to remove exceptions that currently apply to licensed facilities and to water systems serving fewer than 50 connections or 200 people. Exceptions that exist in current rules include cross connection control program, distribution and raw water pumping capacity, standby power, general plans, private ownership provisions, and contingency plans.

- Provide oversight to NCWS that treat to improve aesthetics: Currently, systems that employ treatment for the purpose of public health protection must obtain a construction permit and later submit MOR. This language allows systems that treat for aesthetic purposes to bypass these requirements. Injecting chlorine for the purpose of improving aesthetics may affect public health and should receive the same oversight as those systems injecting for the purpose of health protection. The WB is proposing to require systems that wish to treat for any purpose to meet the same requirements.

- Diversify the type of operator training received and update operator certification rules: Diverse training opportunities are plentiful for operators. To encourage operators to take advantage of the breadth of training available, the proposed administrative rules incorporate successful aspects of the wastewater operator certification program. That is, categorize each training course as technical, managerial, or other, and require a minimum number of training hours in each category during a training cycle. The minimums range from no minimum for the lowest certification level to 75 percent of required hours for the highest certification level. The remainder number of required hours can be earned in any category. The proposed rules will also clarify that revocation of the operator license may result in cases of falsification of an examination, impersonation of an individual, or misrepresentation or falsification of a training certificate or report.

- Expand planning provisions: In addition to considering removing exceptions for small systems and for licensed facilities, the WB is proposing to expand planning provisions in the general plan requirements and the reliability study requirements. A general plan is a layout of the waterworks system and identifies areas of low pressure. The WB is proposing to expand general plan requirements for CWS with a distribution system intended for fire protection to include an inventory of water mains, a hydraulic analysis, and maps including existing and future service area boundaries. Additionally, publicly owned systems would include a capital improvements plan identifying needs for 5-year and 20-year planning periods. The reliability study, currently required of all CWS, would expand to include production and consumption data to identify trends for the same planning periods as general plans, water purchased from and supplied to other water systems, usage for each customer class, and a water shortage response plan for emergencies.

- Provide a grant program for surface water systems: To expand the source water protection efforts to surface water systems, the WB is proposing rules for a surface water intake protection grant program, modeled after the existing WHPP,

to disperse money available through the DWRF set-aside under assistance to state drinking water programs of Section 1452g(2) of the SDWA.

Two rules stakeholder meetings have been conducted during the FY to present these proposals and receive stakeholder input. Program staff have also met with smaller groups of stakeholders. The WB is receiving positive support on many of the proposals from the regulated community, LHD regulators, and associations representing water systems. The WB expects to continue to receive stakeholder input over the coming months.

5.4 Encourage Asset Management

As the infrastructure gap continues, field staff are stressing asset management concepts during interactions with CWS and their local decision makers. One district supervisor in particular has asked his field staff to include asset management issues and resources in the letter following a sanitary survey, specifically concerning reliability studies. Currently, a reliability study is required under state rule to be updated every five years and must include a 10-year projection of water supply demand. As the update deadline nears, district staff are strongly encouraging their CWS to base the updated study on a 20-year projection. The WB believes this will allow the water systems to develop complete capital improvements plans and provide an opportunity to implement other asset management practices. Another district had several water systems that were approaching their 5-year update deadline. The district field staff member worked diligently to move these systems toward completing that requirement and is getting good response.

6 Review Existing Systems Program and Address Findings

Sanitary surveys are the primary tool to evaluate capacity and identify needs for specific systems. A longstanding MDEQ policy dictates sanitary survey frequencies for all types of CWS and NCWS. In FY 2006, the MDEQ felt that a greater effort was needed to complete surveys. Significant progress was made in FY 2007. To complete the sanitary survey improvement strategy, the WB began revising the sanitary survey policy in FY 2008 to achieve greater consistency in evaluating systems and to comply with new federal requirements for sanitary surveys. In the NCWS program, the LHD staff conduct the sanitary surveys. The NCWS program is continuing to strive to improve the sanitary survey program, which is reviewed by MDEQ district representatives during quarterly and annual reviews of each LHD.

The financial assessments slowed in FY 2007. As a result, a greater effort was made to bring more systems into the assessment program. During FY 2008, five CWS underwent financial assessments and another nine have agreed to participate in an assessment.

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 of 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 and indicates which systems have appeared on an SNC list during those years. New systems appeared on a SNC list primarily due to a single failure to monitor as required in the initial monitoring period.

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. During the reporting period, needs were identified and discussions were held to determine what areas in the CDP could be created or 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 CWS
FY 2006 through FY 2008

PWSID[1]	CWS Name	FY Added to SDWIS/State[2]	Date Added	SNC[3]
MI0000044	CEDAR HOLLOW CONDOMINIUMS	2008	04/17/2008	
MI0002124	EMERY PINES	2008	11/29/2007	
MI0003947	LONG LAKE VILLAGE SUB	2008	01/01/2008	
MI0003966	LYNX GOLF VIEW	2008	08/14/2008	
MI0004276	MERRILL, VILLAGE OF	2008	10/29/2007	
MI0005268	PERE MARQUETTE TWP - WELLS	2008	09/05/2008	
MI0005824	ROSEBUSH MANOR SENIOR LIVING COMMUNITY	2008	01/01/2008	
MI0001643	COTTAGE COVE ON ELK LAKE	2007	04/02/2007	
MI0004404	MILLS TOWNSHIP	2007	05/01/2007	
MI0005573	OAKLAND HUNT SUB	2007	03/29/2007	
MI0005925	SANILAC TOWNSHIP	2007	07/01/2007	
MI0006631	MILL STREET 1 LDHA	2007	04/30/2007	Yes
MI0007217	WYNSTONE SUB	2007	03/29/2007	
MI0060505	CREEK VIEW LODGES	2007	08/28/2007	
MI0000716	BINGHAM TOWNSHIP	2006	01/25/2006	
MI0000733	BLACK BEAR FARMS	2006	06/28/2006	
MI0000838	RIDGE VALLEY OF MILFORD SUBDIVISION	2006	07/03/2006	
MI0001363	PIER 33 WATER WORKS, L.L.C.	2006	09/08/2006	
MI0001565	COLUMBIA LAKES ESTATES	2006	02/14/2006	Yes
MI0001652	COUNTRY VILLAGE	2006	12/21/2005	
MI0003098	HAWKS LANDING CONDOMINIUMS	2006	06/02/2006	
MI0005849	SADDLE RIDGE CONDO ASSOC.	2006	01/20/2006	
MI0006423	STONE RIDGE	2006	04/07/2006	Yes
MI0006569	THE LIGHTHOUSE-TRAVERSE CITY LLC	2006	09/08/2006	
MI0006574	THE SHORES ON CROOKED LAKE	2006	12/02/2005	
MI0006594	THORNTON FARMS	2006	01/19/2006	Yes

[1] Public Water System Identification Number
[2] Safe Drinking Water Information System/State
[3] Noted CWS on a SNC list in the years covered by this report.

	New CWS	SNC
2008	7	0
2007	7	1
2006	12	3
Total	**26**	**4**

New NTNCWS
FY 2006 through FY 2008

PWSID[1]	NTNCWS Name	FY Added to WaterTrack[2]	Date Added	SNC[3]
MI0320650	SEBRIGHT PRODUCTS, INC.	2008	09/04/2008	
MI0820404	APPLETREE CHRISTIAN LEARNING CENTER	2008	02/08/2008	
MI1820276	NEMCSA DAY CARE	2008	08/28/2008	
MI1920612	CENTER OF APPLIED CHRISTIANITY	2008	10/02/2007	
MI2520873	NOAH'S LEARNING CENTER	2008	06/19/2008	
MI2521601	GENOVA PRODUCTS	2008	09/29/2008	
MI2620440	LYLE INDUSTRIES INC	2008	04/15/2008	
MI2920616	GOOD SHEPHERD CHURCH	2008	11/06/2007	
MI3020302	BIRD LAKE BIBLE SCHOOL	2008	09/10/2008	
MI3420266	MENARD'S INC.	2008	01/08/2008	
MI3420268	PORTLAND FEDERAL CREDIT UNION	2008	05/02/2008	
MI3420269	RIDGE KING	2008	01/05/2008	
MI3820825	SIS'S IMAGINATION STATION	2008	10/31/2007	
MI3820826	J.B. SQUARD, LLC	2008	10/31/2007	
MI4120941	SONSHINE CORNER LEARNING CENTER	2008	06/16/2008	
MI4720655	HARTLAND COMMERCE CENTER	2008	12/10/2007	
MI4720912	GUARDIAN BUILDING	2008	02/04/2008	
MI4720914	RED ROBIN PROPERTIES	2008	02/26/2008	
MI4720916	TMA ONE - EAGLE ONE	2008	02/29/2008	
MI4720919	EXCELDA MANUFACTURING	2008	05/23/2008	
MI4720925	DOWN ON THE FARM LEARNING CENTER	2008	08/26/2008	
MI5420415	HUNTEY CLUBHOUSE	2008	08/06/2008	
MI5820438	FLYING J TRAVEL CENTER	2008	11/02/2007	
MI6322855	HIGHLAND STATION	2008	10/10/2007	
MI6322862	MATRIX	2008	10/08/2007	
MI6322867	LAFONTAINE AUTOMOTIVE	2008	05/29/2008	
MI6322868	HEATHER HIGHLANDS	2008	04/15/2008	
MI6720190	DEWITT BOTTLING	2008	10/31/2007	
MI6820206	AMI INDUSTRIES	2008	10/15/2007	
MI8120581	CHILDREN'S CREATIVE LEARNING CENTER, DBA	2008	01/22/2008	
MI8320296	MDOT	2008	08/25/2008	
MI0320643	O SHAW WAW NO PLAZA	2007	12/29/2006	
MI0320646	LAKETOWN GREENHOUSE	2007	06/07/2007	
MI0520146	ARMOR EXPRESS	2007	12/19/2006	
MI1820268	MID MICHIGAN COMMUNITY ACTION AGENCY	2007	09/11/2007	
MI2020006	AVITA ARTESIAN WATER	2007	07/25/2007	Yes
MI2320293	NORTHERN CONCRETE PIPE, INC.	2007	11/27/2006	Yes
MI2320294	POLLY PRODUCTS, LLC	2007	11/15/2006	Yes
MI3020236	HIS KIDS NEW JERUSALEM DAYCARE	2007	12/28/2006	Yes
MI3720189	HAPPY ENDING ICE CREAM PLAZA	2007	09/18/2007	
MI3820823	EARLY IMPRESSIONS	2007	04/18/2007	Yes

PWSID[1]	NTNCWS Name	FY Added to WaterTrack[2]	Date Added	SNC[3]
MI4620651	ST. JOHN'S LUTHERAN CHURCH	2007	04/05/2007	
MI4620655	BIRTH, TODDLER AND BEYOND #2	2007	07/11/2007	
MI4720449	MILLER OFFICE BUILDING	2007	07/17/2007	
MI4720893	LORD OF LIFE CHURCH	2007	12/13/2006	
MI4720908	GARDEN GATE MONTESSORI	2007	06/13/2007	
MI5020362	ARMADA FUEL STOP	2007	06/07/2007	
MI5320208	NORON COMPOSITE TECHNOLOGIES	2007	01/08/2007	Yes
MI5320210	AMP TECH	2007	01/09/2007	
MI5420400	BIG RAPIDS TOWNSHIP INDUSTRIAL PARK	2007	03/28/2007	
MI5420401	MORLEY ALTERNATIVE SCHOOL BUILDING	2007	02/13/2007	Yes
MI5920611	EIGHT CAP ANNEX	2007	03/06/2007	
MI6220291	WHITE CLOUD SPRING WATER	2007	09/13/2007	
MI6322863	CONTINENTAL ALUMINUM	2007	09/06/2007	
MI6920233	GRACE BAPTIST COLLEGE #2	2007	07/19/2007	Yes
MI7220437	LAKESIDE CLINIC	2007	02/26/2007	
MI7820379	OWOSSO TWP. WATER	2007	07/24/2007	
MI7820380	PFEIFLE BUILDING	2007	07/31/2007	
MI8120573	CASSIDY LAKE SAI	2007	11/02/2006	
MI8120582	DOROTHY'S DISCOVERY CAYCARE	2007	08/07/2007	
MI0120217	ALCONA HEALTH CENTER - LINCOLN	2006	01/23/2006	
MI0320634	ACRDC/PULLMEN HEADSTART	2006	12/20/2005	Yes
MI0320641	SCENIC VIEW FARMS	2006	09/27/2006	Yes
MI1620453	TRANSFIGURATION JUBILATE DAY CARE	2006	08/30/2006	Yes
MI2420311	MCBRIDE COMMERCIAL PARK	2006	08/30/2006	
MI2420352	PIONEER PROFESSIONAL BUILDING	2006	05/11/2006	Yes
MI2420356	FITNESS PLUS/STEPPING STONES DAYCARE	2006	10/20/2005	
MI2620128	SHELLEY'S PLACE	2006	01/13/2006	
MI3320187	WILLIAMSTON PRODUCTS INC.	2006	10/19/2005	
MI3420134	WILLOW POINT DAIRY	2006	01/24/2006	
MI3420136	HERBRUCK'S POULTRY RANCH (CHICKERY)	2006	11/07/2005	
MI3420265	BERGER MOTOR SALES, INC.	2006	03/21/2006	Yes
MI3820814	MICHIGAN NATIONAL GUARD	2006	01/24/2006	
MI3820817	CLEMENT SCHOOL	2006	04/04/2006	
MI3820818	NORTHWEST CORNERS / AIR HOLDINGS, LLC	2006	07/06/2006	
MI4620649	BIRTH, TODDLER AND BEYOND	2006	06/22/2006	
MI4720013	SHOPS AT COUNTRY CORNER	2006	06/22/2006	Yes
MI4720020	ARISE UNITED METHODIST CHURCH	2006	10/05/2005	
MI4720492	CAE	2006	04/20/2006	
MI4720867	BRIGHTON COUNTRY DAY SCHOOL	2006	01/24/2006	
MI4720891	EAGLE TWO EAST	2006	10/19/2005	
MI4720902	HAMBURG PROFESSIONAL CENTER	2006	03/01/2006	
MI5820432	CROSSROADS CHURCH	2006	05/19/2006	
MI5820435	PINNACLE TECHNOLOGY	2006	05/12/2006	
MI5920572	WAL-MART	2006	11/07/2005	Yes

PWSID[1]	NTNCWS Name	FY Added to WaterTrack[2]	Date Added	SNC[3]
MI6220283	PROVIDENCE CHRISTIAN HIGH SCHOOL	2006	10/17/2005	Yes
MI6322847	SCHUPAN RECYCLING	2006	06/06/2006	
MI6720177	EVART WELLS 5, 7	2006	10/03/2005	
MI6920224	MDOT NORTH REGIONAL BUILDING	2006	05/11/2006	
MI7820209	IMMANUEL BAPTIST SCOOL	2006	12/22/2005	
MI8120522	BALANCE TECHNOLOGOES INC.	2006	10/20/2005	
MI8120538	HUMANE SOCIETY OF HURON VALLEY	2006	03/09/2006	
MI8120541	WHITMORE LAKE HIGH SCHOOL	2006	08/10/2006	
MI8120546	TECH PARK WEST	2006	04/25/2006	
MI8120555	GARDNER-WESTCOTT COMANY	2006	12/27/2005	
MI8120560	ANN ARBOR COUNTRY PRESCHOOL	2006	03/07/2006	

[1] Public Water System Identification Number
[2] WaterTrack is the database of the NCWS, from which SDWIS/Fed is populated.
[3] Noted NTNCWS on a SNC list in the years covered by this report.

	New NTNCWS	SNC
2008	31	0
2007	29	8
2006	36	8
Total	**96**	**16**

Appendix B: Outline of a Typical Financial Assessment and Financial Action Plan

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: Supply usually does not provide all the information requested.

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.

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.