PERFORMANCE AUDIT
OF THE

PUBLIC DRINKING WATER SUPPLY PROGRAM

DEPARTMENT OF ENVIRONMENTAL QUALITY

June 2001

76-120-99

EXECUTIVE DIGEST

PUBLIC DRINKING WATER SUPPLY PROGRAM

INTRODUCTION	This report, issued in June 2001, contains the results of our performance audit* of the Public Drinking Water Supply* Program, Department of Environmental Quality (DEQ).
AUDIT PURPOSE	This performance audit was conducted as part of the constitutional responsibility of the Office of the Auditor General. Performance audits are conducted on a priority basis related to the potential for improving effectiveness* and efficiency*.
BACKGROUND	The Public Drinking Water Supply Program, operated by the DEQ Drinking Water and Radiological Protection Division (DWRPD) includes oversight of community drinking water supply systems* and non-community drinking water supply systems*, certification of drinking water testing laboratories, and training and certification of persons who operate drinking water supply systems in the State. A primary objective of the Public Drinking Water Supply Program is to help ensure that public drinking water supply systems produce and distribute water in accordance with federal and State drinking water laws, rules, policies, and procedures.

* *See glossary at end of report for definition.*

DWRPD is also responsible for oversight of various environmental health issues relating to radiological protection; registration of medical waste producers and haulers, public swimming pool operators, and dry cleaners; and oversight of campgrounds, on-site sewage systems, subdivisions, and condominium developments. These environmental health programs will be considered for inclusion in a separate performance audit.

The United States Environmental Protection Agency (EPA) has granted Michigan primary enforcement responsibility (primacy*) to regulate public drinking water supply systems. For primacy, the State must adopt drinking water regulations that are at least as stringent as the federal regulations and must demonstrate that it can enforce the program requirements.

DWRPD's Field Operations Section oversees approximately 1,450 community drinking water supply systems. The Section is responsible for ensuring that these community water suppliers provide drinking water that meets or exceeds minimum requirements of the federal and State Safe Drinking Water Acts, rules, policies, and procedures.

DWRPD's Ground Water Supply Section contracts with 43 local health departments (LHDs) that oversee approximately 10,800 transient* and non-transient* non-community drinking water supply systems and investigate private well contamination complaints.

DWRPD's Laboratory Services Section operates an EPA-certified drinking water laboratory and inspects and certifies laboratories that analyze drinking water samples for compliance with provisions of the federal and State

* *See glossary at end of report for definition.*

Safe Drinking Water Acts for water suppliers that operate in the State.

The Environmental Assistance Division trains and certifies operators of public drinking water supply systems in accordance with federal and State laws, rules, policies, and procedures.

DWRPD expended approximately $8.25 million to operate the Public Drinking Water Supply Program in fiscal year 1998-99, including direct payments to 43 LHDs of approximately $1.45 million for the non-community drinking water program. In addition, DWRPD expended approximately $2.5 million on staff, contracts, and grants funded by Drinking Water Revolving Loan Fund set-asides*, which are audited separately. DWRPD had 74 filled positions assigned to implement the Public Drinking Water Supply Program on May 31, 2000.

AUDIT OBJECTIVE, CONCLUSION, AND NOTEWORTHY ACCOMPLISHMENTS

Audit Objective: To assess the Public Drinking Water Supply Program's effectiveness in ensuring the safety of the State's public drinking water supply.

Conclusion: We concluded that the public drinking water supply program was generally effective in ensuring the safety of the State's drinking water supply. However, our assessment disclosed three material conditions* related to the non-community drinking water program:

- DWRPD should ensure that LHDs take timely action to address the issue of non-community drinking water suppliers who repeatedly fail to monitor or fail to comply with significant program requirements (Finding 2).

* *See glossary at end of report for definition.*

- DWRPD should increase its oversight of LHDs to help ensure that they complete sanitary surveys* in a timely manner and follow up on serious deficiencies, should monitor LHDs to help ensure that follow-up of serious sanitary survey deficiencies is a top priority, and should require LHDs to identify which sanitary survey deficiencies are considered serious (Finding 3).

- DWRPD had not developed an effective oversight system to ensure that LHDs were posting all monitoring violations and maximum contaminant level* violations on the federal reporting system (Finding 4).

Our assessment also disclosed reportable conditions* related to the monitoring of community drinking water system activities and results, the evaluation and monitoring of LHDs, the non-community water data management and reporting system, comprehensive written policies and procedures, a continuous quality improvement process, and the recovery of costs relating to American Water Works Association operator training classes (Findings 1 and 5 through 9).

Noteworthy Accomplishments: DWRPD is in the process of implementing three programs that have had a significant impact on protecting drinking water supply sources: the Source Water Assessment Program, which will assess the quality of every source of drinking water used by the approximately 12,000 community and non-community public water suppliers; Wellogic, a computer-based program that maintains historical records on every drinking water well drilled in the State and makes this well information available for hydrogeological research and

* *See glossary at end of report for definition.*

other purposes; and the voluntary Wellhead Protection Program, which provides grants to community drinking water supply systems to protect wellheads from possible sources of contamination.

In addition, DWRPD's drinking water laboratory achieved continuing certification as an EPA-certified drinking water laboratory. The certification indicates that the drinking water laboratory is being operated under high standards and maintains an effective quality control system.

AUDIT SCOPE AND METHODOLOGY

Our audit scope was to examine the program and other records of the Drinking Water and Radiological Protection Division and the Environmental Assistance Division. Our audit was conducted in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States and, accordingly, included such tests of the records and such other auditing procedures as we considered necessary in the circumstances.

Our audit procedures included review of laws, rules, policies, and procedures and assessment of DWRPD's implementation of continuous quality improvement initiatives. We interviewed program staff. We examined Public Drinking Water Supply Program records and activities for the period October 1, 1997 through May 31, 2000.

We discussed the Public Drinking Water Supply Program with EPA staff who are responsible for oversight of this federally mandated program.

We analyzed program reports, examined data systems, and reviewed other records relating to DWRPD's planning process, operating procedures, and administration of the Public Drinking Water Supply Program.

We reviewed DWRPD's process for certifying drinking water laboratories and examined records relating to the examination and training process implemented by the Environmental Assistance Division for the certification of drinking water plant operators. We also reviewed fees charged to the community and non-community drinking water supply systems.

We surveyed LHDs to evaluate satisfaction with DWRPD's implementation of the non-community drinking water program (see Exhibit A, presented as supplemental information).

We also conducted a telephone survey of environmental and governmental groups and other parties to determine satisfaction with DWRPD's implementation of the Public Drinking Water Supply Program (see Exhibit B, presented as supplemental information).

AGENCY RESPONSES AND PRIOR AUDIT FOLLOW-UP

Our audit report includes 9 findings and 11 corresponding recommendations. DEQ's preliminary response indicated that it agrees with 6 recommendations, partially agrees with 4 recommendations, and disagrees with 1 recommendation.

DWRPD complied with both recommendations from our prior audit of the Public Drinking Water Supply Program.

July 5, 2001

Mr. Russell J. Harding, Director
Department of Environmental Quality
Hollister Building
Lansing, Michigan

Dear Mr. Harding:

This is our report on the performance audit of the Public Drinking Water Supply Program, Department of Environmental Quality.

This report contains our executive digest; description of agency; audit objective, scope, and methodology and agency responses and prior audit follow-up; comment, findings, recommendations, and agency preliminary responses; description of surveys and summaries of survey responses, presented as supplemental information; and a glossary of acronyms and terms.

The agency preliminary responses were taken from the agency's responses subsequent to our audit fieldwork. The *Michigan Compiled Laws* and administrative procedures require that the audited agency develop a formal response within 60 days after release of the audit report.

We appreciate the courtesy and cooperation extended to us during the audit.

Sincerely,

Thomas H. McTavish, C.P.A.
Auditor General

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Description of Agency

The Public Drinking Water Supply Program, operated by the Drinking Water and Radiological Protection Division (DWRPD), Department of Environmental Quality (DEQ), includes oversight of community drinking water supply systems and non-community drinking water supply systems, certification of drinking water testing laboratories, and training and certification of persons who operate drinking water supply systems in the State. DWRPD contracts with 43 local health departments (LHDs) to oversee the non-community drinking water program, to register and oversee private well drillers, and to follow up water complaints.

DWRPD is also responsible for oversight of various environmental health issues relating to radiological protection; registration of medical waste producers and haulers, public swimming pool operators, and dry cleaners; and oversight of campgrounds, on-site sewage systems, subdivisions, and condominium developments. These environmental health programs will be considered for inclusion in a separate performance audit.

A primary objective of the Public Drinking Water Supply Program is to help ensure that public drinking water supply systems produce and distribute water in accordance with minimum safety standards outlined in federal and State drinking water laws, rules, policies, and procedures.

The United States Environmental Protection Agency (EPA), under the authority of the federal Safe Drinking Water Act of 1974, has granted Michigan primary enforcement responsibility (primacy) to regulate public drinking water supply systems. For primacy, the State must adopt drinking water regulations that are at least as stringent as the federal regulations and must demonstrate that it can enforce the program requirements.

DWRPD has identified two critical components in the oversight process for the Public Drinking Water Supply Program:

1. The first critical component in the oversight process consists of proper well system construction; isolation of wells from contaminant* sources; proper design,

* *See glossary at end of report for definition.*

operation, and construction of water treatment facilities; completion of periodic sanitary surveys and timely follow-up of noted deficiencies; ongoing inspection of water supply systems and correction of deficiencies; and owner/operator education and oversight. DWRPD has identified these as the primary barriers to prevent contamination of drinking water provided by public water suppliers. Review of new public water supply system designs and oversight during construction, periodic sanitary surveys, monitoring, and ongoing site visits are designed to ensure that public water supply systems are in substantial compliance with minimum federal and State program standards.

2. The second critical component in the oversight process is periodic testing for contaminants in drinking water supply systems. All drinking water contains varying levels of contaminants. The EPA establishes contaminant levels that are considered safe for the drinking water supply. Each community and non-community public water supply system must conduct periodic water tests to verify that the level of contaminants in the water does not exceed the maximum contaminant levels (MCLs) allowed by federal and State rules. Detection of contaminants in excess of an MCL and failure to sample or to report sample results are violations of federal and State law that must be reported to the EPA. DWRPD maintains extensive databases to report violations by community and non-community public drinking water supply systems. The EPA also establishes treatment techniques, in lieu of MCLs, to control certain contaminants. Treatment techniques provide assurance of public health protection where detection is difficult or imprecise. For example, treatment techniques have been established to remove viruses, bacteria, and turbidity*.

DWRPD's Field Operations Section oversees approximately 1,450 community drinking water supply systems that provide drinking water to approximately 7.2 million residents of the State. The Section is responsible for ensuring that these community water suppliers provide drinking water that meets or exceeds minimum requirements of the federal and State Safe Drinking Water Acts, rules, policies, and procedures.

DWRPD's Ground Water Supply Section (GWSS) contracts with 43 LHDs for oversight of the non-community drinking water program. The LHDs are responsible for overseeing and monitoring approximately 10,800 transient and non-transient non-community drinking water supply systems and investigating private well contamination

* *See glossary at end of report for definition.*

complaints. GWSS is responsible for on-site monitoring and oversight of the LHDs to ensure compliance with minimum program requirements as outlined in the annual contracts. Oversight of community drinking water supplies operated by manufactured housing communities and nursing homes is the responsibility of another DWRPD section and another State agency. As a result, these community drinking water suppliers were not included in our review.

DWRPD's Laboratory Services Section operates an EPA-certified drinking water laboratory and inspects and certifies laboratories that analyze drinking water samples for compliance with provisions of the federal and State Safe Drinking Water Acts for water suppliers that operate in the State.

The Environmental Assistance Division trains and certifies operators of public drinking water supply systems in accordance with federal and State laws, rules, policies, and procedures.

DWRPD expended approximately $8.25 million to operate the Public Drinking Water Supply Program in fiscal year 1998-99, including direct payments to 43 LHDs of approximately $1.45 million for the non-community drinking water program. In addition, DWRPD expended approximately $2.5 million on staff, contracts, and grants funded by Drinking Water Revolving Loan Fund set-asides, which are audited separately. DWRPD had 74 filled positions assigned to implement the Public Drinking Water Supply Program on May 31, 2000.

Audit Objective, Scope, and Methodology and Agency Responses and Prior Audit Follow-Up

Audit Objective

The objective of our performance audit of the Public Drinking Water Supply Program, Department of Environmental Quality, was to assess the Public Drinking Water Supply Program's effectiveness in ensuring the safety of the State's public drinking water supply.

Audit Scope

Our audit scope was to examine the program and other records of the Drinking Water and Radiological Protection Division and the Environmental Assistance Division. Our audit was conducted in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States and, accordingly, included such tests of the records and such other auditing procedures as we considered necessary in the circumstances.

Audit Methodology

Our audit procedures, conducted during September 1999 through July 2000, included examination of program records and activities for the period October 1, 1997 through May 31, 2000.

We reviewed federal and State laws, administrative rules, management plans, policies, and procedures and assessed whether management has implemented continuous quality improvement initiatives. We interviewed program staff at both central and district offices. We examined Public Drinking Water Supply Program records and activities, including records of the Drinking Water and Radiological Protection Division (DWRPD), the Environmental Assistance Division, local health departments (LHDs), and community and non-community drinking water suppliers.

We discussed the Public Drinking Water Supply Program with EPA staff who are responsible for oversight of this federally mandated program.

We interviewed staff and reviewed records at 4 DEQ district offices, 9 community water suppliers, and 11 LHDs to gain an understanding of and to analyze DWRPD's compliance with Public Drinking Water Supply Program requirements. We analyzed

program reports, examined data systems, and reviewed other records relating to DWRPD's planning process, operating procedures, and administration of the Public Drinking Water Supply Program.

We reviewed DWRPD's process for certifying drinking water laboratories and examined records relating to the examination and training process implemented by the Environmental Assistance Division for the initial and ongoing certification of drinking water plant operators. We also reviewed fees charged to community and non-community drinking water supply systems, including annual fee credits, and assessed DWRPD's ability to meet program requirements based on existing staffing levels.

We surveyed the LHDs to evaluate stakeholder satisfaction with DWRPD's implementation of the non-community drinking water program (see Exhibit A, presented as supplemental information).

We also conducted a telephone survey of environmental and governmental groups and other parties interested in the Public Drinking Water Supply Program to determine satisfaction with DWRPD's implementation of the Public Drinking Water Supply Program (see Exhibit B, presented as supplemental information).

Agency Responses and Prior Audit Follow-Up

Our audit report includes 9 findings and 11 corresponding recommendations. DEQ's preliminary response indicated that it agrees with 6 recommendations, partially agrees with 4 recommendations, and disagrees with 1 recommendation.

The agency preliminary response which follows each recommendation in our report was taken from the agency's written comments and oral discussion subsequent to our audit fieldwork. Section 18.1462 of the *Michigan Compiled Laws* and Department of Management and Budget Administrative Guide procedure 1280.02 require DEQ to develop a formal response to our audit findings and recommendations within 60 days after release of the audit report.

DWRPD complied with both recommendations from our prior audit of the Public Drinking Water Supply Program.

COMMENT, FINDINGS, RECOMMENDATIONS, AND AGENCY PRELIMINARY RESPONSES

EFFECTIVENESS IN ENSURING THE SAFETY OF THE STATE'S PUBLIC DRINKING WATER SUPPLY

COMMENT

Background: The Public Drinking Water Supply Program is responsible for ensuring the safety of drinking water supplied to residents of the State of Michigan and its visitors. The Drinking Water and Radiological Protection Division (DWRPD) directly oversees approximately 1,450 community drinking water supply systems that provide year-round service to not fewer than 15 service connections or that regularly provide year-round service to not fewer than 25 residents. In addition, DWRPD has delegated responsibility for approximately 10,800 non-community drinking water supply systems to 43 local health departments (LHDs). These LHDs oversee public water supply systems that have not less than 15 service connections or that serve not fewer than 25 individuals on an average daily basis for not less than 60 days per year. Public drinking water supply systems do not include private wells that supply water to an individual home.

Audit Objective: To assess the Public Drinking Water Supply Program's effectiveness in ensuring the safety of the State's public drinking water supply.

Conclusion: We concluded that the public drinking water supply program was generally effective in ensuring the safety of the State's drinking water supply. However, our assessment disclosed three material conditions related to the non-community drinking water program. DWRPD should ensure that LHDs take timely action to address the issue of non-community drinking water suppliers who repeatedly fail to monitor or fail to comply with significant program requirements. Also, DWRPD should increase its oversight of LHDs to help ensure that they complete sanitary surveys in a timely manner and follow up on serious deficiencies, should monitor LHDs to help ensure that follow-up of serious sanitary survey deficiencies is a top priority, and should require the LHDs to identify which sanitary survey deficiencies are considered serious. Further, DWRPD had not developed an effective oversight system to ensure

that LHDs were posting all monitoring violations and maximum contaminant level (MCL) violations on the federal reporting system.

Our assessment also disclosed reportable conditions related to the monitoring of community drinking water system activities and results, the evaluation and monitoring of LHDs, the non-community water data management and reporting system, comprehensive written policies and procedures, a continuous quality improvement process, and the recovery of costs relating to American Water Works Association operator training classes.

Noteworthy Accomplishments: DWRPD is in the process of implementing three programs that have had a significant impact on protecting drinking water supply sources:

(1) The Source Water Assessment Program, which is funded by a one-time set-aside from the Drinking Water Revolving Loan Fund, is required by the federal Safe Drinking Water Act. In the Michigan program (one of the first to submit a source water assessment program to the United States Environmental Protection Agency [EPA] for approval), contractors are in the process of assessing the quality of every source of drinking water used by the approximately 12,000 community and non-community public water suppliers.

(2) DWRPD maintains a computer-based program that will allow LHDs to inventory and track every drinking water well drilled in the State. This Wellogic program provides rapid access to historical records and adds in excess of 20,000 drinking water wells drilled to the well inventory annually in the State. Well information is valuable for many reasons, including hydrogeological research.

(3) DWRPD has set aside $1 million per year for the last three years to encourage water suppliers to protect wellheads from possible sources of contamination. Through this voluntary Wellhead Protection Program, the Department of Environmental Quality (DEQ) has provided grants to community drinking water supply systems so that over 50% of the State population that obtain their drinking water from groundwater sources reside in communities actively working on wellhead protection.

In addition, DWRPD's drinking water laboratory achieved continuing certification as an EPA-certified drinking water laboratory. This certification indicates that the drinking water laboratory is being operated under high standards and maintains an effective quality control system.

FINDING

1. Monitoring of Community Drinking Water System Activities and Results

DWRPD did not ensure that district office files contained sufficient documentation to support that the 1,450 community drinking water supply systems were in substantial compliance with program requirements.

Sections 325.1001 - 325.1023 of the *Michigan Compiled Laws* (the State Safe Drinking Water Act) require that DWRPD gather data from water suppliers. Water suppliers must submit a general plan, including information on the waterworks system, general plant layout, identification of the public served by the system, treatment and distribution system information, and the rated capacity of the system. Also, water suppliers must prepare a contingency plan that lists well information, emergency numbers, and procedures for emergencies. Further, the State Safe Drinking Water Act requires DWRPD to conduct surveillance visits and perform evaluations of the water suppliers.

DEQ, in its 1998 annual report to the EPA, stated:

> The primary barriers to prevent contamination of water systems include proper well system construction, isolation from contaminant sources, proper design, operation, and construction of treatment facilities (where surface water is the source of supply), periodic inspections with correction of deficiencies, and owner/operator education and oversight . . . .

Thus, DEQ recognizes that the sanitary survey and periodic and ongoing oversight and inspection of water supplier facilities are critical features of the internal control that cannot be overlooked.

However, DWRPD has not established a comprehensive oversight and compliance review program to help ensure that water suppliers were in compliance with program requirements established to protect the public health and ensure the safety of the drinking water supply. Based on our review of nine community drinking water supply systems, we noted that neither DWRPD nor water supply

system files contained sufficient documentation to ensure that the water suppliers were in compliance with program standards:

a. Five files did not contain contingency plans.

b. Three files did not contain water works system information (a requirement of the general plan).

c. Four files, including the largest water system in the State (serving in excess of 4 million residents), did not contain a sanitary survey. Sanitary surveys, which are considered a primary control over drinking water systems, should contain detailed documentation of construction, monitoring, and evaluation visits.

DWRPD's central office staff had not established a comprehensive oversight of district offices to determine whether water supply systems complied with federal and State laws and rules. Central office staff did not conduct visits to district offices to review water supply files in order to ensure that they were accurate and complete. Thus, DWRPD was unaware that district office employees had not properly documented or completed sanitary surveys or that water systems did not have up-to-date contingency plans. Failure to complete water systems reviews and failure to require water systems to prepare emergency contingency plans could compromise the safety of the community drinking water supply system.

A solution would be to utilize a file cover sheet or checklist outlining minimum documentation standards, dates they were achieved, and evidence of supervisory review.

RECOMMENDATION

We recommend that DWRPD ensure that district office files contain sufficient documentation to support that the 1,450 community drinking water supply systems are in substantial compliance with program requirements.

AGENCY PRELIMINARY RESPONSE

DEQ agrees with the recommendation. DWRPD intends to conduct periodic file reviews by supervisory staff and agrees with the auditors' suggestion that a simple check sheet can be placed in each facility file.

FINDING

2. Non-Community Drinking Water Program Enforcement

DWRPD should ensure that LHDs take timely action to address the issue of non-community drinking water suppliers who repeatedly fail to monitor or fail to comply with significant program requirements.

LHDs are responsible for implementing systems that provide for timely and appropriate progressive enforcement actions against non-community water suppliers who do not perform water tests required by federal and State laws and rules and against non-community water suppliers who do not take timely action to correct contamination levels that exceed MCLs allowed by federal and State rules. Sections 325.1001 - 325.1023 of the *Michigan Compiled Laws* (the State Safe Drinking Water Act) and related administrative rules provide for supervision and control over public water supplies.

The choice of enforcement methods is left to the discretion of 43 LHDs. We determined that the primary method of gaining compliance is through cooperation between the LHD and the non-community water suppliers. County officials and commissioners have opposed the use of enforcement measures and assessment of fines against water suppliers who are local businesspersons and constituents. Therefore, if a local water supplier chooses to continually violate monitoring requirements, the LHDs generally have not used progressive enforcement to obtain compliance with program requirements.

As a result of the LHDs' reluctance to take timely enforcement action and the failure of DWRPD to require LHDs to take timely and appropriate enforcement action against water suppliers who are not in compliance with drinking water standards, the EPA has identified 1,026 (9.5%) of the approximately 10,800 non-community drinking water suppliers in the State as being in "significant noncompliance" with requirements of the federal and State Safe Drinking Water Acts and rules. DWRPD gave a list of the significant noncompliers to each LHD at the time of our audit fieldwork with instructions to make the follow-up of significant noncompliers a top priority.

The absence of a timely enforcement action has resulted in LHDs not taking timely and appropriate progressive enforcement action against water suppliers in significant noncompliance with program requirements.

DWRPD, in conjunction with the EPA, has identified water suppliers with serious recurring monitoring violations and water suppliers with recurring MCL violations. The absence of contract provisions mandating timely enforcement actions and the absence of written policies and procedures for handling significant noncompliance contributed to the LHDs not taking timely and appropriate progressive disciplinary actions against water suppliers in significant noncompliance with program requirements.

RECOMMENDATION

We recommend that DWRPD take appropriate steps to ensure that LHDs take timely action to address the issue of non-community drinking water suppliers who repeatedly fail to monitor or fail to comply with significant program requirements.

AGENCY PRELIMINARY RESPONSE

DEQ agrees with this recommendation and believes that it has taken appropriate steps.

DEQ believes that the best measure of a program is the compliance rate of the public water systems. The evaluation of compliance rates through the DEQ strategic planning process prior to the audit resulted in DWRPD focusing resources in this program area. As a result, DWRPD is calculating rates of compliance for each LHD and placing emphasis upon those LHDs with the highest violation rates. "Emphasis" means providing personal consultation and rating LHDs deficient during evaluations for failure to use existing administrative fine authority in the Safe Drinking Water Act, Act 1976, P.A. 399, as amended, or to use local authority when violation rates are high.

For violations considered "imminent hazards," as defined in the guidance manuals and Minimum Program Requirements (MPRs), action by the LHDs, including enforcement as necessary, is required. DWRPD is providing adequate oversight in those areas of primary importance to public health protection. (See Finding 3; this principle also applies to timely correction of sanitary survey deficiencies.)

The information presented in the audit finding focuses primarily on progressive enforcement and downplays compliance assistance. DEQ favors a comprehensive approach based upon the very large number of regulated facilities and the complexity of their operation. Non-community drinking water systems include a

wide variety of facilities, such as restaurants, churches, schools, office buildings, and campgrounds. Many systems operate seasonally. DEQ has determined that no single mechanism to improve compliance works for all facilities.

DWRPD has delegated program implementation to the LHDs, much the same as the EPA has delegated the program to Michigan under the primacy agreement. The LHDs have an array of tools available to implement the program satisfactorily. Formal enforcement is but one of those tools and the most resource intensive.

When formal enforcement is necessary, the LHDs are required to take action and they have several choices, including: enforcing local ordinances, using State authority to levy administrative fines, or referring particularly difficult cases to DEQ. DEQ periodically submits a written "enforcement strategy" to the EPA for its review and approval. The current DEQ enforcement strategy has been deemed acceptable and approved by the EPA.

DWRPD believes that this approach is working, based upon program data. In the eight-month period from February to October 2000, significant violators (as defined by the EPA) were reduced from 303 to 185, a 40% reduction. In addition, work continues on the remaining systems, and that work effort is carefully reviewed during LHD evaluations. In addition, Exhibit B of this audit indicates that LHDs strongly support the approach used by DEQ, that is, to implement a strong compliance assistance program to gain voluntary compliance with use of strong enforcement only as necessary.

FINDING

3. Sanitary Surveys of Non-Community Drinking Water Systems

DWRPD should increase its oversight of LHDs to help ensure that they complete sanitary surveys in a timely manner and follow up serious deficiencies. Also, DWRPD should monitor LHDs to help ensure that follow-up of serious sanitary survey deficiencies is a top priority. In addition, DWRPD should require LHDs to identify which sanitary survey deficiencies are considered serious.

DWRPD has identified proper well system construction, isolation of wells from contaminant sources, and periodic inspections of wells (commonly referred to as sanitary surveys) with correction of deficiencies as primary barriers to prevent

contamination of water systems. Proper construction, isolation, and periodic sanitary surveys provide the foundation for safe drinking water. DWRPD requires that LHDs complete a sanitary survey for each non-community drinking water supply system every five years. Completion of the sanitary survey and follow-up to ensure that the water supplier addressed system deficiencies are critical controls that help ensure the safety of the non-community drinking water supplies.

LHDs did not complete sanitary surveys for all non-community drinking water suppliers. Also, LHDs did not follow up noted deficiencies in the sanitary surveys. Our review of a random sample of 11 LHDs disclosed:

a. Twenty-two (9%) of 246 sanitary surveys were not completed as required at 7 of the 11 LHDs.

b. LHDs did not have documentation that they followed up deficiencies noted in 88 (39%) of the 224 sanitary surveys in our sample at 10 of the 11 LHDs.

c. LHDs did not routinely identify which sanitary survey deficiencies were considered serious.

Failure to complete sanitary surveys and failure to follow up serious deficiencies noted during sanitary surveys reduce the effectiveness of the sanitary survey as a primary method of preventing contamination of water systems and place a higher emphasis on water testing to detect contamination of the water supply.

RECOMMENDATIONS

We recommend that DWRPD increase its oversight of LHDs to help ensure that they complete sanitary surveys in a timely manner and follow up serious deficiencies.

We also recommend that DWRPD monitor LHDs to help ensure that follow-up of serious sanitary survey deficiencies is a top priority.

We further recommend that DWRPD require LHDs to identify which sanitary survey deficiencies are considered serious.

AGENCY PRELIMINARY RESPONSE

DEQ partially agrees with these recommendations.

The requirement for sanitary surveys to be conducted on a five-year frequency means that a sanitary survey must be completed for each system during a five-year period. It does not mean that an LHD must complete exactly 20% of the sanitary surveys each year. DEQ and LHDs address any yearly shortfall to ensure that the five-year requirement is met.

During the audit period, some of the LHDs were not performing inspections and sanitary surveys at a 20% per year rate. That situation is being addressed through the LHD program evaluation process, and the LHDs are responding with corrective action plans. As a result, data from April to October 2000 shows that the annual rate of performing sanitary surveys is in excess of 20%. DEQ calculates the "backlog reduction" during this six-month period to be 34% (the April backlog was 1,518; the October backlog was 996).

In regard to identification and follow-up of serious deficiencies, the LHDs currently follow up each sanitary survey with a letter to the system owner where deficiencies are identified. This letter provides a corrective action schedule for all identified deficiencies. At the time of the audit, the LHDs were not required to identify which deficiencies were serious. DEQ agrees to modify its LHD contracts in the future to require such designation.

FINDING

4. Non-Community Monitoring Violations and MCL Violations on the Federal Reporting System

DWRPD had not developed an effective oversight system to ensure that LHDs were posting monitoring violations and MCL violations on the federal reporting system. As a result, we identified a significant number of non-community drinking water monitoring violations and MCL violations that were not reported.

DWRPD contracts with 43 LHDs to implement the non-community drinking water program. A primary responsibility of LHDs is to ensure that the approximately 10,800 non-community drinking water suppliers complete periodic testing as required by federal and State laws and rules. Each instance of a water supplier failing to complete a water test must be reported as a monitoring violation.

Exceeding federally established MCLs is a more serious problem that must also be reported to the State and included in the federal reporting system. These federal violations, which are posted to the Internet on the EPA web site (www.epa.gov/safewater/dwinfo/mi.htm), provide information to the public on water suppliers who may be providing water that does not meet minimum health safety standards.

We reviewed monitoring violations and MCL violations at 11 (26%) of the 43 LHDs. These 11 LHDs oversee 2,369 of the 10,800 active non-community drinking water suppliers. Our testing disclosed underreporting of monitoring violations and the failure to report some MCL violations:

a. All 11 LHDs failed to report some monitoring violations. In total, the 11 LHDs did not report 195 monitoring violations. Of the 246 water suppliers we reviewed, 76 (31%) had at least one monitoring violation that was not reported.

   Failure to report a monitoring violation was identified as a major concern of the EPA during a 1997 audit of the Michigan's Public Drinking Water Supply Program. Monitoring violations on the surface only indicate that a water sample was not submitted and analyzed. However, recurring instances of failure to submit water samples should raise a question about the quality of the water.

   Based on a 31% violation rate for our sample, if this violation rate exists throughout the population of approximately 10,800 non-community drinking water supplies, we would project that approximately 3,350 water suppliers would be in violation of reporting requirements.

b. Numerous test results received by the State water laboratory exceeded the maximum time limit of 30 hours for coliform bacteria testing. The EPA has established a 30-hour holding limit on coliform bacteria samples because holding a water sample in excess of 30 hours is likely to have a negative impact on the ability of the bacteria to survive. We identified 7 (64%) LHDs that routinely accepted water samples exceeding federally mandated time limits, including 30 invalid water samples accepted by 6 LHDs that were not reported as monitoring violations on the federal reporting system. Records at the seventh LHD did not permit us to identify whether specific samples were

received on a timely basis. However, our review of coliform test results at this LHD showed that approximately 12% of all samples for coliform bacteria testing were received after the 30-hour limit, which we consider to be a significant violation rate.

Title 40, Part 141, section 21(f)(3) of the *Code of Federal Regulations* does not allow State regulators to accept water samples that exceed the maximum time limit. Also, an EPA staff member stated that any coliform bacteria sample exceeding the 30-hour limit must be considered a monitoring violation if another valid sample is not submitted before the end of the reporting period. As a result, the non-community drinking water program significantly underreported EPA-defined monitoring violations throughout the audit period.

c. Five (45%) LHDs did not either report a total of 5 MCL violations in the federal reporting system or document that the samples had been invalidated as required by the Non-Community Public Water Supply Manual. Also, 3 LHDs did not comply with minimum program requirements by either requiring water suppliers to follow safety precautions for contaminated water supplies (sign posted and use of alternate water supply) or requesting the invalidation of samples in accordance with DWRPD procedures. Exceeding an MCL is a serious violation, one that indicates a potential threat to the health of the public. The absence of an effective system to ensure that MCL violations are properly recorded and followed up is a serious weakness in internal control over the Public Drinking Water Supply Program. Failure to report and resolve one MCL violation would be considered a material program weakness by the EPA.

The absence of effective evaluation and monitoring of LHDs (as discussed in Finding 5) and the lack of comprehensive written policies and procedures (as discussed in Finding 8) have contributed to weak internal control and to a weak reporting system. Although DEQ has assigned field staff to oversee implementation of the non-community drinking water program, each of the 5 staff members assigned to monitor program implementation covers a very large service area. Thus, detailed review for proper program implementation is not possible. As noted in Finding 5, DWRPD staff have not been able to effectively monitor for program implementation and to follow up the current status of LHDs found in noncompliance with minimum program requirements outlined in annual contracts.

Failure to report monitoring violations and MCL violations can pose a risk to the health of the public who have access to contaminated water supplies. Failure to report violations is also a serious weakness in internal control that could result in the State's loss of primacy.

RECOMMENDATION

We recommend that DWRPD develop an effective oversight system to ensure that LHDs are posting monitoring violations and MCL violations on the federal reporting system.

AGENCY PRELIMINARY RESPONSE

DEQ partially agrees with the recommendation and findings.

DWRPD does provide oversight to ensure that LHDs are posting monitoring violations and MCL violations on the federal reporting system. This oversight emphasizes those violations that pose the greatest risk to public health.

The MCL violations discussed in item c. pose the greatest risk to public health. However, a detailed review of each of the five cases indicates:

a. There were two cases in which the LHD failed to provide adequate file documentation after invalidating samples in accordance with administrative rules. There was no MCL violation in either case.

b. In one case, the facility closed before the MCL violation was confirmed and did not reopen.

c. In one case, an MCL violation occurred and was not reported, but the file documents that all other work was properly performed, including required sampling, public notification, and imposition of public health protective measures.

d. In one case, an MCL violation occurred and was not reported. However, despite a lack of documentation, DWRPD determined that the LHD provided proper advice to the owner on requirements to protect public health.

DWRPD asserts that there was no instance during the audit period in which the LHDs failed to provide proper advice to protect public health. If a health-based violation occurs, an immediate response to a public health threat is the top priority of both DEQ and LHDs. Water systems with these violations receive appropriate advice and are required to respond appropriately.

The EPA web site cited in the finding is not an effective information source on the current compliance status of any non-community water system. The data on the web site is at least six months old.

A much more effective measure to address MCL violations and immediate risks to public health is the iron-clad administrative practice used in the Michigan non-community drinking water program to shut the system down or arrange for an alternate supply of safe drinking water. In addition, the system owner/operator is required to issue appropriate notice for protection of the public whenever a violation occurs. Public exposure to an unsafe condition ceases immediately following knowledge of the problem by either DEQ or LHD personnel.

DWRPD does not condone underreporting of monitoring violations by LHDs, which is discussed in item a). DWRPD has and will continue to focus on this issue in the LHD oversight process.

The issue of coliform sample holding time discussed in item b. is a technical violation. The problem is insignificant from a health standpoint, and any further work effort beyond existing efforts is not making the best use of limited resources for maximum public health benefit. The EPA has not cited DEQ for underreporting monitoring violations resulting from exceeding the 30-hour criteria in the annual program audits, despite the statement in the finding based upon a telephone interview with an EPA staff member.

DWRPD has closely examined the 30-hour criteria because of the necessity for public water systems to mail samples. In fact, Michigan performed a specific study several years ago on the effects of an extended holding time on sample results. The study results were submitted to the EPA with a request to approve up to 48 hours holding time as an "alternative analytical technique" under the federal Safe Drinking Water Act. The EPA took no action on the request, citing a lack of resources to review alternative analytical techniques. The DWRPD study concludes that there is no adequate scientific basis for the requirement (at least up

to 48 hours) and that there is no practical way for the Michigan water systems to achieve compliance.

Despite this, DEQ is presently exploring the cost and means to conduct another similar "holding time study." If the study continues to indicate no concern with greater than a 30-hour holding time, DEQ will again seek the EPA's approval and a revision to the federal regulations.

FINDING

5. Evaluation and Monitoring of LHDs

DWRPD needs to improve its oversight of the non-community drinking water program by implementing existing program monitoring requirements.

DWRPD has adopted a risk-based monitoring process for overseeing activities of LHDs. This process requires DWRPD field staff to perform on-site evaluations of each LHD based on an LHD evaluation action plan developed in December 1997. The action plan permits field staff to reduce on-site visits for any LHD that is in significant compliance with contract provisions after a history of two years' compliance with the minimum program requirements. LHDs in compliance may complete and submit a self-evaluation for two years following two consecutive years of on-site evaluations with full compliance with minimum program requirements.

DWRPD did not comply with its evaluation action plan. We noted that 12 LHDs did not receive an on-site evaluation and did not complete a self-evaluation in 1998. We also noted that 6 of the 12 LHDs that were not assessed in 1998 also did not receive an on-site evaluation or complete a self-evaluation in 1999. Two of the 6 LHDs that were not evaluated in 1998 or 1999 were out of compliance with at least one minimum program requirement in 1997.

Oversight and monitoring for compliance with minimum program requirements is a primary function of program management. Failure to monitor for proper program implementation is a serious internal control weakness that could jeopardize the health of users of these non-community drinking water suppliers. During the audit, we noted significant changes in how certain LHDs were implementing the program based on changes in LHD program staff. This was caused in part by a high level of

LHD staff turnover. Thus, it is important that DWRPD staff periodically determine whether LHDs have implemented the program in accordance with minimum program requirements. One way to do this is through on-site assessments.

DWRPD staff stated that 1998 self-evaluations were not sent out to certain LHDs because of staff oversight. Also, because of a staff member's illness, Upper Peninsula evaluations were not completed in either 1998 or 1999. DWRPD reported that replacement staff have been hired and the Upper Peninsula evaluations will be completed in 2000.

RECOMMENDATION

We recommend that DWRPD improve its oversight of the non-community drinking water program by implementing existing program monitoring requirements.

AGENCY PRELIMINARY RESPONSE

DEQ agrees with the recommendation and will implement the existing program to evaluate and monitor LHDs annually.

The audit information presented is based entirely upon 1998 and 1999 performance. The required evaluations were performed at all LHDs in 2000, as a result of filling vacancies that had existed previously.

FINDING

6. Non-Community Water Data Management and Reporting System

DWRPD had not developed an effective method to report activities and results of the non-community drinking water program. As a result, LHDs reported significant problems with the automated data management system and the EPA has criticized DWRPD's lack of effort to develop an effective data reporting system.

Oversight and tracking of approximately 10,800 non-community drinking water supply systems is a complicated, data-intensive process. Each LHD must maintain information on an inventory of transient and non-transient water suppliers, each with varied testing requirements. As a result, a comprehensive, data-based computer system is necessary. Federal regulations require the State to track

monitoring violations and MCL violations and to report all violations to the EPA within 45 days of the end of each quarter.

The data management system in use by DWRPD and LHDs is in need of significant improvements to provide for efficient reporting of existing program requirements as well as additional data monitoring requirements that will be required by the federal drinking water program.

The EPA has advised the State that the limited capability of its non-community water data management system is a major program weakness and has repeatedly encouraged DEQ to complete development of the data management and reporting system for the non-community water system.

LHDs have expressed serious concerns regarding the existing data management system. In our stakeholder survey of LHDs, 17 (49%) of the 35 LHDs responding to survey questions reported that DEQ did not provide sufficient data collection and transfer systems. Comments from LHDs indicated ongoing problems with implementation, undependable upgrades, unreliability since its development eight years ago, maintenance of duplicative manual records to help ensure accuracy of data, and frequent loss of data during data downloads and system updates.

The absence of a user-friendly data management and reporting system results in both DEQ staff and LHD staff spending a significant portion of their time attempting to resolve system problems. This time could be available for enhanced oversight of water suppliers.

We reported on the need for improvements to the data management system in our prior audit report. Since that audit was completed, DWRPD was transferred from the Department of Public Health to the Department of Environmental Quality. The Department of Public Health responded that it would continue to work with information technology systems staff to complete the data management and reporting system. This system has not been sufficiently improved to provide LHDs with an effective method to report activities and results of the non-community drinking water program.

RECOMMENDATION

We recommend that DWRPD develop an effective method to report activities and results of the non-community drinking water program.

AGENCY PRELIMINARY RESPONSE

DEQ agrees with the recommendation and the need for an updated and improved non-community data management system. DEQ informed us that work has begun in fiscal year 2000-01.

DWRPD data management needs are extensive, and resources are always limited. Although work was needed on the data management system in the past, DEQ informed us that it had several other higher priorities that consumed its available resources.

For example, year 2000 preparedness was mandated by the State to be the top priority and that required evaluation of every DWRPD data system in operation. Other higher priority needs include public demands for Internet accessible information and investment in laboratory-related data management, including billing for analytical fees.

Improving the data management system will not be accomplished easily or quickly because of the complexity of the system and the need to link the 43 LHDs that have a variety of data systems and equipment.

FINDING

7. Comprehensive Written Policies and Procedures

DWRPD should formally adopt its written policies and procedures manual for the community and non-community drinking water programs.

Comprehensive written policies and procedures help communicate management's intent and help ensure consistent and equitable oversight and administration of the program by DEQ staff and contracted LHDs. Although DWRPD has established a policy manual for the non-community drinking water program and several resource documents and manuals that are used in the community drinking water program, these manuals and guidance documents have not been formally adopted by the DWRPD.

Our review of the implementation of the community and non-community drinking water programs noted:

a. DEQ has decentralized the community drinking water program. Employees are assigned to 8 field locations throughout the State. As a result, 8 field managers are making independent decisions on how to implement the community drinking water program. Implementation of this large program without the benefit of comprehensive policies and procedures has led to inconsistent instructions to drinking water supply systems regarding contents of consumer confidence reports, failure of local engineers to maintain comprehensive water plant information, and lack of documentation of water testing required by federal and State drinking water laws and rules.

b. DEQ has contracted with 43 LHDs to administer the non-community drinking water program. Failure to clearly communicate program requirements could result in inconsistent implementation and inconsistent enforcement for violations of the federal and State Safe Drinking Water Acts by non-community drinking water supply systems.

Because of the highly technical nature of testing drinking water, the decentralization of the community drinking water program, and the implementation of the non-community drinking water program by 43 LHDs, it is critical that DWRPD formally adopt its written policies and procedures manual to provide for the consistent implementation of federal and State laws, rules, policies, and procedures relating to the community and non-community drinking water programs. A lack of written policies and procedures can impact the effectiveness and efficiency of program operations and hinder the consistency of program practices between the field offices and the central office.

We identified two instances that illustrate examples of informal DEQ policies and procedures resulting in significant variance in implementing the Public Drinking Water Supply Program:

(a) The non-community drinking water program requires that LHDs oversee water suppliers who operate on a seasonal basis. When a well has been closed down and depressurized at the end of the season, informal policy requires two clean coliform tests within 24 hours before the water supply can be used. However, our review disclosed that LHDs were not aware of this requirement

and routinely did not implement it, and our discussions with four DWRPD staff regarding this requirement resulted in different answers.

(b) Federal regulations do not allow LHDs to accept coliform water tests that have not been received by a laboratory within 30 hours. For example, as noted in Finding 4, we determined that 8 of the 11 LHDs routinely accepted test results for coliform water samples received by the State laboratory 30 hours or more after the samples were taken. EPA rules state that either late samples must be considered invalid and another sample must be drawn or the water supplier must be charged with a monitoring violation. However, in our discussions with four non-community DWRPD staff regarding this requirement we received different answers ranging from sample rejection to unconditional acceptance.

The lack of formally adopted written policies and procedures contributes to differing interpretations of State and federal program requirements. Also, formally adopted written procedures are valuable in training new employees and serve as a guide for better administration and control over operations.

RECOMMENDATION

We recommend that DWRPD formally adopt its written policies and procedures manual for the community and non-community drinking water programs.

AGENCY PRELIMINARY RESPONSE

DEQ agrees with the recommendation and will initiate review and formal adoption of written policies and procedures for the drinking water programs.

FINDING

8. Continuous Quality Improvement (CQI) Process

DWRPD had not established a comprehensive CQI process to evaluate and improve the effectiveness of the Public Drinking Water Supply Program. This limited DWRPD's ability to evaluate the overall effectiveness of the Program.

DWRPD's mission is to reduce exposure to the environmental hazards which have had an adverse effect on the environment and the health and well-being of the public.

The Legislature and the Governor have required in various appropriations acts and in Executive Directive No. 1996-01 that State programs ensure excellence and continuous improvement in the quality of State government services. DWRPD can best evaluate program effectiveness by using a CQI process. Such a process should include: quantifiable performance indicators* for measuring outputs* and outcomes*; performance standards* that describe the desired levels of outputs and outcomes based on management expectations, peer group performance, and/or historical data; a management information system to gather accurate output and outcome data; a comparison of results to management; and proposals of program changes to improve effectiveness.

DWRPD has informed us that it believes that it has implemented this process through the employee evaluation process. The evaluation process establishes program objectives based on general department targets, means, and measurements. DWRPD then tracks program information that pertains to the objectives. DWRPD uses this information in measuring the employees' ability to meet the stated objectives. Examples of performance indicators that DWRPD used to evaluate its employees included:

a. Percent of Freedom of Information Act (FOIA) requests and log letter responses with response within the required time (output).

b. Number of district offices visited (output).

c. Percentage compliance with the federal and State Safe Drinking Water Acts at mobile home parks and non-community public water supplies (outcome).

d. Percentage of inspections completed as mandated by law, rule, or policy (output).

e. Percentage of facilities in noncompliance that received an appropriate follow-up action (output).

f. Number of enforcement actions (output) and the percentage of cases successfully resolved (outcome).

* *See glossary at end of report for definition.*

DWRPD management gathered statistical information on certain broad performance indicators, such as the number of inspections completed annually and the number of FOIA requests addressed within mandated time frames. However, these statistics are of limited usefulness in evaluating whether the Public Drinking Water Supply Program was effective in determining whether water suppliers consistently produced clean and safe drinking water. Further, the measurement data is collected and stored in various employees' confidential personnel files. It is not accumulated and reported on in a comprehensive program format. Thus, comprehensive information is not available to evaluate and improve the effectiveness of the program.

RECOMMENDATION

We recommend that DWRPD establish a comprehensive CQI process to evaluate and improve the effectiveness of the Public Drinking Water Supply Program.

AGENCY PRELIMINARY RESPONSE

DEQ disagrees with this recommendation.

DEQ has a comprehensive strategic planning process that incorporates the concepts of CQI. DEQ establishes departmentwide targets annually and then cascades the targets throughout the organization. The final level of rollout results in the development of performance objectives for individual employees.

By design, DEQ has linked the strategic planning system with the employee performance evaluation system. Although linked, the two systems are distinct.

Two of the DEQ strategic plan targets involve promoting efficient program operations and identifying systems or processes for modification or reengineering. Each year, different systems or processes are identified in each division as part of the strategic planning process. Performance factors are then developed for the division chief that identify the systems or processes to be modified or reengineered during that year. This linkage of the strategic planning system and performance evaluation ensures that planning and accountability for CQI efforts exist.

The strategic planning system also allowed DWRPD to identify the non-community water supply program as a program needing increased attention prior to this audit.

Through the planning process, DWRPD established the non-community program as a target area for increased effort to improve compliance rates.

Measurement data used in the DEQ strategic planning system is not limited to data collected and stored in employee confidential files. The data collected is far more extensive than the examples cited in the finding. Additionally, the data is compiled at all management levels and used in program decision making. Much of the information is also reported to and used by both DWRPD and DEQ management to evaluate and improve the effectiveness of programs.

FINDING

9. Recovery of Costs Related to American Water Works Association (AWWA) Operator Training Classes

DEQ should enter into a contractual agreement with AWWA that addresses the disposition of training program revenue.

DEQ and AWWA offer continuing education classes to operators of drinking water plants. DEQ employees routinely teach classes and DEQ contributes significant staffing and financial resources to operate this training program. AWWA collects all fees for these training programs and has not reimbursed DEQ for costs for staff time to prepare for or teach classes, for postage and printing costs of the training catalogue, and for related staff time to process applications for these training classes.

DEQ has not entered into a contractual agreement outlining duties and responsibilities of the respective parties and has not attempted to recover its costs of operating this training program. AWWA received approximately $66,000 and $79,000 in excess of its direct expenditures for operating this training program in 1997 and 1998, respectively. This excess revenue is partly a result of DEQ providing instructors and other services at no charge to AWWA.

DEQ cosponsors two types of training events with AWWA:

a. DEQ provides substantial involvement by providing instructors.

b. DEQ cosponsors certain events that are primarily staffed by AWWA to recognize that the course qualifies for continuing education credit. DEQ estimated that, for the fiscal year ended September 30, 1998, training courses with significant DEQ involvement generated approximately $20,000 of the $79,000 excess revenue noted above.

DEQ and AWWA have operated this program on a cooperative basis for years without any consideration that the State should recover its program costs.

Recovery of the cost of staff time used on training programs could provide funding to improve monitoring for compliance with significant program requirements.

RECOMMENDATION

We recommend that DEQ enter into a contractual agreement with AWWA that addresses the disposition of training program revenue.

AGENCY PRELIMINARY RESPONSE

DEQ agrees with the recommendation and will pursue a formal arrangement with AWWA that addresses the disposition of training program revenue.

SUPPLEMENTAL INFORMATION

Description of Surveys

We developed two surveys (Exhibits A and B) requesting feedback from various individuals related to their satisfaction with the focus and effectiveness of the Department of Environmental Quality's (DEQ's) Public Drinking Water Supply Program activities:

1. Local Health Departments (Exhibit A)

   We mailed surveys to 46 local health departments in Michigan. We received a total of 37 responses, which are summarized in Exhibit A.

   A review of the responses indicated that a majority of the respondents (64%) did not feel that the current level of funding was sufficient to operate the Program, and nearly half of the respondents (48%) felt that DEQ did not provide sufficient data collection and transfer systems.

2. Telephone Survey of Parties Interested in the Program (Exhibit B)

   We contacted 32 environmental groups, governmental organizations, and other interested parties to determine whether individuals with some knowledge of public drinking water issues were satisfied with the Drinking Water and Radiological Protection Division's (DWRPD's) administration and implementation of the Public Drinking Water Supply Program. We received responses from 8 organizations, which are summarized in Exhibit B.

   A review of responses from organizations directly involved in the drinking water program indicated that these groups had an excellent working relationship with DWRPD. Survey respondents reported that they overwhelmingly supported DWRPD's efforts to implement an effective program to ensure the quality of drinking water provided to the public.

EXHIBIT A

PUBLIC DRINKING WATER SUPPLY PROGRAM
Department of Environmental Quality (DEQ)
Local Health Departments (LHDs)
Summary of Survey Responses

Surveys distributed	46
Number of responses (N=)	37
Response rate	80%

1. DEQ provides appropriate non-community drinking water program (NCDWP) training to our staff. (N=34)

Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
5	25	3	1	0
15%	74%	9%	3%	

2. DEQ is knowledgeable and able to respond to our NCDWP technical assistance questions. (N=35)

Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
10	20	5	0	0
29%	57%	14%		

3. The current level of funding from all sources is sufficient to ensure that our NCDWP operates as intended. (N=30)

Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
0	4	7	11	8
	13%	23%	37%	27%

4. DEQ does a good job of communicating NCDWP requirements and related information to the LHDs. (N= 35)

Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
6	22	3	4	0
17%	63%	9%	11%	

5. DEQ provides our LHD with sufficient data collection and transfer systems. (N=35)

Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
1	10	7	13	4
3%	29%	20%	37%	11%

6. DEQ provides our LHD with quality information regarding program changes. (N=34)

Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
6	21	5	2	0
18%	62%	15%	8%	

7. DEQ provides us with timely program information. (N = 34)

Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
5	18	6	4	1
15%	53%	18%	12%	3%

8. The local NCDWP provides reasonable assurance that our drinking water supplies are safe. (N = 34)

Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
8	22	3	0	1
24%	65%	9%		3%

9. When was the most recent NCDWP training offered by DEQ? (N= 34)

Within the last 90 days	More than 90 but less than 180 days ago	More than 180 but less than 360 days ago	More than a year ago	I do not know
9	11	11	0	3
26%	32%	32%		9%

10. Did your staff participate in the most recent training offered by DEQ? (N = 31)

Yes	No
27	4
87%	13%

11. Does your LHD have a drinking water consumer complaint process? (N= 34)

Yes	No
31	3
91%	9%

EXHIBIT B

PUBLIC DRINKING WATER SUPPLY PROGRAM
Department of Environmental Quality (DEQ)
Telephone Survey of Parties Interested in the Program
Summary of Survey Responses

In an effort to determine various stakeholders' views regarding DEQ's administration of the Public Drinking Water Supply Program, we contacted environmental groups, governmental organizations, and other interested parties. We contacted 32 environmental and water-related interest groups and organizations by mail and followed up with a telephone call to discuss issues relating to the Public Drinking Water Supply Program.

Eight (25%) of the 32 organizations that we contacted responded to our request for a telephone interview. Respondents included 2 environmental advocacy groups, 2 agencies that represent local governmental units, and 4 water-related interest groups. A summary of stakeholder concerns follows.

Several respondents informed us that DEQ and Drinking Water and Radiological Protection Division (DWRPD) staff are very knowledgeable and have operated in a professional manner to implement the Public Drinking Water Supply Program. These respondents also reported that DWRPD staff have been very supportive in implementing the community and non-community drinking water programs. These respondents reported that they appreciated DWRPD's efforts to obtain voluntary compliance and to downplay the use of strong enforcement actions.

Two respondents discussed concerns which are currently beyond the scope of authority of the federal and State Safe Drinking Water Acts. For example, these respondents voiced concerns relating to DEQ's reluctance to monitor for non-point source pollution caused by fertilizer and pesticide run-off during periods of high use and DEQ's reluctance to share information on groundwater contamination between divisions.

The respondents also voiced concerns regarding the lack of effective enforcement actions against water suppliers who were not in compliance with minimum program requirements as outlined in the federal and State Safe Drinking Water Acts, rules, policies, and procedures; the failure of DEQ to require water suppliers to test for contaminants and the failure to report monitoring violations and MCL violations on the

federal reporting system (based on findings of a federal audit of the drinking water program); and the inconsistency in application of DEQ policies and procedures between district offices (e.g., the respondents explained that DEQ's regional drinking water engineers gave conflicting instructions to community water suppliers on how to report information in the first consumer confidence reports).

The overwhelming response to our request for information indicated that these stakeholder groups had an excellent working relationship with DWRPD. Survey respondents reported that they overwhelmingly supported DWRPD's efforts to implement an effective program to ensure the quality of drinking water provided to the public.

Glossary of Acronyms and Terms

AWWA	American Water Works Association.
community drinking water supply system	A public water system that provides year-round service to not fewer than 15 service connections or that regularly provides year-round service to not fewer than 25 residents. For example, a community drinking water supply system can range in size from a small apartment complex (15 or more living units) to a large municipal water system serving in excess of 4 million individuals.
contaminant	A physical, chemical, biological, or radiological substance or matter in water.
DEQ	Department of Environmental Quality.
DWRPD	Drinking Water and Radiological Protection Division.
effectiveness	Program success in achieving mission and goals.
efficiency	Achieving the most outputs and outcomes practical for the amount of resources applied or minimizing the amount of resources required to attain a certain level of outputs or outcomes.
EPA	United States Environmental Protection Agency.
FOIA	Freedom of Information Act.
GWSS	Ground Water Supply Section.
LHDs	local health departments.

material condition — A serious reportable condition which could impair the ability of management to operate a program in an effective and efficient manner and/or could adversely affect the opinion of an interested person concerning the effectiveness and efficiency of the program.

maximum contaminant level (MCL) — The highest level of a contaminant that the EPA allows in drinking water. MCLs ensure that drinking water does not pose either a short-term or a long-term health risk. The EPA sets MCLs at levels that it believes are economically and technologically feasible.

non-community drinking water supply system — A public water supply that is not a community supply, but that has not less than 15 service connections or that serves not fewer than 25 individuals on an average daily basis for not less than 60 days per year. Non-community water supply systems are classified as either non-transient (for example, large employers, schools, and day-care centers) or transient systems (for example, small hotels, motels, and restaurants; medical and dental offices; and convenience stores that sell coffee and fountain soft drinks to the public) based on the population served.

non-transient — A non-community public water supply that serves not fewer than 25 of the same individuals on an average daily basis over 6 months per year. This includes, for example, water supplies in places of employment, schools, and day-care centers.

outcomes — The actual impacts of the program. Outcomes should positively impact the purpose for which the program was established.

outputs — The products or services produced by the program. The program assumes that producing its outputs will result in favorable program outcomes.

performance audit An economy and efficiency audit or a program audit that is designed to provide an independent assessment of the performance of a governmental entity, program, activity, or function to improve public accountability and to facilitate decision making by parties responsible for overseeing or initiating corrective action.

performance indicators Information of a quantitative or qualitative nature indicating program outcomes, outputs, or inputs. Performance indicators are typically used to assess achievement of goals and/or objectives.

performance standards A desired level of output or outcome as identified in statutes, regulations, contracts, management goals, industry practices, peer groups, or historical performance.

primacy The EPA can delegate primary enforcement responsibility for the public water system oversight program to any state that adopts drinking water regulations that are no less stringent than the national primary drinking water regulations; has adopted and is implementing adequate procedures for the enforcement of such state regulations, including conducting monitoring and making inspections as required by the EPA; keeps records and makes reports required by the EPA; has adequate plans for provision of safe drinking water under emergency circumstances; and has adopted authority for administrative penalties to public water systems that have violated federal program requirements.

public drinking water supply A waterworks system that provides water for drinking or household purposes to persons other than the supplier of the water. A public water system does not include either systems that supply water to only one living unit or systems that consist solely of customer site piping.

reportable condition A matter coming to the auditor's attention that, in the auditor's judgment, should be communicated because it represents either an opportunity for improvement or a significant deficiency in management's ability to operate a program in an effective and efficient manner.

sanitary survey An on-site review of the water source, facilities, equipment, operation, and maintenance of a public water system for the purpose of evaluating the adequacy of such source, facilities, equipment, operation, and maintenance for producing and distributing safe drinking water.

set-aside EPA established a low-interest loan financing program with funding provided by the Drinking Water Revolving Loan Fund to qualified water suppliers to finance construction of waterworks system projects. EPA permits the State to designate (or set-aside) funds for specified uses within the Drinking Water Revolving Loan Fund to address areas of concern included in the federal Safe Drinking Water Act.

transient A non-community water supply that does not serve 25 or more individuals on an average daily basis over 6 months per year. For example, this category includes hotels and motels and small restaurants that employ less than 25 employees, medical and dental offices, and convenience stores that sell coffee and fountain soft drinks to the public.

turbidity The cloudy appearance of water caused by the presence of tiny particles. High levels of turbidity may interfere with proper water treatment and monitoring.