



**Michigan Department of Environmental Quality
Water Bureau
Drinking Water and Environmental Health Section**

Owner/Operator Certification For
Noncommunity/Public Water Supply Classification Change

A classification change of the public water supply named below is hereby requested based on the facility usage and criteria documented herein and the applicable definition under the Safe Drinking Water Act, 1976 PA 399, and Administrative Rules (see reverse side).

Facility Name: _____ WSSN: _____

Use of Facility: _____ Active _____ Inactive _____

Facility Operation Period _____ Year-round _____ Seasonal (begin date _____ to end date _____)

Average number of persons (transient) using facility during peak 60 day period. _____

Number of regular consumers/same individuals (nontransient) using facility 6 months or more per year. _____

Number of residents served by water system. _____

Source of usage and operational data: _____

PUBLIC WATER SUPPLY CLASSIFICATION CHANGE REQUEST
(Check appropriate classification for each column)

_____ Transient Noncommunity	TO	_____ Transient Noncommunity
_____ Nontransient Noncommunity		_____ Nontransient Noncommunity
		_____ Type III Public Water Supply
		_____ Private Water Supply
		_____ Well Abandoned

OWNER/OPERATOR'S STATEMENT OF STATUS

I hereby certify this information is true and accurate to the best of my knowledge. If in the future, this facility meets the criteria to be classified as a Noncommunity supply, I will notify the local health department. At that time, a sanitary survey will be scheduled and the annual fee and a water sampling schedule meeting the requirements of Act 399 will be assigned.

Owner/Official Signature: _____ Printed Name: _____

Title: _____ Date: _____

Health Department Representative Signature: _____ Date: _____

Noncommunity Public Water Supply Classification Change Instructions/Definitions

Definitions:

PUBLIC WATER SUPPLY means a water works system which provides water for drinking or household purposes to persons other than the supplier of water except for those water works systems which supply water to only 1 living unit.

COMMUNITY SUPPLY means a public water supply that provides year round service to not less than 15 living units or which regularly provides year-round service to not less than 25 residents.

NONCOMMUNITY SUPPLY means a public water system, which is not a community supply, but which has not less than 15 service connections or which serves not less than 25 persons per day on an average daily basis for not less than 60 days per year.

Use of facility – List facility use. Active facility examples include: restaurants, bar, motel, resort, campground, church, school, roadside park, convenience store, service station, industry, etc. Inactive facility examples include: temporarily/permanently closed, well converted to individual residence use only, well abandoned, etc.

Service Connection – A direct connection from a distribution water main to a living unit or other facility for the purpose of providing water for drinking or household purposes. A service connection is not designed to be an integral part of the network of distribution water mains.

Living unit – A house, apartment, or other domicile occupied or intended to be occupied on a day-to-day basis by an individual family group, or equivalent.

Maximum facility capacity – Use the number of seats, bed spaces, fire marshall building capacity or other applicable unit of measurement.

Transient – A person who has the opportunity to consume water from a water system but who is not a regular or residential consumer. Examples include people stopping by at a highway rest stop, people staying at a hotel or resort, people having a meal at a restaurant, etc.

Nontransient – A person who does not reside at a place served by the water system, but has a regular opportunity to consume water produced by the system. Examples include children at school and employees at their workplace.

Resident – An individual who owns or occupies a living unit.

Source of data – Payroll records, enrollment seating capacity, bedspaces, rental records, receipts, actual count, estimates, etc.

Average # persons served per day – From your records, determine the number of persons served each day during the 60 most busiest days of the year (the 60 days need not be consecutive). Add the 60 service/attendance figures and divide by 60. This result is the average number of persons served per day. Your records must be made available to the Department for confirmation upon request.

Serve or provide – The availability or opportunity for consumption of water by facility users as opposed to a direct physical offering or consumption.

Type III Public Water Supply – Public water systems that do not meet the community or noncommunity definition.

Private Water Supply – Water system that serves only a single-family residence.

Authority – 1976 PA 399, and Administrative Rules. A person who violates this act or the rules promulgated hereunder or an order issued pursuant to this act is guilty of a misdemeanor and shall be punishable by a fine of not more than \$5,000.00 for each day of violation, or by imprisonment for not more than 1 year or both.

SAMPLE COMPLIANCE LETTER - NONTRANSIENT NONCOMMUNITY

Date

Mailing Address

Attn:

RE: Sanitary Survey (SYSTEM NAME)
WSSN

Dear :

A copy of a sanitary survey of your public water system is enclosed. The purpose of this sanitary survey, conducted under the authority of Michigan's Safe Drinking Water Act (1976 PA 399) and Administrative Rules, was to:

1. Determine if the system meets minimum construction and operation standards and require correction where necessary,
2. Determine if the system currently meets applicable state drinking water standards, and
3. Establish water quality monitoring (water sampling) requirements.

The following describes the results of the survey and your water quality monitoring requirements.

Construction/Operation

According to the items surveyed, the water system **is in compliance** with the construction standards established by the Act.

Records currently show < > as being the certified operator of this facility. According to the Act, a public water supply shall notify this office within 7 days when the supply no longer has the services of an operator in charge, or if there is a change in operators.

Water Quality

The results of laboratory analyses of water samples collected as part of the survey are also enclosed. These results indicate that the water was **in compliance** with the appropriate drinking water standards at the time of sampling.

Monitoring (Sampling) Requirements

Unless you are required to sample more frequently as a condition of a license or policy, your system must meet the following sampling schedule. The required parameters are organized below in two groups:

1) SAMPLE FROM DESIGNATED COMMON DRINKING WATER LOCATIONS:

Coliform (bacteriologic)	Frequency:	Quarterly sampling (1 sample every 3 months)
	Next sample due:	(Date) (Recommend 30 days prior to end of monitoring period date.)
	Sampling location:	(Designate sampling location, e.g., break room sink.)

* **EDITORS NOTE:** Monthly monitoring required for systems serving >1000. Quarterly monitoring is required for systems serving 1000 or less, however the frequency may be reduced to no less than once per year based on a favorable sanitary survey and a protected groundwater source. Policy at the Michigan Department of Environmental Quality (MDEQ) is to require nontransients to quarterly monitor at least until a satisfactory history is established.

Lead/copper (inorganic)	Frequency:	(Current frequency, e.g., 1 sample every 3 years)
	Next sample due:	(30 days prior to sample due date)
	Number of samples:	(Number of samples based upon population)
	Sampling location:	(Designate sampling location, e.g., break room sink...) (Sample all fixtures where water is used consumption up to the required number per population. This is a first draw sample, the water must have been at rest a minimum of six hours prior to sampling.)

2) RAW WATER SAMPLE POINTS AT THE PRESSURE TANK BEFORE ANY TREATMENT DEVICE:

Nitrate (inorganic)	Frequency:	1 sample per year.
	Next sample due:	(Date) (Recommend 30 days prior to sample due date.)
	Sampling location:	The <u>raw water sampling tap</u> located at < >.

* **EDITORS NOTE:** The current nitrate monitoring frequency is up to the department to establish. Beginning January 1, 1993, all noncommunity systems must sample annually for nitrate and collect at least one sample within 3 years for nitrite. The nitrite analysis will be incorporated into the automated testing and be done when a nitrate is run at the MDEQ lab. However if another lab is used the supplier must request both nitrate and nitrite analysis.

Complete Metals (inorganic) Frequency: **1 sample every three years.**

NOTE: (Can be reduced to 1 sample every 9 years after 3 rounds below MCL. Select the proper frequency and delete the rest, e.g., 1 sample every 9 years.)

Next sample due: **(Sample due date)**

Sampling location: The raw water sampling tap located at < >

Cyanide (inorganic) Frequency: **1 sample every 3 years.**

NOTE:(Can reduce to 1 sample every 9 after 3 rounds below MCL.)

Next sample due: **(Sample due date)**

Sampling location: The raw water sampling tap located at < >

Volatile Organic Chemicals (VOC)

Frequency: **Once every 6 years.**

Next sample due: **(Sample due date)**

Sampling location: The raw water sampling tap located at < >

Synthetic Organic Chemicals (SOC)

Frequency: **1 sample every 6 years.**

Next sample due: **(Sample due date)**

Sampling location: The raw water sampling tap located at

Sampling Procedures

Sample bottles, instructions and report forms may be obtained from your local health department or by ordering them directly from the MDEQ laboratory (order form and fee schedule enclosed). Payment of MDEQ laboratory fees are the responsibility of the owner/operator of the water supply.

If a laboratory other than the MDEQ laboratory is used for sample analysis, it must be MDEQ certified for the analysis performed, and a copy of the results of the analysis must be provided to this office by the water supply owner/operator.

A Water Supply Serial Number (WSSN), a computer number used for identification purposes, has been assigned to each public water supply in the state and each well at the facility is identified with a number or source code. Your water supply serial number is WSSN < >, source code(s) < >, and must be recorded on each water sample form. Without this number on the sample form, you may not be credited for collecting a required sample.

Inserts have been included for additional information on sampling requirements. Please review this information and maintain it in your records for future reference.

The Act specifies that it is the owner/operator's responsibility to collect and submit the required water samples for analysis and to maintain and operate the water system in a sanitary condition.

If you have questions regarding the sanitary survey or monitoring (sampling) requirements, please contact this office at (517) 335- . Thank you.

Sincerely,

Sanitarian
Local County Health Department

rjh
Enclosures
cc:

* "Editors Notes" are inserted in the sample Sanitary Survey letters in the Noncommunity Public Water Supply Manual for explanation of monitoring requirements to those using the manual. These "Editors Notes" should not be included in the letter sent to the owner/operator of the public water sup

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NONCOMMUNITY**

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1. Determine if the system meets minimum construction and operation standards and require correction where necessary,
2. Determine if the system currently meets applicable state drinking water standards, and
3. Establish water quality monitoring (water sampling) requirements.

The following describes the results of the survey and your water quality monitoring requirements.

Construction/Operation

According to the items surveyed, the water system **is not in compliance** with the construction standards established by the Act. The items of noncompliance and the necessary corrections are as follows:

1. **Violation:**
Corrective Action:

This facility is required to have a certified operator with a < > level certification or higher. Records currently show < > as being the certified operator of this facility. According to the Act, a public water supply shall notify this office within 7 days when the supply no longer has the services of an operator in charge, or if there is a change in operators.

The above corrections must be completed by (DATE). Please notify this office (STAFF NAME) at 517-335- when the corrections are made so a re-inspection can be scheduled.

Water Quality

The results of laboratory analyses of water samples collected as part of the survey are also enclosed. These results indicate that the water was **in compliance** with the appropriate drinking water standards at the time of sampling.

Monitoring (Sampling) Requirements

Unless you are required to sample more frequently as a condition of a license or policy, your system must meet the following sampling schedule. The required parameters are organized below in two groups:

1) SAMPLE FROM DESIGNATED COMMON DRINKING WATER LOCATIONS:

Coliform (bacteriologic) Frequency: **Quarterly sampling (1 sample every 3 months)**
Next sample due: **(Date)** (Recommend 30 days prior to end of monitoring period date.)
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Lead/copper (inorganic) Frequency: **(Current frequency, e.g., 1 sample every 3 years)**
Next sample due: **(30 days prior to sample due date)**
Number of samples: **(Number of samples based upon population)**
Sampling location: **(Designate sampling location, e.g., break room sink...)**
(Sample all fixtures where water is used consumption up to the required number per population. This is a first draw sample, the water must have been at rest a minimum of six hours prior to sampling.)

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Nitrate (inorganic) Frequency: **1 sample per year.**
Next sample due: **(Date)** (Recommend 30 days prior to sample due date.)
Sampling location: The raw water sampling tap located at < >.

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 Next sample due: **(Sample due date)**
 Sampling location: The raw water sampling tap located at < >

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 NOTE: (Can reduce to 1 sample every 9 years after 3 rounds below MCL.)
 Next sample due: **(Sample due date)**
 Sampling location: The raw water sampling tap located at < >

Volatile Organic Chemicals (VOC)
 Frequency: **Once every 6 years.**
 Next sample due: **(Sample due date)**
 Sampling location: The raw water sampling tap located at < >

Synthetic Organic Chemicals (SOC)
 Frequency: **1 sample every 6 years.**
 Next sample due: **(Sample due date)**
 Sampling location: The raw water sampling tap located at

Sampling Procedures

Sample bottles, instructions and report forms may be obtained from your local health department or by ordering them directly from the MDEQ laboratory (order form and fee schedule enclosed). Payment of MDEQ laboratory fees are the responsibility of the owner/ operator of the water supply.

If a laboratory other than the MDEQ laboratory is used for sample analysis, it must be MDEQ certified for the analysis performed, and a copy of the results of the analysis must be provided to this office by the water supply owner/operator.

A Water Supply Serial Number (WSSN), a computer number used for identification purposes, has been assigned to each public water supply in the state and each well at the facility is identified with a number or source code. Your water supply serial number is WSSN < >, source code(s) < >, and must be recorded on each water sample form. Without this number on the sample form, you may not be credited for collecting a

required sample.

Inserts have been included for additional pertinent information on sampling requirements. Please review this information and maintain it in your records for future reference.

The Act specifies that it is the owner/operator's responsibility to collect and submit the required water samples for analysis and to maintain and operate the water system in a sanitary condition.

If you have questions regarding the sanitary survey, the required upgrading, or monitoring (sampling) requirements, please contact me at (517) 335- . Thank you.

Sincerely,

rjh
Enclosures
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Construction/Operation

According to the items surveyed, the water system is in compliance with the construction standards established by the Act.

This facility is required to have a certified operator with a < >level certification or higher. Records currently show (do not show anyone) < > as being the certified operator of this facility. According to Act 399, a public water supply shall notify this office within 7 days when the supply no longer has the services of an operator in charge, or if there is a change in operators. If this operator is no longer working at your facility, please notify this office.

Water Quality

The water quality of Noncommunity Public Water supplies must meet state and federal drinking water standards. Depressurized seasonal systems: *(Seasonal systems that winterize their systems are required to disinfect the distribution system and collect a minimum of two good coliform bacteria sample results prior to putting the system into service. A nitrate sample should also be collected at the beginning of a new season.)* The sampling parameters, frequency and locations are outlined as follows:

Monitoring (Sampling) Requirements

Unless you are required to sample more frequently as a condition of a license or policy, your system must meet the following sampling schedule:

Coliform (bacteriologic) –

Frequency: **Quarterly (1 sample every 3 months)**

Next routine samples due before: **(Date)** (Recommend 30 days before end of Monitoring Period Date)

Sampling locations: **(Name specific sampling location, e.g., break room sink)**

Sample containers: Order unit 30, test code BPTC if using MDEQ laboratory.

Nitrate (inorganic) -

Frequency: **1 sample per year.**

Next sample due before: **(Date)**

Sampling location: The **raw water sampling tap** located at the pressure tank (before any water treatment device)

Sample containers: Order unit 32, test code R if using MDEQ laboratory.

Sampling Procedures

Sample bottles, instructions and report forms may be obtained from your local health department or by ordering them directly from the MDEQ laboratory (order form and fee schedule enclosed). Payment of MDEQ laboratory fees are the responsibility of the owner/ operator of the water supply.

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An insert has been included for additional pertinent information on sampling requirements. We recommend you review this information, and maintain it in your records for future reference.

Act 399 specifies that it is the owner/operator's responsibility to collect and submit the required water samples for analysis and to maintain and operate the water system in a sanitary condition.

If you have questions regarding the sanitary survey, the required upgrading, or monitoring (sampling) requirements, please contact me at (). Thank you.

Sincerely,

Sanitarian, R.S.
Noncommunity Program Coordinator
Environmental Health
Local Health Department
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The above corrections need to be completed by (DATE). Please notify this office (STAFF NAME) at 517-335- when the corrections are made so a re-inspection can be scheduled.

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The water quality of Noncommunity Public Water supplies must meet state and federal drinking water standards. Seasonal depressurized systems: (*Seasonal systems that winterize their systems are required to disinfect the distribution system and collect a minimum of two good coliform bacteria sample results prior to putting the system into service. A nitrate sample should also be collected at the beginning of a new season.*) The sampling parameters, frequency and locations are outlined as follows:

Monitoring (Sampling) Requirements

Unless you are required to sample more frequently as a condition of a license or policy, your system must meet the following sampling schedule:

Coliform (bacteriologic) -

Frequency: **Quarterly (1 sample every 3 months)**

Next routine samples due before: **(Date)** (*30 days before federal deadline is preferred*)

Sampling locations: **(Name specific sampling location, e.g., break room sink)**

Sample containers: Order unit 30, test code BPTC if using MDEQ laboratory.

* **EDITORS NOTE:** *Monthly monitoring required for systems serving >1000.*

Quarterly monitoring is required for systems serving 1000 or less, however the frequency may be reduced to no less than once per year based on a favorable sanitary survey and a protected groundwater source. Systems in significant noncompliance should not receive a reduction in minimum monitoring until compliance is achieved.

Nitrate (inorganic) -

Frequency: 1 sample per year.

Next sample due before: **(Date)**

Sampling location: A raw water sampling tap located as close to the well as possible, and before any water treatment device.

Sample containers: Order unit 32, test code R if using MDEQ laboratory.

* **EDITORS NOTE:** *The current nitrate monitoring frequency is up to the department to establish. Beginning January 1, 1993, all noncommunity systems must sample annually for nitrate and collect at least one sample within 3 years for nitrite. The nitrite analysis will be incorporated into the automated testing and be done when a nitrate is run at the MDEQ lab. However if another lab is used the supplier must request both nitrate and nitrite analysis.*

Sampling Procedures

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STANDARD STATEMENTS FOR SANITARY SURVEYS

The following cross connections were observed during the sanitary survey:

Hose Bibs

There was no back flow protection on the hose bib located _____. Without a backflow prevention device in place, contaminants may be drawn into the water system during periods of negative distribution system pressure, (through an attached hose). Install an atmospheric vacuum breaker on the hose bib.

A submerged water inlet was observed in the toilet tank located _____. This condition may allow contaminated tank water to gain entry to the water distribution system during periods of negative system pressure. Install an approved anti-siphon ball cock assembly in each of the toilet tanks that currently have submerged inlets.

The water supply line to the urinal does not have an approved backflow prevention device on it. As a result, contaminants may backflow into the potable water distribution system during periods of negative pressure. Install an approved atmospheric vacuum breaker or a flush valve/vacuum breaker combination fixture on the water supply line to the urinal.

The mop sink located _____ has a hose attached which terminates in the sink basin and it is not provided with an approved backflow prevention device. During periods of water system negative pressure, contaminated water from the sink basin could be siphoned into the potable water system. Install an atmospheric vacuum breaker on the mop sink hose bib.

Air Gaps

The drain line from the ice machine is routed directly to a floor drain. Under these conditions, contaminants may be drawn from the sewer line into the ice machine under conditions of negative water system pressure. Provide an air gap between the floor drain and the drain line exiting the ice machine. The air gap should be two times the diameter of the source pipe.

Pressure Vacuum Breaker

The potable water supply line serving the irrigation system is not properly protected from backflow. Where this condition exists, contaminants from below grade, un-pressurized irrigation system piping can be drawn into the drinking water supply during periods of water system negative pressure. Install a pressure-type vacuum breaker

which is approved for this application on the water supply line serving the irrigation system.

Hoses used for washing down work areas in the building that were equipped with terminal shut-off valves/ spray nozzles were not properly protected against backflow. Where a hose is maintained under system pressure during normal operation, a "pressure type" vacuum breaker is required. Atmospheric vacuum breakers will NOT function properly in this application because the valve is caused to lock or seat in the "open" position, then when a negative pressure incident does occur, the valve stays open allowing contaminants to backflow into the drinking water system.

The water supply line to the x-ray processor does not have any backflow prevention device on it. Install an approved pressure vacuum breaker on the water supply line.

There is no backflow preventer on the water supply line to the pressure washer. Cleaning agents may be drawn into the potable water system during periods of negative water system pressure. Install an approved pressure type vacuum breaker on the water supply line serving the pressure washer.

RPZ Devices

The make-up water line to the boiler is not equipped with a proper backflow prevention device.

This boiler is operating at pressures above 30 psi, and is classified as a high pressure boiler. Under conditions of negative water system pressure, water from the boiler (which may contain contaminants) may backflow into the drinking water piping if no, or an improper backflow prevention device is in place. An approved RPZ device (reduced pressure zone principle backflow preventer) must be installed. It should be located just upstream from the pressure reducing valve.

The boiler is treated with potentially toxic chemical additives. The make-up water line serving this boiler is not equipped with an approved backflow prevention device. Under conditions of negative water system pressure, these chemical additives may backflow into the drinking water supply. An approved RPZ device (reduced pressure zone principle backflow preventer) must be installed. It should be located just upstream from the pressure reducing valve.

Yard Hydrant

There was an unapproved yard hydrant located_____. This type of "frost-free" hydrant has a weep hole in the riser pipe which allows water from the riser to drain back into the ground when the valve is closed. When the valve is opened,

contaminated water/dirt can be drawn in through this weep hole and contaminate the potable water. If a hydrant is necessary, then install an approved frost proof yard hydrant (list enclosed), or modify the existing hydrant as illustrated, (see enclosed diagrams).

Well Construction and Maintenance

The well casing terminates below grade with a buried well seal. When the well pump is running, contaminants will be drawn into the well through any opening or crack in the well seal resulting in system contamination. The well must be modified so that:

- 1) The casing terminated a minimum of 12 inches above grade.
- 2) A screened vent must be installed on the well casing or well cap.
- 3) If the pump is to be located at the well head, the casing may terminate above grade in a heated well house.
- 4) The water line from the well must be under pressure at all times. For below-frost installations, an approved pitless adapter is required.

The well cap does not seal tightly around the well casing and is not provided with a screened vent. This type of well cap will allow insects to gain entry to the well, often resulting in bacterial contamination. Installation of a properly designed well cap which has a screened vent is highly recommended. A list of approved well caps is enclosed.

The well cap does not seal tightly around the well casing and is not provided with a screened vent. This type of well cap will allow insects to gain entry to the well, often resulting in bacterial contamination. Installation of a properly designed well cap which has a screened vent is **REQUIRED** due to the history of positive Coliform bacteria samples from this well. A list of approved well caps is enclosed.

The well cap was damaged. Because the well casing is no longer sealed, insects may gain entry to the well casing resulting in bacteriologic problems. A new well cap must be installed. The new cap must seal tightly to the casing and be provided with a screened vent. A list of approved well caps is enclosed.

A buried, unprotected suction line between the well casing and the well pump is present. When a water line is buried and under suction, contaminants may be drawn into the water line through any loose joint or crack. The suction line must be protected in one of the following ways:

- 1) Install concentric piping with the space between the inner suction line and the

outer pipe pressurized. A concentric "T" or seal cross may be used at the pump. A pitless adapter designed for accepting concentric pipe must be installed.

- 2) Eliminate the jet pump and the unprotected suction line. Install a submersible pump that utilizes a pressure line between the well casing and the building.

The well casing is not vented. When the pump runs, the entire casing length is put under negative pressure. This may result in drawing contaminants into the well through loose casing joints, the well seal or the electrical conduit. A well cap with a screened vent or a screened casing vent must be installed to equalize the pressure inside the casing.

The well head terminates below grade, in a pit which may be subject to flooding. If surface water collects in the pit and overtops the well seal, then the well will become contaminated. A pitless adapter must be installed and the well must terminate a minimum of 12 inches above grade. The pit must be abandoned, (filled in). If a pressure tank was also located in the pit, it should be relocated to the building.

There is no raw water sampling tap provided. This tap is used for repeat sampling for Coliform bacteria as a means to determine if unsafe results are coming from the well or the distribution system. It is also used as the primary sampling point for various chemical sampling parameters. Install a raw water sampling tap on the water line just prior to the pressure tank. The sample tap should be located approx. 12" above the floor and be configured as illustrated in the attached diagram.

The well casing is subject to flooding. Contaminants may gain entry to the well if flood waters over top the well vent, thereby contaminating the well with surface water contaminants. Grade the area surrounding the wellhead so that water will flow away from the well casing.

There is a check valve on the discharge line from the submersible pump, near the pressure tank. In the event that the check valve in the well fails, (usually located at the pump), water flowing back down the well will cause a negative pressure. Remove this check valve.

Well Logs

There was no water well drilling record (well log) on file for this well. In order to assess the vulnerability of this water supply, we must be provided with information from the original well drilling contractor. Well drilling contractors are required to submit a well log for any well installed in the state of Michigan after 1966. If a well log is not available, bills for parts and/or maintenance may provide some of this information.

Isolation Distances

The well is ___ feet from the septic system. The standard isolation area required between a well and a contaminant source of this nature is a minimum of 75 feet. The concern for isolation from waste disposal systems of this nature is the potential for bacteriologic (microbial) contamination of the well by near-surface, water carried disease organisms and nitrate/nitrite contamination. Due to this lack of isolation, the sampling frequency for Coliform bacteria may not be reduced.

UST'S

The well is located less than 75 feet from an underground storage tank (UST) containing _____. A UST that contains any type of liquid chemical, is considered a "major" source of contamination. The standard isolation distance required between a Type II well and a major source of contamination is 800 feet. When a tank of this nature is present this close to the well, either the well must be relocated, or the UST must be removed.

The well is located ___ feet from an underground storage tank (UST) containing _____. A UST that contains any type of liquid chemical is considered a "major" source of contamination. The standard isolation distance required between a Type II well and a major source of contamination is 800 feet.

Transient:

You must provide information on the construction and condition of the underground storage tanks to our office within 30 days. This information will help us to determine if it will be necessary to monitor for volatile organic chemicals (VOC's).

Nontransient:

A volatile organic chemical (VOC) sample must be collected to determine if the well has been impacted by leakage of chemicals from the UST. In the event that VOC's are detected in the initial sample, quarterly sampling will be required. Within 30 days you must provide documentation concerning the construction and condition of the UST's and any information on leak detection systems that are in place.

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Permit Application

DATE

Address

ATTN:---

Dear Mr./Ms. -----:

Enclosed is an application to install a Type II public water supply well. Please read all instructions (note the example on the back) and complete the white portions of the application. A drawing or site plan of the property and the proposed well site must be provided. When the application is completed, please sign it and return all copies to this office for review.

In order to save time in review, include the following information on your site plan:

- 1) Show the location of well and distribution system in relationship to property lines and all structures on the property. Please indicate any buildings on the property or on adjacent properties that will be served by the well.
- 2) Show the distance from the proposed well site to any potential sources of contamination such as buried storm drains, sanitary and storm sewer lines, septic tanks, drainfields, drywells, grease traps, abandoned wells, surface water, livestock holding areas, etc.
- 3) Show the distance to all major sources of contamination on the property or on adjacent properties such as: landfills, large scale chemical storage, waste lagoons, known groundwater contamination sites, buried fuel tanks, above ground fuel tanks, etc.
- 4) Provide information on the anticipated peak demand (in gallons per minute) that the well must produce to meet your needs.
- 5) Include a list of all water consuming fixtures in the facility.
- 6) Include an estimate of the number of persons that will be served by the well.
- 7) Include the estimated number of regular users of the water; i.e., employees that would be at the facility for 4 hours a day, 4 days a week and 6 months of the year.

When the application has been reviewed and a site visit has been made to confirm site acceptability, this office will issue the well construction permit. When the construction is complete, but before the public uses the well, contact our office for a final inspection and the collection of water samples. A favorable inspection, receipt of the water well record (well log), and satisfactory water sample results will allow final approval and use of the water supply. The collection, analysis, and reporting of water samples may take several weeks so notify this office for final inspection well in advance of when you plan to put the well into service.

If you have any questions, please contact ----- County Health Department at **Phone number**).

Sincerely,

Sanitarian, R.S.

----- County Health Department

cc: **Well Drilling Contractor**



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER DIVISION
APPLICATION AND PERMIT TO INSTALL WATER SUPPLY FACILITIES

For DEQ/Health Department Use

Permit To:

Completion is required under the authority of Part 13 Act 1976 PA 399
Failure to comply will void this application

- Construct a Public Well Under Act 399, P.A. 1976 or Sanitary Code
Alter a Public Water Supply Under Act 399, P.A. 1976 or Sanitary Code

Well Permit Number
Corresponding Sewage Permit No.
WSSN

ESTABLISHMENT NAME ADDRESS CITY ZIP
COUNTY TOWNSHIP TOWN N/S RANGE E/W SECTION FRACTION 1/4 1/4 1/4
OWNER/MANAGER ADDRESS CITY ZIP
BUSINESS TELEPHONE OWNERSHIP: GOVERNMENT PRIVATE AVERAGE NO. OF PERSONS SERVED PER DAY
NO. OF SERVICE CONNECTIONS PREMISE TYPE LICENSE TYPE
IF SEASONAL: FROM TO WELL CONTRACTOR TELEPHONE PUMP INSTALLER
APPLICANT'S NAME ADDRESS CITY ZIP

I hereby apply for this permit and have authorization to do so. I understand this is a construction permit only, and that the well is not to be put into service until final approval has been granted. I further state the information given is accurate and complete.

Applicant's Signature Date Phone

(FOR DEQ/HEALTH DEPARTMENT USE ONLY - DO NOT WRITE IN SHADED AREAS)

WELL SITE EVALUATION INFORMATION DATE OF EVALUATION BY
CLASSIFICATION: TYPE IIA TYPE IIB
STANDARD ISOLATION AREA FT. (IF ISOLATION DISTANCES ARE LESS THAN ESTABLISHED
MAJOR ISOLATION AREA FT. MINIMUM STANDARDS, COMPLETE DEVIATIONS SECTION)
PERMIT CONDITIONS/DEVIATIONS
WELL CONSTRUCTION PERMIT: APPROVAL/DENIAL
DO NOT PROCEED WITH CONSTRUCTION WITHOUT SIGNATURE FROM DEQ/HEALTH DEPARTMENT REPRESENTATIVE
By Date
REQUIRED MINIMUM CAPACITY GPM

FINAL INSPECTION DATE BY
WELL: CASING TERMINATION APPROVED: YES NO
WELL LOCATION APPROVED: YES NO
WELL CONSTRUCTION SATISFACTORY: YES NO
VENTED: YES NO
BURIED SUCTION LINE PROTECTED: YES NO
PUMP: SHALLOW WELL JET DEEP WELL JET SUBMERSIBLE
HAND PUMP TURBINE OTHER
PIPING MATERIALS: MATERIAL PRESSURE RATING PSI ASTM#
STORAGE: TYPE LOCATION CAPACITY GALLONS OPERATING RANGE
TREATMENT: TYPE (IF ANY) LOCATION
TEST RESULTS: BACTERIOLOGIC (1st) DATE COLLECTED
BACTERIOLOGIC (2nd) DATE COLLECTED
NITRATE DATE COLLECTED MG/L
FUTURE BACTI SAMPLING: BY OWNER: L.H.D. OTHER
FREQUENCY: QUARTERLY ANNUALLY OTHER
WELL RECORD: DATE RECEIVED
WATER SUPPLY APPROVED: YES NO BY
DATE
COMMENTS:

SCALE DRAWING: Make a SCALE DRAWING, including dimensions, in the space provided below. Show well location in respect to all possible sources of contamination, including adjacent properties, sewer lines, septic systems, and major sources of contamination. This drawing must be approved by the local health department before installation of the well. Please indicate north.
After well construction is completed, a water well record must be submitted, and the DEQ/health department notified for final inspection and sampling of the well.

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JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



STEVEN E. CHESTER
DIRECTOR

August, 2007

Dear Applicant:

SUBJECT: Permit Application for New Nontransient Noncommunity Water System

Effective October 1, 1999, a new nontransient noncommunity public water system cannot start construction until the owner has satisfactorily demonstrated the facility has the capacity to comply with the provisions of the Safe Drinking Water Act (SDWA), 1976 PA 399, as amended. Capacity is defined as the overall capability of a water supply to reliably produce and deliver water meeting all national primary drinking water regulations in effect, or likely to be in effect, on the date of commencement of operation.

Capacity encompasses the technical, managerial, and financial capabilities that enable the water system to plan, achieve, and maintain compliance with drinking water standards of the SDWA. **The following forms are enclosed and required to be completed and submitted with the well permit application to obtain approval to construct the water system:**

- “ **Technical Capacity** – will be assessed through the well permit application, construction, and final inspection process. The completed permit application must be approved prior to commencing construction of the water system. Inspection and final approval is required prior to supplying water to the public.
- “ **Managerial Capacity** – will be assessed upon review and approval of the managerial plan that includes the designation of a certified operator and completion of the enclosed contingency plan.
- “ **Financial Capacity** – will be assessed upon review and approval of a financial plan demonstrating the supply is aware of and capable of meeting financial obligations associated with operating a public water supply. A summary of sampling requirements and the Department of Environmental Quality (DEQ) Laboratory fee schedule for analysis is enclosed for purposes of estimating costs.

Please contact the permitting agency if you have question about what is necessary to complete the permit application and forms. Thank you.

Enclosures

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Nontransient Noncommunity Water Supply Capacity Development Application

Under Michigan Rule, 325.1004, Sec. 4. (2) (4), 325.1008, Sec. 8 and 325.1015, Sec 15. (2), this form must accompany construction plans submitted for all **new nontransient noncommunity public water supplies**, and existing supplies applying to become a nontransient water supply.

Technical Plan:

Permit to Construct

ÿ **New nontransient noncommunity public water supplies** shall complete an “Application and Permit to Install Water Supply Facilities” from the DEQ or an authorized local health department representative. The completed application must include plans and specifications for the new waterworks system. The application form **EQP 2024 (10/97)**, or DEQ approved permit application, is attached.

ÿ **Existing water supply** that will become a nontransient water supply shall provide plans and specifications of the waterworks system. The information must include a site plan showing the existing well location isolation from buildings, property boundaries, potential sources of contamination, etc., and all available information regarding the well, e.g., *Water Well and Pump Record*. A sanitary survey must be completed by the local health department to assess the status of compliance of the water supply prior to approval for use as a nontransient noncommunity water supply.

Managerial Plan:

Certified Operator

For all nontransient noncommunity water supplies, the owner is required to identify an operator in responsible charge of the water supply. Operator certification and nine hours of continuing education training every three years will be required. Identify the person who is or will be the certified operator for the identified nontransient water supply.

Operator Name:	
Operator ID Number:	
Street Address:	
City, State, Zip Code	
Telephone:	
Water Supply Serial Number(WSSN):	

Contingency Plan

A contingency plan for an appropriate response to temporary loss of normal water service is required as part of the managerial capacity assessment. The attached contingency plan form is to be completed and submitted with the rest of this application.

Financial Plan:

The attached Financial Plan Worksheet is to help identify relevant costs and sources of information. Please transfer the estimate totals to this form and retain the worksheet.

Provide cost analysis/estimate for the following:

Estimated cost for construction of new nontransient noncommunity water supply system, e.g., well, pressure tank, treatment, permit fees. _____

Is connection to a community water supply system available? Yes No

If connection to a community water is available, provide the cost for connecting to the community system. \$ _____

Annual operator certification and training. \$ _____

Annual operation and maintenance for utilities, treatment chemicals, DEQ annual fee, etc. \$ _____

Annual sample collection and laboratory analysis. \$ _____

Emergency repairs and contingency plan funds. \$ _____

By signing this document, I certify that I have assessed the actual and potential costs and responsibilities of operating the water supply, and have the ability to acquire and manage sufficient resources to maintain the technical, managerial and financial capacity of the water system as it relates to the requirements of the Safe Drinking Water Act, and I am the supply owner, manager, chief financial officer, or chief executive officer.

Signature: _____ Name (print): _____

Title: _____ Date: _____

For office use	Reviewer and date of review
Technical Capacity Plan	
Financial Capacity Plan	
Managerial Capacity Plan	

FINANCIAL PLAN WORKSHEET FOR ESTIMATING COSTS FOR NEW NONTRANSIENT NONCOMMUNITY WATER SUPPLIES

This worksheet is to provide general information and ranges of cost for completing the Financial Plan portion of a Capacity Assessment Application. The intent is for the water supply owner to identify costs of operating a public water system including contingencies and plan accordingly. All costs may not be applicable to your water supply.

Construction Costs Estimates:

Well Construction/Pump Installation	\$	
Storage Tank(s)	\$	
Treatment Equipment	\$	
Permit Fees	\$	
TOTAL	\$	

Information sources: water well drilling contractors, water well pump installers, suppliers, water treatment firms, local health department fee schedule, consulting firms.

Cost of Connection to Municipal Water (if available):

Tap fee	\$	
Hook up (excavation, materials, labor, etc.)	\$	
Usage (estimated annual water bills)	\$	
Information Sources: (municipality, contractors, consultants)	\$	
TOTAL	\$	

Operator Certification and Training:

Certification Costs:	\$	
Filing, examination/renewal*	\$	
Wages (3 hrs per week to full time depending on system)	\$	
Outsource Operator	\$	
Training Costs: Continuing Education (minimum of 3 hrs/yr)*	\$	
TOTAL	\$	

Information sources: employee salary structures, travel costs, certified operators for hire, consulting firms
*DEQ currently does not charge for the examination process or training seminars but may do so in the future.

FINANCIAL PLAN WORKSHEET (cont.)

Annual Water Supply Operation & Maintenance:

Electricity	\$ _____
Treatment Chemicals/Treatment Equipment/Service	\$ _____
Backflow Preventor Testing	\$ _____
DEQ Annual Water Supply Fee	\$ _____
Other	\$ _____
TOTAL	\$ _____

Information sources: utilities, chemical/equipment suppliers, plumbing contractors, consulting firms.

Water Sample Collection and Analysis:

Annualized costs for analysis based on routine sampling for all parameters with waivers and DEQ laboratory fees (subject to change).

Total Coliform	4 @ \$16	64.00	\$ _____
Nitrate	1 @ \$18	18.00	\$ _____
Arsenic	1 @ \$18 / 3 yr	6.00	\$ _____
Metals	1 @ \$102 / 3 yr freq	34.00	\$ _____
Cyanide	1 @ \$25 / 3yr freq	8.00	\$ _____
VOC	1 @ \$100 / 6 yr	17.00	\$ _____
SOC	3 totaling \$365 / 6 yr freq	61.00	\$ _____
Lead Copper	5 @ \$26 / 3 yr freq	<u>43.00</u> \$251.00*	\$ _____
Sample Collection/Delivery Costs			
TOTAL			\$ _____

*Your cost may differ per year due to size of system, sampling requirements, or water quality issues.
Information sources: certified drinking water laboratories, consulting firms, DEQ monitoring requirements.

Emergency Repairs/Contingency Funds:

Disinfection/Flushing	\$ _____
Bottled Water (cost for 2 week supply)	\$ _____
Pump Replacement	\$ _____
Other	\$ _____
TOTAL	\$ _____

DRINKING WATER CONTINGENCY PLAN
Noncommunity Public Water Supplies

Water Supply Name _____

Water Supply Serial Number (WSSN) _____

Contingency Plan Purpose: *In the event of an emergency pertaining to the drinking water supply, it is necessary to act promptly and effectively to protect public health and welfare. In the context of this plan, emergencies could include complete loss of water pressure, contamination of water supply, and threats or observed vandalism to water supply. Complete loss of water normally would require closure of the facility. Threats or contamination with unknown substances may also warrant such action. However, under certain situations where water is flowing but has been determined unsafe to drink by health authorities, it may be possible to operate the facility with approval of the appropriate local or state agencies. If approved, operation for an interim period is dependent on providing an approved source of water for consumption and notification to the users to not consume the piped water in the facility. This fact sheet is intended to outline procedures and contacts to address such emergencies. If an emergency occurs, immediately contact your local health department for further instructions.*

Facility Personnel: List person(s) responsible for facility (owner or designee) and person(s) in routine charge of water system operation and treatment (certified operator) title and telephone number.

<u>Name</u>	<u>Title</u>	<u>Phone</u>
_____	_____	_____
_____	_____	_____

Other Contacts: List local and state contacts for notification of emergencies involving drinking water.

Local Health Department contact: _____ Telephone: _____

Department of Environmental Quality - Water Bureau - Lansing,
Telephone 517-373-1370:

DEQ District Office: _____ Name: _____ Tel: _____

Certified laboratory: List local laboratory(s) and telephone number used by your facility for analysis of total coliform bacteria.

Contractors: List qualified contractors who may be used during emergencies.

Water Well Drilling Contractor: _____

Plumber: _____

Other: _____

5. **Alternate Water Source:** List options for providing safe source of drinking water on a temporary basis:

Purchase bottled water at: _____ Quantity: _____

Method of dispensing water to individuals in sanitary manner: _____

Other Alternate approved source: _____

6 **Other consumptive water uses or equipment that may be directly connected to the potable water supply.** Indicate if any of the listed water uses are in the facility and thus need to be addressed.

Drinking Fountains to shut off: Yes / No

Ice machines (discard contents): Yes / No

Post mix soft drinks to disconnect: Yes / No

A coffee machine, tea, juices, soups, vending, etc.: Yes / No

Other: _____

Note: If the water supply loses pressure or cannot be used due to unsafe conditions, any equipment used for food service or consumption which is connected to the water supply will need to be disinfected per the manufacturer's specifications.

Public Notification: Consumers are to be advised of a problem with the water and availability of an alternate source of water for consumption.

Ø Post public notice at sinks and any other potential drinking water outlets that can not be shut off. List locations to be posted:

Ø Retain copy of signed and dated public notice. List any other means to notify public.

(Schools/Child Care Centers/Children's Camps are recommended to provide notice to parents.)

Consult your local health department for the required public notification language and format. **YOU MUST HAVE APPROVAL FROM YOUR LOCAL HEALTH DEPARTMENT PRIOR TO RESUMING USE OF YOUR WATER SUPPLY FOR CONSUMPTION.**

Total Coliform Monitoring Transient and Nontransient Noncommunity Water Supplies Routine Sampling - One Annual Cycle

Systems that Serve >1000 persons / day (monthly) ¹													Analytical Cost ³ \$16
Systems that Serve <1001 (quarterly)													
Reduced (annual) ²													

PLEASE SAMPLE WELL IN ADVANCE OF END OF MONITORING PERIOD TO AVOID PROBLEMS

1. Two samples per month minimum, more than 2/month required if serving > 2500 persons, consult local health department or the DEQ.
2. Reduction must be in writing by local health department or the DEQ, not applicable to systems serving over 1,000 persons.
3. DEQ Laboratory analytical cost per sample, subject to change. You may use any certified laboratory.

Nitrate Monitoring Transient and Nontransient Noncommunity Water Supplies Routine Sampling - One Annual Cycle

Nitrate (annual)		Analytical Cost ³ \$18
Nitrite (one time)	1 only, no further sampling required in subsequent years unless initial result is greater than 0.5 mg/l	

PLEASE SAMPLE WELL IN ADVANCE OF END OF MONITORING PERIOD TO AVOID PROBLEMS

Additional Chemical Monitoring Nontransient Noncommunity Water Supplies Only (Minimum Requirements)

Analyses	9 Year Monitoring Period			9 Year Monitoring Period			Analytical Cost ⁴	
	3 Year Cycle	3 Year Cycle	3 Year Cycle	3 Year Cycle	3 Year Cycle	3 Year Cycle		
	1993-1995	1996-1998	1999-2001	2002-2004	2005-2007	2008-2010		
VOC ¹							\$100	
SOC ¹							\$365	
Metals ²							\$128	
Cyanide ²							\$25	
Lead & Copper ³	6 mo 	6 mo 	1 yr 	1 yr 				\$26

PLEASE SAMPLE WELL IN ADVANCE OF END OF MONITORING PERIOD TO AVOID PROBLEMS

1. Volatile/Synthetic Organic Chemicals (VOC/SOC) – a waiver based on no detects and low vulnerability allows 1 per 6 year reduction, otherwise, quarterly sampling and additional parameters are required, contact your local health department or the DEQ.
2. Metals and Cyanide – 1 sample every 3 years, then can be reduced to 1 sample every 9 years if below maximum contaminant level.
3. Lead/Copper - Initial samples for consecutive 6th month periods, then can be reduced to annual if below action level, then 1 per 3 years.
4. DEQ Laboratory analytical cost per sample, subject to change. You may use any certified laboratory.

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER BUREAU
FEE SCHEDULE FOR TESTING REQUIRED FOR NONCOMMUNITY WATER SUPPLIES**

MICROBIOLOGY

TEST CODE	FEE	SAMPLE UNIT NUMBER	TEST DESCRIPTION
BPTC	\$16.00	30	DRINKING WATER COLIFORMS (total & E.coli)

INORGANIC CHEMISTRY

TEST CODE	FEE	SAMPLE UNIT NUMBER	TEST DESCRIPTION
R	\$18.00	32	Automated Partial Chemistry (fluoride, chloride, hardness, nitrate, nitrite, sulfate, sodium, iron)
CCN	\$25.00	36 CN	Cyanide (for supplies without continuous chlorination). Sample waived for systems with continuous chlorination

METALS CHEMISTRY

TEST CODE	FEE	SAMPLE UNIT NUMBER	TEST DESCRIPTION
CAS	\$18.00	36ME	Arsenic
CMET2	\$102.00	36ME	Metals (SB,AS,BA,BE,CD,CR,HG,PB,SE,NI,TL)
CCUB	\$26.00	36CC	Lead/Copper for corrosion control

VOLATILE ORGANIC CHEMISTRY (VOC)

TEST CODE	FEE	SAMPLE UNIT NUMBER	TEST DESCRIPTION
CXVO	\$100.00	36VO	Volatile Organic Compounds by GC/MS

SYNTHETIC ORGANIC CHEMISTRY (SOC) NONVOLATILE

TEST CODE	FEE	SAMPLE UNIT NUMBER	TEST DESCRIPTION
CXPT	\$125.00	36NV	Pesticides Screening by GC/MS
CXHB	\$120.00	36NV	Chlorinated Acid Herbicides
CXLP	\$120.00	36LP 36LPa	Carbamates by HPLC for systems without continuous chlorination. Supplies with continuous chlorination use unit 36LPa

ADDITIONAL VOC/SOC REQUIRED IF NO WAIVER IS ALLOWED (contact your Local Health Department or the DEQ before sampling)

TEST CODE	FEE	SAMPLE UNIT NUMBER	TEST DESCRIPTION
CXEV	\$70.00	36VO	EDB AND DBCP by GC
CXDQ	\$150.00	36DQ	Diquat by HPLC
CXHA	\$130.00	36HA	Dalaphon and Haloacetic Acids
CXGY	\$100.00	36GY	Glyphosate by HPLC
CXEN	\$150.00	36EN	Endothall by GC/MS

Costs and codes are unique to the DEQ laboratory and subject to change. You may use any laboratory certified by the DEQ to conduct the required tests. This summary depicts the commonly required testing for noncommunity water supplies. Additional schedule information can be obtained at http://www.michigan.gov/deq/0,1607,7-135-3313_3675_3692---,00.html

DEQ Lab Fee Schedule change effective June 15, 2007

DEQ/WB/GWS 8/6/2007

Permit Issuance

Date

Address

ATTN: -----

RE: Permit to install a water supply at -----

WSSN # -----

Dear Mr./Ms.-----:

Enclosed is the approved well permit application for ----- . Please note the conditions of this permit are as follows:

ISOLATION

The well is to be located a minimum of 75 feet from all potential sources of contamination such as: septic fields, septic tanks, dry wells, buried sewer lines, surface water (lakes, streams, etc.), storm sewer lines, catch basins or animal pastures.

The well is to be located a minimum of 800 feet from major sources of contamination such as: landfills, large scale sewage disposal facilities, chemical storage tanks, buried fuel tanks, waste water lagoons or buried waste holding tanks.

LOCATION (Complete this section if there is a deviation. Identify the deviation and provide validation for allowing)

The proposed location for the well is

GROUTING

The well must be grouted using materials and methods approved by the department. The grouting addendum enclosed with the permit addresses proper grouting requirements. **(Specifically: complete if special grouting requirements or requesting notification prior to drilling / grouting occurs)**

WELL RECORD

The well drilling contractor is to complete the well record (well log) upon completion of the well and submit a copy directly to ----- for use at the final inspection.

DISINFECTION AND SAMPLING

We have found that the most effective way to initially disinfect new wells is to use the displacement method. Place chlorinated water with a concentration of about 200 parts per million into the well to displace at least two times the casing volume; pump the chlorinated water into the distribution system; allow 24 hours contact time; and then pump to waste.

A usable sample tap must be located near the pressure tank or as close to the well as possible. The sample tap should have a 1/4 inch, downward turned, unthreaded outlet and be operator by a ball valve or a good quality gate valve. See enclosed diagram.

After disinfection and pumping to waste, the Health Department must be contacted for final inspection. The health department, the owner, or his authorized representative may collect the water samples. One of the required coliform samples is to be collected at the time of the final inspection. A MINIMUM OF 2 CONSECUTIVE ACCEPTABLE BACTERIOLOGICAL SAMPLES (collected at least 24 hours apart, with no chlorine residual) and one acceptable nitrate/nitrite sample MUST BE OBTAINED PRIOR TO USE OF THE WELL BY THE PUBLIC.

WELL ABANDONMENT

The existing well is required to be properly abandoned when the new well is placed into service. Proper abandonment includes removal of the well components and filling the borehole or casing with a high solids bentonite slurry, neat cement, or coarse grade dry bentonite.

If you have not chosen the well contractor yet, please make sure that you provide him with a copy of the permit, the grouting addendum, AND THIS LETTER so that he is aware of the permit requirements.

If there are any questions regarding what is required, or if changes to the permit or procedures are proposed please contact this office for prior approval. Thank you.

Sincerely,

-----, R.S.

(Sanitarian Name)

_____ County Health Department

(Transient Approval Letter)
LHD Letterhead

DATE

Address

ATTN: Water supply owner / operator

RE: Water supply system approval for **(Name of supply)**
WSSN: -----

Dear **Mr./Ms. -----** :

Enclosed is a copy of the final inspection report/approved permit and the water sample results for the new well at your facility. The well system is constructed in accordance with the Safe Drinking Water Act, Act 399 P.A. of 1976 and Administrative Rules as Amended.

Water Quality

The collected water samples are in compliance with the standards required under the Act. The system may be put into service for the public at this time.

Monitoring (Sampling) Requirements

Unless you are required to sample more frequently as a condition of a license or policy, your system must meet the following sampling schedule:

Coliform (bacteriologic) -

Frequency: Quarterly, 1 sample every 3 months. **(Quarterly for at least one year)**

Next sample due before: **(Recommend 30 days in advance of compliance period date.)**

Sampling location: **(Must be specific, e.g., Break room sink)**

Sample containers: Order unit 30, test code BPTC if using MDEQ laboratory.

Nitrate (inorganic) -

Frequency: Annual, 1 sample per year.

Next sample due before: **(30 days prior to end of compliance period date.)**

Sampling location: The raw water sampling tap located at the pressure tank (before any water treatment device)

Sample containers: Order unit 32, test code R if using MDEQ laboratory.

Note: – A nitrite sample only has to be collected one time. The nitrite sample should be collected as part of the initial approval process. No additional nitrite samples are required.

If a laboratory other than the MDEQ laboratory is used for sample analysis, it must be MDEQ certified for the analysis performed, and a copy of the results of the analysis must be provided to this office by the water supply owner/operator.

A Water Supply Serial Number (WSSN), a computer number used for identification purposes, has been assigned to each public water supply in the state. Your water supply serial number is WSSN -----, and must be recorded on each water sample form. Without this number on the sample form, you may not be credited for collecting a required sample.

An insert has been included for additional pertinent information on sampling requirements. We recommend you review this information, and maintain it in your records for future reference.

Act 399 specifies that it is the owner/operator's responsibility to collect and submit the required water samples for analysis and to maintain and operate the water system in a sanitary condition.

If you have questions regarding the sanitary survey or monitoring (sampling) requirements, please contact me at **(Phone number)**. Thank you.

Sincerely,

Sanitarian's Name
Environmental Sanitarian
----- Health Department

Enclosures
cc:

Nontransient Final Approval Letter
LHD Letterhead

DATE

Address

ATTN: Water supply owner / operator

RE: Water supply system approval for **(Name of supply)**
WSSN: -----

Dear **Mr./Ms.** ----- :

Enclosed is a copy of the final inspection report/approved permit and the water sample results for the new well at your facility. The well system is constructed in accordance with the Safe Drinking Water Act, Act 399 P.A. of 1976 and Administrative Rules as Amended.

Water Quality

The collected water samples are in compliance with the standards required under the Act. The system may be put into service for the public at this time.

Monitoring (Sampling) Requirements

Unless you are required to sample more frequently as a condition of a license or policy, your system must meet the following sampling schedule:

Coliform (bacteriologic) -

Frequency: Quarterly, 1 sample every 3 months. **(Quarterly for at least one year)**

Next sample due before: **(30 days prior to end of compliance period date.)**

Sampling location: **(Must be specific, e.g., Break room sink)**

Sample containers: Order unit 30, test code BPTC if using MDEQ laboratory.

Nitrate (inorganic) -

Frequency: Annual, 1 sample per year.

Next sample due before: **(30 days prior to end of compliance period date.)**

Sampling location: The raw water sampling tap at the pressure tank, and before any water treatment device.

Sample containers: Order unit 32, test code R if using MDEQ laboratory.

APPENDIX E-8

Note: – A nitrite sample only has to be collected one time. The nitrite sample should be collected as part of the initial approval process. If the sample results are less than half of the MCL no additional nitrite samples are required.

Volatile Organic Chemicals (VOC) -

Frequency: **One every 6 years.**

Next sample due before: **1 year prior to sample due date.**

Sampling location: The raw water sampling tap located at the pressure tank (before any water treatment device)

Sample containers: Order unit 36VO, test code CXVO if using MDEQ laboratory.

Complete Metals (inorganic) -

Frequency: 1 sample every three years. Can be reduced to 1 sample every 9 years after 3 rounds below MCL. **(Select the proper frequency and delete the rest, e.g., 1 sample every 9 years.)**

Next sample due before: **(1 year prior sample due date.)**

Sampling location: The raw water sampling tap located at the pressure tank (before any water treatment device)

Sample containers: Order unit 36ME test code CMET2 if using MDEQ laboratory.

Cyanide (inorganic) -

Frequency: 1 sample every 3 years. Can reduce to 1 sample every 9 years after 3 rounds below MCL.

Next sample due before: **(1 year prior sample due date.)**

Sampling location: The raw water sampling tap located at the pressure tank (before any water treatment device)

Sample containers: Order unit 36CN, test code CCN if using MDEQ laboratory.

Synthetic Organic Chemicals (SOC) -

Frequency: 1 sample every 6 years.

Next sample due before: **(1 year prior sample due date.)**

Sampling location: The raw water sampling tap located at the pressure tank (before any water treatment device)

Sample containers: Order units (2) 36NV and 36LP, test codes CXPT, CXHB, and CXLP if using MDEQ laboratory.

Lead/copper (inorganic) -

Frequency: **(Current frequency, e.g., 1 sample every 3 years.)**

Next sample due before: **(1 year prior sample due date.)**

Number of samples: **(Number of samples based upon population.)**

Sampling location: Minimum of one sample per building at a fixture frequently used for potable purposes. This is a first draw sample, the water

APPENDIX E-8

must have been at rest a minimum of six hours prior to sampling.
Sample containers: Order Unit 36CC if using MDEQ laboratory.

If a laboratory other than the MDEQ laboratory is used for sample analysis, it must be MDEQ certified for the analysis performed, and a copy of the results of the analysis must be provided to this office by the water supply owner/operator.

A Water Supply Serial Number (WSSN), a computer number used for identification purposes, has been assigned to each public water supply in the state. Your water supply serial number is WSSN -----, and must be recorded on each water sample form. Without this number on the sample form, you may not be credited for collecting a required sample.

An insert has been included for additional pertinent information on sampling requirements. We recommend you review this information, and maintain it in your records for future reference.

Act 399 specifies that it is the owner/operator's responsibility to collect and submit the required water samples for analysis and to maintain and operate the water system in a sanitary condition.

If you have questions regarding the sanitary survey or monitoring (sampling) requirements, please contact me at **(Phone number)**. Thank you.

Sincerely,

Sanitarian's Name
Environmental Sanitarian
----- Health Department

Enclosures
cc:

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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER DIVISION

GROUTING ADDENDUM TO PERMIT

Permit No. _____ Name: _____ WSSN: _____

This permit addendum is intended to notify the property owner and well drilling contractor with a copy of the permit and grouting addendum prior to beginning construction.

WELL TYPE: ___ Single Family ___ Public ___ Other

WELL SITE STATUS: ___ Standard Well Site
 ___ Groundwater Contamination Site: Contam. Type _____ Level _____
 ___ Reducing Isolation Distance ___ Flowing Well Site ___ Other _____

GROUTING METHOD FOR DRIVING CASING
(E.G., CABLE TOOL)

GROUTING METHOD FOR CASING SET IN
OVERSIZED DRILL HOLE (E.G., ROTARY)

GROUTING METHOD:
___ Standard Method
(driving with granular bentonite)
___ Conductor Pipe to ___ Feet
___ Other _____

GROUTING METHOD:
___ Entire Casing Length
___ Surface Into Clay Layer At ___ Feet
___ Other _____

GROUTING MATERIAL:
___ Neat Cement Slurry ___ High Solids Bentonite Slurry ___ Granular
___ Any of the Above ___ Other (specify) _____

GROUTING METHODS:
Grout slurries are to be placed either down the casing or a group pipe placed in the annulus. Pouring of cement or bentonite slurries into the annulus is not permitted.

COMMENTS:

LHD/MDEQ NOTIFICATION:
___ LHD/MDEQ Must Be Notified Prior to Grouting of the Well
___ LHD/MDEQ Notification Not Required

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Date:

Facility
Attn:
Address
WSSN

Subject: Routine Water Sampling Reminder

This letter is in regards to your routine < **quarterly** > < **ANALYTE** > water sample needed to meet the requirements of the Michigan Safe Drinking Water Act, PA 399 of 1976. According to the monitoring requirements of this public water supply, a < **ANALYTE** > sample must be taken during the < **1ST quarter** > of FY < **YEAR** > (< **DATE** >). If you have not yet taken the water sample, please do so immediately.

Water sample bottles, sampling instructions and report forms are available from this department. Water samples may be sent to any certified laboratory for testing; however, it is the owner/operator's responsibility to report the results to this department if another facility other than the MDEQ lab is used. Make sure to write your WSSN (Water Supply Serial Number) on the sample form. You may not be credited with the sample results if you do not include your WSSN on your laboratory request form.

Failure to collect a water sample would be a violation of the Michigan Safe Drinking Water Act and may result in further enforcement including civil fines.

If you have any questions, please contact this office at ###-####. Thank you for your continued cooperation with this program.

Sincerely,

Environmental Sanitarian

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< Year >

NON-COMMUNITY PUBLIC WATER SUPPLY
MONITORING VIOLATION NOTICE

< Date Letter was sent >

Our records show that _____ (WSSN) _____ (well 001) did not submit the following water sample(s) prior to the required "collect-by" date during the respective fiscal-year and/or calendar year period:

- | | | | |
|-------------------------------------|---|--------------------------|---------|
| <input checked="" type="checkbox"/> | Quarterly Bacteriological < (July 1 through September 30, 2007) > | <input type="checkbox"/> | Cyanide |
| <input type="checkbox"/> | Annual Nitrate/Nitrite | <input type="checkbox"/> | Metals |
| <input type="checkbox"/> | Lead/Copper | <input type="checkbox"/> | SOC's |
| <input type="checkbox"/> | Arsenic | <input type="checkbox"/> | VOC's |

Please understand that the above sample(s) should have been submitted prior to < DATE >. If you have not collected the above mentioned sample(s), please send in the sample(s) immediately, and prior to < DATE > to avoid further monitoring violations and potential monetary fines. If you have already collected the above sample(s) prior to < DATE >, please forward me a copy of the respective lab results.

A monitoring violation requires public posting be made to notify users of the failure of the public water supply to collect designated samples. The monitoring violation public notice is enclosed. Posting of the notice shall continue until sample results are received to comply with the monitoring period, or for a period of 7 days, whichever is greater. Please sign and date one of the enclosed monitoring violation notices and return it to this office at the above address. This will be a permanent part of your Type II file.

Please be aware that this violation has been reported to the Federal Environmental Protection Agency. Public access to these records is available on the Internet at the following web site: www.epa.gov/ogwdw/dwinfo/mi.htm The Safe Drinking Water Act authorizes this department to assess a civil fine of \$200.00 for each failure to sample and report results. Failure to have the Public Notice posted in your facility (and a copy returned to this Department) can lead to the same administrative actions. **Therefore, in order for you to not receive the fine (at this time), submit these required samples by < October 31, 2006 >.**

Sample bottles for coliform bacteria and nitrates (partial chemistry) can be obtained from any of the branch offices listed above or by contacting the Michigan Department of Environmental Quality Laboratory at 517/335-8184. All other bottles must be ordered from the laboratory.

When submitting samples, please remember to include your water supply serial number (WSSN) and Customer Number on the sample submittal form or you will not receive credit for taking the samples. Your WSSN is listed at the beginning of this notice. Your Customer Number can be found on previous water sample result forms. If you choose to use a private laboratory, you must submit the sample results to me directly.

Please note, if you did collect the required sample(s) and have a copy of the lab results, disregard this violation notice and please contact this office as soon as possible at < xxx-xxx-xxxx >. This will allow me to change your status to "in compliance" and rescind this notice. Thank you for your anticipated cooperation.

EH Staff
Noncommunity Public Water Supply Program

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< *Date* >

RE: < *ANALYTE* > Monitoring Violation Resolution/Notice of Monitoring Frequency Change for < *facility name* > WSSN < *xxxxxxx* >

Dear

We received the results of the required routine < *ANALYTE* > on < *DATE* >. The monitoring violation has been resolved and the water supply can be taken off “precautionary measures”. The public notice may now be taken down.

As a result of the monitoring violation, the monitoring frequency for this facility is now increased to < *quarterly* > sampling for at least one year. *Please consider this letter as notification to collect the required water sample(s).* The next routine monitoring sample must be collected by < *DATE* >. This office will review the monitoring frequency after four consecutive quarterly sample results have been received. At that time you will be notified if there is a change in the frequency.

Failure to collect < *quarterly* > samples will again result in a monitoring violation, fines, and escalated enforcement actions.

Thank you for your cooperation and please do not hesitate to contact the undersigned should you have any questions regarding the water supply.

Sincerely,

EH Staff
Type II Public Water Supply Coordinator
(*****) ****_*****

Cc:

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< *Date of Letter* >

< *Facility Name* >

< *Address* >

< *City* >, *MI* < *Zip Code* >

RE: Water Supply Serial < # >

Dear Owner/Operator:

On < *Date* > a water sample was collected from your public water supply. The sample was positive for Coliform Bacteria. **Under the provisions of the Safe Drinking Water Act, Act 399, P.A. 1976 and Rules as amended, you must collect four (4) repeat samples within 24 hours of notification of unsatisfactory sampling results.** One must be collected from the same tap as the initial positive. We recommend you collect the other three re-samples from other locations in the distribution system.

This letter is an inquiry as to the present status of your water supply. If you have already re-sampled the supply, please provide this office with a copy of the sampling results. If you have not re-sampled, do so immediately and contact this office to verify you have initiated your required re-sampling.

You must include your WSSN number (water supply serial number) on the sample report form in order for MDEQ to credit you for sampling. Samples submitted without a WSSN number will not be tested. When submitting RE-SAMPLES, be sure to FILL IN THE SAMPLE NUMBER FROM YOUR ORIGINAL "POSITIVE" WATER SAMPLE FORM, in the top right hand side of the form.

Thank you for your cooperation.

Sincerely,

EH Staff
LHD

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Local Health Department Logo

Date

Facility Address

RE: {**Name of water supply**} failure to collect repeat samples after positive coliform result
WSSN -----

Dear Madam/Sir:

On (**date of positive sample result**) a bacteriologic sample collected at (**Name of water supply**) was reported as positive for (**total or E coliform**). The (**LHD name**) notified your facility by (**telephone or an on site visit**) of the need to collect 4 repeat samples within 24 hours (**unless the Department extended for specified reason the 24 hour limit; e.g. result reported on Friday, Saturday or Sunday**) on (**Date of contact**). Our records show that the 4 repeat coliform bacteria water samples were not collected in the required time as required by Rule 325.10707(1) of the Michigan Safe Drinking Water Act. The failure to collect the repeat bacteriologic samples in the required time causes doubt as to the safety of the water supply.

(If the samples have not been collected) The current results indicate the water is unsafe therefore (**Name of facility**) is being put on precautionary measures. Precautionary measures necessitate either closure of your facility or providing an approved alternate source of drinking water and public health posting at all available outlets. Precautionary measures will remain in affect until a minimum of 4 consecutive analyses for coliform bacteria determine compliance with the state drinking water standards. An additional 5 “routine” samples will be required in the month after precautionary measures are removed to confirm the reliability of the supply to consistently deliver water meeting the drinking water standards.

The enclosed public notice must be posted in a conspicuous location and all available outlets must be posted with a sign specifying “Do not drink this water”. A signed copy of the public notice shall to be provided to the (**Name of the LHD**) by mail or fax (**Fax number and office address can be entered here or below signature**).

(Note: DEQ Memo NCWS 06-005 recommends that a civil fine “should be issued and the samples collected within the next 24 hours.” If a fine is issued the following would be inserted.)

As the supplier of water at (**Name of facility**) you are being fined \$200.00 as §325.1007(2)(a) for failure to collect and have analyzed water samples at the required schedule. Enclosed is a Civil Fine citation. The fee is to be paid to the Michigan Department of Environmental Quality as specified on the form.

The public notice shall remain posted until (**Name of Department**) has obtained copies of acceptable sample results and given written or verbal approval for your water supply to be taken off precautionary measures. This violation has been reported to the Michigan Department of Environmental Quality.

If you have questions regarding the required sampling procedure or the implementation of precautionary measures please contact me. Thank you.

Sincerely,

Name of San, R.S.
Type II Coordinator

Enclosure
Cc: Certified Operator

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LHD Logo

Date

Facility Owner/Address

RE: (Name of facility) Supply Monitoring Violation
WSSN: - - - - -

Dear Madam/Sir:

On (date of positive sample result) a bacteriologic sample collected at (Name of water supply) was reported as positive for (total or E coliform). The (LHD name) notified your facility by (telephone or an on site visit) of the need to collect 4 repeat samples within 24 hours to determine compliance with the state drinking water standards (unless the Department extended for specified reason the 24 hour limit; e.g. result reported on Friday, Saturday or Sunday) on (Date of contact). The required 4 repeat samples were not collected until (date and number of days after required day of sampling). The failure to collect the repeat samples within 24 hours of notification is a violation of the Safe Drinking Water Act as to Rule 325.10707.

(Note: DEQ Memo NCWS 06-005 recommends that a civil fine “should be issued and the samples collected within the next 24 hours.” If a fine is issued the following would be inserted.)

As the supplier of water at (Name of facility) you are being fined \$200.00 as to §325.1007(2)(a) for failure to collect and have analyzed water samples at the required schedule.

The failure to collect the required samples in a timely manner requires that the enclosed monitoring violation public notice be posted. A signed copy of the notice is to be provided to the attention of the undersigned by either mail or fax.

The 4 repeat samples have been collected on (date of sampling) by (LHD or owner name). The forthcoming sample results will determine future sampling requirements. If any of the repeat samples are positive there will be a coliform maximum contamination level violation and precautionary measures will be required. If all results show coliform not detected an additional 5 “routine” samples would be required in the month of (Month) to confirm the reliability of the supply to consistently deliver water meeting the drinking water standards.

The public notice shall be immediately posted at a location that is conspicuous to customers/users. The notice of failure to monitor shall remain posted a minimum of 7 days following receipt of required laboratory results. This monitoring violation has been reported to the Michigan Department of Environmental Quality.

If you have questions regarding the required posting, future sampling requirements or the necessary procedures if implementation of precautionary measures becomes necessary please contact me. Thank you.

Sincerely,

, R.S.
Type II Coordinator
(address/phone/fax number)

Enclosure
Cc: , Certified Operator

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Tracking Form For Noncommunity Public Water Supply Positive Coliform Sample Results

Facility: _____ WSSN: _____

Contact Person: _____

Address: _____

Phone: _____ / _____

Monitoring Frequency: Annual Quarterly Other

Initial positive result date: ____ / ____ / ____ Repeat sampling date ____ / ____ / ____

Number of repeat samples: ____ Results: # Positive ____ # ND ____ # OG ____

MCL awareness date: ____ / ____ / ____ 1st day compliance period: ____ / ____ / ____

Facility notified of MCL: Letter Phone Other _____

Public notice posted: (Y) (N) Signed copy for file: Investigation conducted (Y) (N)

Investigation conducted by: _____ Date: ____ / ____ / ____

Repairs made to system: _____

Supply chlorinated: (Y) (N) Method used and by: _____

Minimum of 2 consecutive coliform ND samples obtained: (Y) (N) Dates: ____ / ____ / ____ and
____ / ____ / ____ More coliform samples required ____ / ____ / ____ & ____ / ____ / ____

System returned to compliance: ____ / ____ / ____ Owner Notified: (Y) (N)

Notified by: Phone Letter Site visit

Five routine samples collected month following POS

Positive Result: (Y) (N) Date: ____ / ____ / ____ Results: # ND ____ # Positive ____

Five routine samples waived: (Y) (N) Form completed: (Y) (N) MCL reported on FRDS: (Y) (N)

Comments: _____

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< *Date of Letter* >

< *Facility Name* >

< *Address* >

< *City* >, *MI* < *Zip Code* >

RE: Maximum Contaminate Level (MCL) Violation
WSSN #< >

Dear Owner/Operator:

Water samples from the above listed well were collected on < *Date* > and were positive for coliform bacteria.

A second set of samples was collected on < *Date* > and at least one of these samples was positive for coliform bacteria. This constitutes a maximum contaminate level (MCL) violation. You must do the following:

1. Take the well out of service to the public.

Note: Provide a supply of bottled water from an approved source until corrections have been made on this water supply.

2. Have the well chlorinated by a licensed well drilling contractor. **Positive displacement method is required. Maintain 200 ppm of chlorine with a contact time of 24 - 48 hours.** At the same time, the contractor may evaluate the well to determine if there are any structural deficiencies that may be contributing to the contamination problem.
3. (A) Resample the well. Collect 2 samples, 8 hours apart after continuous pumping of the well, with verification that no chlorine residual is present. **If the well is not pumped continuously, collect 2 samples 24 hours apart. Submit the sample results to this office.**
4. **Posting public notice while the well is out of service is required. Please find a public notice posting enclosed for your use. Please sign and fax it back to this office at < Fax Number >.**
5. The supply may not be put back into service for the public until approval from this health department has been issued.

6. In < *Next Month & Year* > five (5) additional bacteriological samples will need to be taken.

The 1986 amendments to the Safe Drinking Water Act mandated new rules for total coliform bacteria monitoring. Be advised that whenever an unacceptable (positive) result is obtained, the supplier of the water must, **WITHIN 24 HOURS**, collect four repeat samples. If you have questions concerning this correspondence, please contact this office at < **Telephone** >. Thank you for your cooperation.

Sincerely,

EH Staff
LHD

Enclosures

Investigating Coliform MCL

Well Information

Size ----- _____
Casing type ----- _____
Age ----- _____
Rock or Drift ----- _____
Grouted ----- _____
Abandoned well(s) ----- _____
Construction deficiencies ----- _____

Geology

Depth to aquifer ----- _____
Confining Layer----- _____
Casing length ----- _____
Length of screen ----- _____
Length of open bore hole ----- _____

Pump Information

Submersible ----- _____
Jet ----- _____
Turbine ----- _____
Hand pump ----- _____
Drop pipe depth----- _____

Distribution system

Treatment ----- _____
Softener disinfected separately ----- _____
Sampling tap ----- _____
Pipe material ----- _____
Pressure tank ----- _____

Date ---/---/---Result ----- Location-----
 Date ---/---/---Result ----- Location-----

Comments: -----

Disinfection Procedures

Date of Disinfection 1st ---/---/--- 2nd ---/---/--- 3rd ---/---/---
 4th ---/---/--- 5th ---/---/--- 6th ---/---/---

Simple disinfection -----
 Sodium or Calcium Hypochlorite -----
 Bulk displacement -----
 Tremie pipe used -----
 Mineral buildup on casing -----
 Casing swabbed -----
 Chlorine concentration -----
 Contact time -----
 Re-circulation -----
 pH adjustment -----
 Re-developed -----

Acid used

ChloroPal

Muriatic acid (don't recommend)

New Well

Vinegar

Other _____

Investigation work

Down Hole Camera

Pump Pulled

Magnet (measured casing)

Bail/Air Pumped well

Check Grout

Results of investigation -----

Has there been recent repairs to well or distribution system -----

Well cap venting (old style) ----- Model _____

Has well been struck by vehicle/lightening -----

Comments: -----

< Date >

RE: Coliform Bacteria Maximum Contaminant Level Violation Resolution
WSSN < >

Dear

The coliform bacteria maximum contaminant level (MCL) violation has been resolved and the water supply can be taken off “precautionary measures”. The results of the coliform bacteria water samples collected < **Date(s)** > were reported as “not detected” and the water is now considered safe for consumption. This information was conveyed to you earlier during a telephone conversation.

Next month, < **Insert Month** >, five (5) coliform bacteria water samples must be collected as required by the drinking water regulations. These five samples are considered to be “*routine*” samples on the laboratory analysis sheet. If all five “*routine*” sample results are found to be “non-detect” for coliform bacteria, the minimum sampling frequency will be quarterly. *Please consider this letter as notification to collect the required water samples.*

Thank you for your cooperation and please do not hesitate to contact the undersigned should you have any questions regarding the water supply.

Sincerely,

EH Staff
Type II Public Water Supply Coordinator
(***) ***_****

Cc:

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ANNUAL NITRATE SAMPLE REMINDER NOTICE

Date:

Facility
Attn:
Address
WSSN

This letter is in regards to your routine annual nitrate water sample needed to meet the requirements of the Michigan Safe Drinking Water Act, PA 399 of 1976. According to the monitoring requirements of this public water supply, a nitrate sample must be taken during the 2000 calendar year (January 1 - December 31). If you have not yet taken the water sample, please do so immediately.

Water sample bottles, sampling instructions and report forms are available from this department. Water samples may be sent to any certified laboratory for testing; however, it is the owner/operator's responsibility to report the results to this department if another facility other than the MDEQ lab is used. Make sure to write your WSSN (Water Supply Serial Number) on the sample form. You may not be credited with the sample results if you do not include your WSSN on your laboratory request form.

Failure to collect a water sample would be a violation of the Michigan Safe Drinking Water Act and may result in further enforcement including civil fines.

If you have any questions, please contact me at ###-####. Thank you for your continued cooperation with this program.

Sincerely,

Environmental Sanitarian

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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
 WATER BUREAU
 DRINKING WATER AND ENVIRONMENTAL HEALTH SECTION

PHASE II/V MONITORING WAIVER

System Name: _____ WSSN: _____
 Population Served (NT): _____ Date of Last Survey: _____

Waiver Type
 (check one)

SOC

Waiver Criteria Summary*

- () **Limited Scans Waiver (Potentially Vulnerable):** 1 sample per 6 years.
 (Well is properly construction, potential use of SOC's in area, and criteria for total waiver or no waiver are not applicable.)
Date of last SOC analysis _____
- () **No Waiver (Vulnerable):** Quarterly sampling for 1 year.
 (Well is improperly constructed in areas of Karst geology, and contaminant manufacture or storage has previously confirmed positive SOC results, or has inadequate well construction data in an area of known SOC groundwater contamination.)
- () **Total Waiver (Not Vulnerable):** Sampling not required.
 (Well properly constructed and in confined artesian aquifer.)

Waiver Type
 (check one)

VOC

Waiver Criteria Summary*

- () **Waiver (Not Vulnerable):** 1 sample per 6 years.
 (Well properly constructed and not subject to VOC contamination.)
- () **No Waiver (Vulnerable/VOC):** Quarterly sampling for 1 year.
 (Well not properly constructed, subject to VOC contamination.)
- () **No Waiver (Vulnerable/VOC + DBCP & EDB):** Quarterly sampling for 1 year.
 (Gasoline derivatives previously detected (EDB/DBPC monitoring required in addition to standard VOC.)
Date of last VOC analysis _____

ASBESTOS WAIVER

Has asbestos cement pipe been used in distribution system? Y or N

Waiver Determination By:

 Signature

 Title

 Agency Name

 Date

*Refer to waiver policy for requirements

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ARSENIC SAMPLING NOTIFICATION LETTER
October 2004

Dear Water Supply Owner:

Subject: New Arsenic Sampling Requirements

This is to advise you of a new drinking water standard for arsenic of 10 parts per billion (ppb) or 0.010 milligrams per liter (mg/l) as published in the Federal Register (66FR 6976) on January 22, 2001. The new standard or maximum contaminant level (MCL) must be met by all community and nontransient noncommunity water systems by January 23, 2006 to avoid being in violation. Sampling for arsenic is required to demonstrate compliance.

The first arsenic sample is due in the first quarter of calendar year 2005 (January 1, 2005-March 30, 2005). If this initial compliance sample result is less than 5 parts per billion (half the MCL) and a previous history does not indicate elevated arsenic levels, the system will be in compliance and will not need to collect a sample in each of the remaining three quarters in 2005 unless notified by the local health department (LHD). If the initial sample is 5 parts per billion or more a sample will be required in each of the remaining three quarters of 2005.

A violation of the MCL exists if the running annual average after four consecutive quarters exceeds 10 ppb or if any result is greater than four times the MCL. Public notification is required as soon as possible but no later than 30 days after an MCL violation occurred.

Arsenic samples must be collected from a raw water sampling tap prior to any treatment. A lab certified for arsenic analysis of drinking water is required to conduct the test. You can use any DEQ certified lab. If you use the DEQ laboratory the sample unit needed is a 36ME and the test code is CAS. The analytical cost currently is \$16 per analysis. Sample units for the DEQ laboratory may be available at your LHD, or it can be ordered by calling the lab at 517-335-8184.

Also please be aware the arsenic issue is national in scope and there may be many companies interested in selling arsenic treatment systems. A permit from the LHD is required prior to installing any arsenic treatment on your water supply. This is to insure the system is appropriate and properly designed before you buy it and avoid costly modification or removal of unapproved devices.

In closing, please contact this office if you have questions about this new requirement.

Sincerely,

LHD Sanitarian

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Dear Public Water Supply Owner,

Subject: Lead / Copper Sampling, Anywhere Industries, WSSN: 2000084

Your facility has been identified as one that may have been previously waived from lead /copper sampling because it was constructed after the date of the ban on lead in drinking water components in June of 1988. Recent revisions to the National Primary Drinking Water Regulations for Lead and Copper, 40 CFR Parts 141 and 142, (Federal Safe Drinking Water Act), require ALL nontransient noncommunity public water supplies serving 25 or more students/employees to sample drinking water for lead and copper.

You now will need to collect the first lead copper samples within the first 6-month monitoring period that begins January 1, 2001 and ends June 30, 2001 (see enclosed instructions and form to report sample results). If the first set of samples is satisfactory, another set is required during the second six months beginning July 1, 2001. If results remain satisfactory, sampling can be reduced to annual or less in some cases.

It is highly recommended sampling be conducted and reported early in the monitoring period. Starting now will allow adequate time to comply with these complex regulations. Also, if initial results indicate the action level would be exceeded for lead or copper, you will need to contact the (local health department) for further instructions and assistance before the monitoring period expires.

If you have questions about lead / copper sampling or any drinking water sampling you are required to do under the Safe Drinking Water Act, please contact me at 555-555-5555. Thank you in advance for your cooperation.

Sincerely,
LHD Sanitarian

Enclosure: Lead / Copper Sampling Instructions and Reporting Form

INITIAL LEAD COPPER SAMPLING AND REPORTING

Regulation: National Primary Drinking Water Regulations for Lead and Copper 40 CFR Parts 141 & 142 (an amendment to the Safe Drinking Water Act) and Minor Revisions, implemented April 1, 2000.

Who is Affected: Community Water Systems and **Nontransient Noncommunity Water Systems** (schools/businesses on their own well(s) serving 25 or more students/employees a day, 6 months or more per year).

Health Information: Lead is a common metal found throughout the environment in lead-based paint, air, soil, household dust, food, and water. Lead builds up in the body over many years and can cause damage to the brain, red blood cells, and kidneys. Lead enters drinking water primarily as a result of corrosion or wearing away of materials containing lead in the water distribution system. These materials include lead-based solder used to join copper pipes, brass, and lead piping. The presence of copper in drinking water is also primarily a result of corrosion. Acute exposure to copper can result in nausea and diarrhea.

What To Do: **Systems are required to collect water samples for lead and copper according to the chart in Table 2 (below) to determine if results are above the action level for lead (.015 mg/l) and copper (1.3 mg/l).**

When: All systems not previously required to sample because they were constructed after the Lead Ban in June of 1998, **begin sampling in the six-month period starting January 1, 2001.** Two consecutive six-month monitoring periods are required the first year. For other systems already conducting lead copper sampling, the number of samples collected shall adjusted per these instructions at the next routine monitoring period as notified by the local health department.

What to Sample : Sample only fixtures where cold water is typically drawn for consumption such as kitchen or break room faucet, or drinking fountains. (Normally, faucets on bathroom sinks, janitor sinks, or hose bibbs are not routinely used for drinking.)

How Many Samples: See Table 2 below to determine how many samples are required for the population served by the water supply. Initial sampling must be done every 6 months.

Table 2

Lead/Copper Sampling According to Population Served		
Population Served	Samples (standard, every 6 mos.)	Samples (reduced, every 12 mos.)
501 to 3,300	20	10
101 to 500	10	5
<101	5	5

Page 2**Sampling if you have one building:**

- § Sample drinking water fixtures in the building up to the chart number. If you have more than the chart number of drinking water fixtures, select ones that represent the water distribution system, i.e. one in each building wing or on each floor. Or, you can collect more than the minimum number of samples.
- § If you have fewer drinking water fixtures than the chart requires, sample the ones you have and note on the sample log sheet you have sampled all drinking water fixtures.

Sampling if you have more than one building

- § For large facilities collect at least one sample per building until you get the number of samples required for the population served by the water supply (Table 2). Again, If you have more than the chart number of drinking water fixtures, select ones that represent the water distribution system, i.e. one in each building wing or on each floor. Or, you can collect more than the minimum number of samples.
- § If you have a only a few buildings, split the samples among them as best you can according to where the water is being consumed.

Sample Collection Procedures

- ÿ Obtain sample containers and analysis from a laboratory certified by the Michigan Department of Environmental Quality for lead/copper analysis. You may use any lab so certified. If you choose to use the MDEQ lab, order Unit 36CC and request test codes CCUB. You can obtain information on ordering sample units at: <http://www.deq.state.mi.us/dwr/Lab/H2O/H2O-lab.html>
- ÿ **Collect the first water out of the tap** (first draw samples) after water has stood motionless in the piping for at least 6 hours. You can sample first thing in the morning or cover the tap for six hours before sampling. **DO NOT sample after weekends, holidays, or extended periods of stagnation** because results may not be representative of the system's operational water quality.
- § Identify the sample, water system name, WSSN, site where it was collected and date. Record the information on the lab slip and the enclosed sampling report form.

When You Receive Lab Results

- § Record the results on page 1 of the report form, determine if the action level is met (page 2) and send to the local health department with copies of the lab reports. If you do not want to determine if an action level is exceeded, complete only page 1 of the report form, submit it and copies of the sample results to the local health department and it will be calculated for you.

When an Action Level is Exceeded

Contact the health department for additional instructions as soon as possible.

- § You may be able to take corrective measures to remove or reduce lead or copper sources and resample before the end of the monitoring period and stay in compliance.
- § Otherwise, when you exceed an action level, public education, additional sampling, and proposing a treatment program are required to be done within specific deadlines and it is important to begin as soon as possible.

ACTION LEVEL DETERMINATION

Lead Results	Instructions	Copper Results
#1	☺ Enter all samples starting with lowest result ☻	#1
#2	If less than 5 samples are taken and any are greater than .015 mg/l for lead or 1.3 mg/l for copper the action level is exceeded	#2
#3		#3
#4		#4
#5		#5
#6	☺ 90 th percentile of 5 samples is average of 4 th and 5 th ☻ Place average here _____ for 90 th percentile	#6
#7	☺ 90 th percentile of 10 samples is result for sample #9 ☻	#7
#8		#8
#9		#9
#10		#10
#11	NOTE: You can compute 90 th percentile by multiplying the number of samples by .9, i.e. 10 samples x .9 = 9 the result for the 9 th sample is the 90 th percentile. (For non whole numbers interpolation is necessary).	#11
#12	OR: You can leave this side blank or unfinished if you want the local health department to calculate the 90th percentile	#12
#13		#13
#14		#14
#15		#15
#16	☺ 90 th percentile of 20 samples is result for sample #18 ☻ (Highest result)	#16
#17		#17
#18		#18
#19		#19
#20		#20

DEQ/DWRP 01/01

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DATE

Supply

Attn: **Operator/Owner**

Address

City, MI ZIP

Dear **Operator/Owner**,

SUBJECT: WSSN (**xxxxx-xx**), water supply serving ...
Lead Action Level Exceedance

This letter is in regard to the water supply for the above referenced facility. The first draw lead and copper sample exceeded the 0.015 milligrams per liter (mg/L), or 15 parts per billion, action level for lead at (**result**) mg/L. Under the Safe Drinking water Act, 1976 PA 399, as amended, and Administrative Rules (Act 399), all Nontransient Noncommunity public water supplies that exceed an "action level" (AL) for lead (0.015 mg/L) are required to do the following:

1. PUBLIC EDUCATION information must be provided to all users of the water supply at facilities where the LEAD AL has been exceeded and posted at drinking water fixture(s).
2. Submit a proposal for **one** of the following forms of CORRECTIVE ACTION:
 - A. Replace fixture with an NSF lead free fixture/joints. Sample replaced fixture for two (2) consecutive six (6) month monitoring periods with results below action level.
 - B. Propose a flushing program monitored by the Michigan Department of Environmental Quality (MDEQ) and the United States Environmental Protection Agency (USEPA). This method entails additional sampling at various time periods and increased flushing.
 - C. Using some form of corrosion control treatment, such as an NSF approved under the counter Reverse Osmosis unit with a D-5 certified operator. Sample for two consecutive 6 (six) month monitoring periods with results below action level.
 - D. Connect facility to municipal water supply if available.

Facilities that exceed the action level must submit a proposal within six (6) months of the end of the monitoring period in which the "action level" was exceeded. The above facility has until (**DATE**) to submit this proposal. A sample public information sheet has been provided for you. A signed and dated copy shall be submitted to the health department when the public education information has been distributed and posted. Public education shall be implemented within 60 days. Staff of the Environmental Health Division will be available to meet with you, discuss the situation, and work out a compliance schedule.

Failure to comply with this notice will be considered a violation of Act 399 and result in enforcement action by imposition of civil fines.

Please contact this office as soon as possible at (**Phone Number**) to discuss and correct this matter. Thank you for your cooperation in resolving this matter.

Sincerely,

(Program Coordinator Signature)

Noncommunity Public Water Supply Coordinator

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Health Dept. Logo

July 23, 2007

«FirstName» «LastName»
«SystemName»
«AddressLine1» «Addressline2»
«City», «State» «Zip» «Zip4»

Dear Water Supply Owner/Operator:

SUBJECT: Disinfection Byproducts Sampling
«SystemName», WSSN: «WSSN»

Our records indicate your water supply is adding a chemical disinfectant (chlorine or ozone) to the drinking water. In addition to using approved chemicals, tracking, and reporting chemical applications, there are some new sampling requirements to measure the levels of byproducts that can be formed when chemical disinfectants are added to drinking water.

The enclosed summary sheet provides the information on what sampling is required under the Federal Act and the Michigan Safe Drinking Water Act, 1976 PA 399, as amended. Samples are to be collected before August 31, 2007 per the enclosed instructions. Please note: those using ozone are required to sample monthly for bromate (a probable human carcinogen). This is a relatively costly requirement. As a result, users may want to consider discontinuing the use of ozone.

Fees are charged by laboratories for sample analysis.

In the interim, if you have questions regarding this new requirement please contact this office. Thank you in advance for your cooperation.

Sincerely,

Noncommunity staff
Environmental Health Section

Enclosures



**Michigan Department of Environmental Quality
Water Bureau
Drinking Water and Environmental Health Section**

DISINFECTION BYPRODUCTS SAMPLING (NEW)

(Summary for Nontransient Noncommunity Water Systems using ground water)

Required Sampling & Maximum Contaminant Level (MCL):

<u>Disinfection Byproduct</u>	<u>MCL</u>	<u>When Disinfectant Used Is</u>
Total Trihalomethanes (TTHM)	0.080 mg/l	chlorine or chloramines
Haloacetic acids (five) (HAA5)	0.060 mg/l	chlorine or chloramines
Maximum residual disinfectant level (MRDL)	4.0 mg/l	chlorine
Bromate	0.010 mg/l	ozone

Who has to Sample:

Nontransient Noncommunity systems adding chlorine, chloramines, or ozone to drinking water. Systems using chlorine (liquid or gas) need both TTHM and HAA5 tests. Those using ozone test only for bromate.

When & Where to Sample:

TTHM & HAA5 (chlorine users) - Sample annually in month of August. One sample every three years thereafter if initial results are below the ¼ of the MCL or ½ the MCL after 2 years. Quarterly sampling is required if results exceed the MCL. Sample from tap representing the water's longest residence time in the distribution system. Typically, this would be an active tap farthest from the well. Indicate this sample point by name or location on the lab sample slip. Example: Break Room Bldg 3.

MRDL - Chlorine residual is to be recorded to determine compliance with the MRDL each time total coliform samples are collected.

Bromate (ozone users) – Sample once per month at the entry point to the distribution system.

Ordering Sample Units:*

<u>Contaminant</u>	<u>Unit</u>	<u>Test Code</u>	<u>Cost</u>
TTHM	36VO (has 2 vials)	CXTM	\$ 65.00
HAA5	36HA	CXHA	\$130.00
Bromate	32a	CDBP	\$ 75.00

Before you collect samples be sure to read sampling instructions with the sample unit. When you submit samples to the laboratory include: Water Supply Serial Number (WSSN), Facility Name, Date of Sample, and Sampling Point Name/Location.

If you have questions please contact your local health department or the DEQ noncommunity staff person for your county (see map) or go to: www.michigan.gov/deqnoncommunitywatersupply

* Information listed pertains to the DEQ Drinking Water Lab services only and costs are subject to change. Sample unit order forms are enclosed. NOTE: You may use any laboratory certified by DEQ for these drinking water analyses.

DEQ/WB 7/07

Table 1 Regulated contaminants

Key

AL=Action level

MCL=Maximum contaminant level

mfl=Million fibers per liter

MRDL=Maximum residual disinfectant level

mrem/year=Millirems per year (a measure of radiation absorbed by the body)

N/A=Not applicable

ntu=Nephelometric turbidity units (a measure of water clarity)

pci/l=Picocuries per liter (a measure of radioactivity)

mg/l=milligrams per liter (mg/l)

TT=Treatment technique

ug/l=Micrograms per liter

Contaminant	MCL in mg/l, except where noted	Major sources in drinking water	Health effects language
Microbiological contaminants			
Total coliform bacteria	MCL: For water systems analyzing 40 or more samples per month, not more than 5.0% of the monthly samples may be positive for total coliform. For systems analyzing fewer than 40 samples per month, not more than 1 sample per month may be positive for total coliform.	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
Fecal coliform and E. coli	zero	Human and animal fecal waste	Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
Turbidity	TT	Soil runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
Other microbiological contaminants			

APPENDIX G-1

Contaminant	MCL in mg/l, except where noted	Major sources in drinking water	Health effects language
Giardia lamblia, viruses, heterotrophic plate count (HPC) bacteria, legionella, cryptosporidium	TT	Naturally present in the environment	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
Inorganic contaminants			
Antimony	0.006	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
Arsenic	0.010	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
Asbestos [fibers longer than 10 um]	7 mfl	Decay of asbestos cement water mains; erosion of natural deposits	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
Barium	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Beryllium	0.004	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
Cadmium	0.005	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
Chromium [total]	0.1	Discharge from steel and pulp mills; erosion of natural deposits	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
Cyanide [free]	0.2	Discharge from steel/metal factories; discharge from plastic and fertilizer factories	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
Fluoride	4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than 9 years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

APPENDIX G-1

Contaminant	MCL in mg/l, except where noted	Major sources in drinking water	Health effects language
Mercury [inorganic]	0.002	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
Nitrate [as nitrogen]	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants below the age of 6 months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Nitrite [as nitrogen]	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants below the age of 6 months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Total nitrate and nitrite [as nitrogen]	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants below the age of 6 months who drink water containing nitrate and nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Selenium	0.05	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
Thallium	0.002	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
Lead and copper			
Lead	AL=0.015	Corrosion of household plumbing systems; erosion of natural deposits	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
Copper	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.
Synthetic organic contaminants including pesticides and herbicides			
2,4-D	0.07	Runoff from herbicide used on row crops	Some people who drink water containing the weed killer 2,4-d well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.

APPENDIX G-1

Contaminant	MCL in mg/l, except where noted	Major sources in drinking water	Health effects language
2,4,5-TP [silvex]	0.05	Residue of banned herbicide	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
Alachlor	0.002	Runoff from herbicide used on row crops	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
Atrazine	0.003	Runoff from herbicide used on row crops	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
Benzo(a)pyrene [PAHs]	0.0002	Leaching from linings of water storage tanks and distribution lines	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
Carbofuran	0.04	Leaching of soil fumigant used on rice and alfalfa	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
Chlordane	0.002	Residue of banned termiticide	Some people who drink water containing chlordane in excess of the mcl over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
Dalapon	0.2	Runoff from herbicide used on rights of way	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
Di(2-ethylhexyl) adipate	0.4	Discharge from chemical factories	Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience toxic effects such as weight loss, liver enlargement, or possible reproductive difficulties.
Di(2-ethylhexyl) phthalate	0.006	Discharge from rubber and chemical factories	Some people who drink water containing di (2-ethylhexyl) phthalate well in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
Dibromochloropropane [DBCP]	0.0002	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
Dinoseb	0.007	Runoff from herbicide used on soybeans and vegetables	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
Dioxin [2,3,7,8-TCDD]	0.00000003	Emissions from waste incineration and other combustion; discharge from chemical factories	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
Diquat	0.02	Runoff from herbicide use	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
Endothall	0.1	Runoff from herbicide use	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.

APPENDIX G-1

Contaminant	MCL in mg/l, except where noted	Major sources in drinking water	Health effects language
Endrin	0.002	Residue of banned insecticide	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
Ethylene dibromide	0.00005	Discharge from petroleum refineries	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
Glyphosate	0.7	Runoff from herbicide use	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
Heptachlor	0.0004	Residue of banned pesticide	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
Heptachlor epoxide	0.0002	Breakdown of heptachlor	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
Hexachlorobenzene	0.001	Discharge from metal refineries and agricultural chemical factories	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
Hexachlorocyclopentadiene	0.05	Discharge from chemical factories	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
lindane	0.0002	Runoff/leaching from insecticide used on cattle, lumber, gardens	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
Methoxychlor	0.04	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
Oxamyl [vydate]	0.2	Runoff/leaching from insecticide used on apples, potatoes, and tomatoes	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
Pentachlorophenol	0.001	Discharge from wood preserving factories	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
Picloram	0.5	Herbicide runoff	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
Polychlorinated biphenyls [PCBs]	0.0005	Runoff from landfills; discharge of waste chemicals	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
Simazine	0.004	Herbicide runoff	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.

APPENDIX G-1

Contaminant	MCL in mg/l, except where noted	Major sources in drinking water	Health effects language
Toxaphene	0.003	Runoff/leaching from insecticide used on cotton and cattle	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.
Volatile organic contaminants			
Benzene	0.005	Discharge from factories; leaching from gas storage tanks and landfills	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
Carbon tetrachloride	0.005	Discharge from chemical plants and other industrial activities	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Chlorobenzene	0.1	Discharge from chemical and agricultural chemical factories	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
O-dichlorobenzene	0.6	Discharge from industrial chemical factories	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
P-dichlorobenzene	0.075	Discharge from industrial chemical factories	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
1,2-dichloroethane	0.005	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
1,1-dichloroethylene	0.007	Discharge from industrial chemical factories	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
Cis-1,2-dichloroethylene	0.07	Discharge from industrial chemical factories	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
Trans-1,2-dichloroethylene	0.1	Discharge from industrial chemical factories	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
Dichloromethane	0.005	Discharge from pharmaceutical and chemical factories	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
1,2-dichloropropane	0.005	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
Ethylbenzene	0.7	Discharge from petroleum refineries	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
Styrene	0.1	Discharge from rubber and plastic factories; leaching from landfills	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.

APPENDIX G-1

Contaminant	MCL in mg/l, except where noted	Major sources in drinking water	Health effects language
Tetrachloro-ethylene	0.005	Discharge from factories and dry cleaners	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
Toluene	1	Discharge from petroleum factories	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
1,2,4-trichlorobenzene	0.07	Discharge from textile-finishing factories	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
1,1,1-trichloroethane	0.2	Discharge from metal degreasing sites and other factories	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
1,1,2-trichloroethane	0.005	Discharge from industrial chemical factories	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
Trichloroethylene	0.005	Discharge from metal degreasing sites and other factories	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Vinyl chloride	0.002	Leaching from PVC piping; discharge from plastics factories	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
Xylenes [total]	10	Discharge from petroleum factories; discharge from chemical factories	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.
Radioactive contaminants			
Beta/photon emitters	4 mrem/yr	Decay of natural and man-made deposits	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta particle and photon radioactivity in excess of the MCL over many years may have an increased risk of getting cancer.
Alpha emitters [gross alpha]	15 pCi/L	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Combined radium [226 & 228]	5 pCi/L	Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Uranium	30 ug/L	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
Disinfection Byproducts			
Total trihalomethanes [TTHM]	0.080	By-product of drinking water disinfection	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

APPENDIX G-1

Contaminant	MCL in mg/l, except where noted	Major sources in drinking water	Health effects language
Haloacetic acids [HAAs]	0.060	By-product of drinking water disinfection	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Bromate	0.010	By-product of drinking water disinfection	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
Chloramines	MRDL = 4	Water additive used to control microbes	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
Chlorine	MRDL = 4	Water additive used to control microbes	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Chlorite	1	By-product of drinking water disinfection	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
Chlorine dioxide	MRDL = 0.8	Water additive used to control microbes	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
Total organic carbon [TOC – control of DBP precursors]	TT	Naturally present in the environment	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THM) and haloacetic acids (HAA). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.
Other treatment techniques			
Acrylamide	TT	Added to water during sewage/ wastewater treatment	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
Epichlorohydrin	TT	Discharge from industrial chemical factories; an impurity of some water treatment chemicals	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.

DO NOT DRINK THIS WATER



Do Not Use Tap Water For:
 Drinking
 Soup, Juice, Coffee
 Making Ice
 Brushing teeth

Use Special Precautions For:
 Hand Washing
 Bathing (delete if na)
 Showering (delete if na)

For your safety, until the problem is corrected, safe water is provided as follows: **Water is located in the main lobby and in the shop area. The Cafeteria is only serving prepackaged foods. (sample)**

E. coli bacteria were found in the [System Name] water supply on [date].

DO NOT DRINK THE WATER.

USE ALTERNATE SUPPLY OF WATER FOR CONSUMPTION AND OTHER USES AS NOTED

Potential Health Effects

Fecal coliform and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

The symptoms above are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice. People at increased risk should seek advice about drinking water from their health care providers. Use commercially prepared hand sanitizer/wipes for hand washing. Do not allow infants or young children to bathe or shower in contaminated water since they may ingest it.

What happened? What is being done?

Bacterial contamination can occur when surface waters gains entry to the drinking water source, storage or distribution system (after construction, repairs, or damage to the well, tanks or piping).

We are working with the local health department to resolve this problem. We anticipate resolving the problem within [estimated time frame]. For more information, please contact «MsMr» «FirstName» «LastName», «Supply_Name», at «Phone», or [mailing address], or the [name of local health department].

PROOF OF DELIVERY

WSSN

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature

Title

Date Distributed

Reminder to water supplier: A signed & dated copy of this notice must be sent to the Local Health Department
Public Notification / Noncommunity Water Supplies

The Public Notice template provided is intended to be modified with the applicable information (system name, MCL date, correction date, contact person, etc.) prior to delivery. Also, reference to the uses of water, location of alternate water sources, or reference to bathing / showering etc., are to be modified on the template for the individual facility / situation. The duration of the notice is continuous through posting until compliance with the MCL is determined by the local health department. A system that is closed or taken out of service when the MCL is determined shall provide public notice for at least 2 weeks or until compliance is attained and shall not resume providing water to the public until the MCL violation has been resolved as determined by the local health department.

The Public Notice template on the reverse side should contain all applicable requirements summarized below when properly completed and posted.

The following is a summary of public notice requirements for owners of noncommunity systems. For specific requirements for public notification for coliform maximum contaminant level violations, please refer to Part 4 of the Safe Drinking Water Act 1976 PA 399, as amended.

Rule 401a (1): All MCL violations require public notice.

Rule 401a (4) Technically, owners have 10 days to certify to the department they provided the notice (ie. send a signed copy). However, since they are required to issue the notice within 24 hours (see below) it is not appropriate to wait 10 days to see if a notice is received to verify compliance. (See Coliform Follow up at Noncommunity Supplies.)

Rule 402 (1)(a)(g) E. coli or fecal coliform are Tier 1 notices. Under (g) Total coliform MCLs are also considered Tier 1 for noncommunity systems.

Rule 402 (2)(a) Public notice shall be provided as soon as practical but within 24 hours after the supplier learns of the violation.

Rule 402 (3) Suppliers shall provide the notice in a form and manner reasonably calculated to reach all persons served through 1 or more of the following forms of delivery:

- (a) broadcast media, radio television,
- (b) posting of the notice in conspicuous locations throughout the area served by the system,
- (c) hand delivery to persons served by the system,
- (d) another delivery method approved in writing by the department.

Conspicuous locations include where water can be consumed ie., bathroom, breakroom sink, kitchen, motel room, drinking fountain, and common area such as entry doors or cash register area where applicable.

Parents/guardians must be provided notice when consumers are children at schools and child care systems. (Refer to the complete text of Rule 402, especially 402 (2)(c)).

Rule 405 (1) Each public notice shall include all of the following:

- (a) a description of the violation including the contaminant,
- (b) when the violation occurred,
- (c) potential adverse health effects (required text is in italics on the posting under Potential Health Effects),
- (d) the population at risk,
- (e) if an alternate water supply should be used,
- (f) what actions consumers should take including when they should seek medical help,
- (g) what the supplier is doing to correct the problem,
- (h) when the problem is expected to be corrected,
- (i) the name, address, and phone number of the supplier to contact for additional information.

DO NOT DRINK THIS WATER



Do not use tap water for:

- Drinking
- Soup, Juice, Coffee
- Making Ice
- Brushing teeth

For your safety, until the problem is corrected, safe water is provided as follows:
USE BOTTLED WATER
IN KITCHEN AND BREAK ROOM & BAGGED ICE IN FREEZER. (sample language)

Coliform bacteria were found in the [System Name] water supply on [date].

DO NOT DRINK THE WATER. USE ALTERNATE SUPPLY OF WATER FOR CONSUMPTION

Potential Health Effects

Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

What happened? What is being done?

Bacterial contamination can occur when surface waters gains entry to the drinking water source, storage or distribution system (after construction, repairs, or damage to the well, tanks, or piping).

We are working with the local health department to resolve this problem. We anticipate resolving the problem within [estimated time frame].

For more information, please contact «MsMr» «FirstName» «LastName», «Supply_Name», at «Phone» or [mailing address], or the [name of local health department].

PROOF OF DELIVERY

WSSN

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature

Title

Date Distributed

Public Notification / Noncommunity Water Supplies

The Public Notice template provided is intended to be modified with the applicable information (system name, MCL date, correction date, contact person, etc.) prior to delivery. Also, reference to the uses of water, location of alternate water sources, or reference to bathing / showering etc. are to be modified on the template for the individual facility / situation. The duration of the notice is continuous through posting until compliance with the MCL is determined by the local health department. A system that is closed or taken out of service when the MCL is determined shall provide public notice for at least 2 weeks or until compliance is attained and shall not resume providing water to the public until the MCL violation has been resolved as determined by the local health department.

The Public Notice template on the reverse side should contain all applicable requirements summarized below when properly completed and posted.

The following is a summary of public notice requirements for owners of noncommunity systems. For specific requirements for public notification for coliform maximum contaminant level violations, please refer to Part 4 of the Safe Drinking Water Act 1976 PA 399, as amended.

Rule 401a (1): All MCL violations require public notice.

Rule 401a (4) Technically owners have 10 days to certify to the department they provided the notice (ie. send a signed copy). However, since they are required to issue the notice within 24 hours (see below) it is not appropriate to wait 10 days to see if a notice is received to verify compliance. (See Coliform Follow up at Noncommunity Supplies.)

Rule 402 (1)(a)(g) E. coli or fecal coliform are Tier 1 notices. Under (g) Total coliform MCLs are also considered Tier 1 for noncommunity systems.

Rule 402 (2)(a) Public notice shall be provided as soon as practical but within 24 hours after the supplier learns of the violation.

Rule 402 (3) Suppliers shall provide the notice in a form and manner reasonably calculated to reach all persons served through 1 or more of the following forms of delivery:

- (a) broadcast media, radio television,
- (b) posting of the notice in conspicuous locations throughout the area served by the system,
- (c) hand delivery to persons served by the system,
- (d) another delivery method approved in writing by the department.

Conspicuous locations include where water can be consumed ie. bathroom, breakroom sink, kitchen, motel room, drinking fountain, and common area such as entry doors or cash register area where applicable.

Parents/guardians must be provided notice when consumers are children at schools and child care systems. (Refer to the complete text of Rule 402, especially 402 (2)(c) .)

Rule 405 (1) Each public notice shall include all of the following:

- (a) a description of the violation including the contaminant,
- (b) when the violation occurred,
- (c) potential adverse health effects (required text is in italics on the posting under Potential Health Effects),
- (d) the population at risk,
- (e) if an alternate water supply should be used,
- (f) what actions consumers should take including when they should seek medical help,
- (g) what the supplier is doing to correct the problem,
- (h) when the problem is expected to be corrected,
- (i) the name, address, and phone number of the supplier to contact for additional information.

NOTICE

NITRATE STANDARD EXCEEDED WATER UNSUITABLE FOR INFANTS

Under the provisions of the Safe Drinking Water Act, 1976 PA 399 and Rules as amended, the EPA has set the Maximum Contaminant Level (MCL) for Nitrate at 10.0 mg/l (milligrams per liter). Water sampling at this facility indicates this drinking water standard has been exceeded.

BE ADVISED

Possible Health Effects

Infants below the age of six months who drink water containing nitrate in excess of the maximum contaminant level could become seriously ill and, if untreated may die. Symptoms include shortness of breath and blue baby syndrome.

If you are pregnant or have specific health concerns, you may wish to consult your doctor.

Steps Being Taken

A supply of bottled water that meets drinking water standards is available for infants and those who request it. (Boiling the water only serves to concentrate nitrate, thereby increasing the hazard.)

The availability of a nitrate safe source of water is being evaluated by the management in cooperation with the Health Department. Nitrates can often be associated with surface or near surface water contaminants such as fertilizers, septic systems and animal waste. Thus the presence of nitrate in significant concentrations in a drinking water well is a concern whether or not infants use the water.

Thank you for your patience and cooperation.

Water Supply Representative _____

Phone _____

Date _____

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DO NOT DRINK THE WATER

Under the provisions of the Safe Drinking Water Act, Act 399 P.A. 1976 and Rules as amended, in situations where the director determines that an imminent hazard to the public health exists, the owner of public water supply shall make immediate notification to the customers or users of the supply.

BE ADVISED

The water may not be used for drinking, food preparation or for ice making purposes. Any person using this water for these purposes is at risk.

The source of water for the < > has a well construction deficiency that may have allowed contaminants to enter the well. The drinking water can not be considered safe until the construction deficiency has been corrected and appropriate water sample results are collected to assess the bacteriologic quality of the water. The < > is now taking the necessary measures to correct the deficiency and confirm the drinking water quality.

A supply of drinking water that meets drinking water standards is being made available for your use during this time period where corrections are being made on the system. Presently, the problem is being evaluated by _____x, in association with the < > County Health Department.

Additional assistance is available if you have questions by calling either the < > County Health Department at < phone > or from the Michigan Department of Environmental Quality, Drinking Water & Environmental Health Section at 517-241-1371. Thank you for your cooperation.

Owner/Operator

Date

Health Department Representative

Date

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Do Not Drink the Water Precautionary Measures in Effect

To: Customers of the *(Name of facility)* Water System
Date: *(Date)*

As a precautionary measure, users of the *(Name of facility)* water system are advised that for the present time the water should not be used for drinking and cooking. An alternative source of drinking water is being provided at the *(service building/office)*.

These precautionary actions are being taken due to the loss of water pressure caused by *(a loss of power)* on *(July 4, 2001)*. Whenever a water system loses pressure for any significant length of time there is the potential for intrusion, precautionary measures are recommended.

The *(Name of facility)* is in process of restoring pressure and will be taking other remedial actions such as flushing (*, disinfection of the system*)(**note: disinfection of the system may not be necessary**) and collecting bacteriological samples from around the system. The samples will be collected to determine that the water quality meets the state drinking water standards.

The precautionary notice measures shall remain in effect until results from the sampling verify the water is safe to drink. Users will be advised when the *(bottled/hailed)* water precautionary measures have been lifted.

For more information contact:

Owner/representative: _____ *(Phone number)*

(Name of local health department) Health Department *(Phone number)*

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MAXIMUM CONTAMINATION LEVEL NOTICE OF VIOLATION

Date:

Facility
Attn:
Address
WSSN

SUBJECT: Maximum Contamination Level Violation for Arsenic

Dear < Owner/Operator>:

Water samples taken from the above facility's water system detected arsenic at a concentration that exceeds the standard or maximum contaminant level (MCL) set forth by the United States Environmental Protection Agency (USEPA). Under the provisions of the Safe Drinking Water Act (SDWA), 1976 PA 399, and rules as amended, the USEPA has set the MCL for arsenic at 10 parts per billion (ppb). The annual running average of the arsenic concentration detected at this facility is <#####> ppb as calculated on <date of violation>.

Therefore, you are in violation of the SDWA. You are required to post a public notice in a conspicuous location where water is consumed. The posting shall remain for the duration of the violation, stating that this water supply does not meet the standard for arsenic according to law. **<Schools and daycare centers are to deliver a notice to parents/guardians>** A copy of the signed, dated public notice must be submitted to this office as verification the consumers have been notified. You are also required to contact this office to discuss corrective actions and a timetable for compliance. An alternate drinking water supply from a safe source is recommended until corrective action(s) have been taken. Please be aware, this violation must be reported to the USEPA.

Failure to comply with these requirements within 14 days of receipt of this notice may result in further enforcement action, which may include civil fines.

If you have any questions regarding this matter, you may contact me at <###-####> during normal office hours.

Sincerely,

J. Sanitarian

Public Notice

Water Quality Maximum Contamination Level Violation For Arsenic

Facility Name: _____

WSSN: _____

Date violation occurred: _____

Water samples taken from this facility's water system detected arsenic at a concentration that exceeds the standard, or maximum contaminant level (MCL), set forth by the United States Environmental Protection Agency, (USEPA). **Under the provisions of the Safe Drinking Water Act, 1976 PA 399, and rules as amended, the USEPA has set the MCL for arsenic at 10 parts per billion, ppb. The annual running average of the arsenic concentration detected at this facility is:**

_____ ppb

BE ADVISED

The USEPA sets drinking water standards and has determined that the presence of arsenic above the established MCL could pose a long-term health concern. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer. Major sources of arsenic in drinking water may occur from the erosion of natural deposits; runoff from orchards; or runoff from glass and electronics production wastes.

Although immediate adverse health effects are not expected, a supply of drinking water that meets drinking water standards is being made available for your use during this time period where corrections are being made on the system. Presently, the problem is being evaluated by the management, in association with the _____ County Health Department.

Thank you for your cooperation. If you have questions about sample results or public health concerns, please contact either:

Facility Representative

Phone

Date

PUBLIC NOTICE

WATER QUALITY MONITORING VIOLATION

Facility Name: _____

Water Supply Serial Number: _____

Water quality at Noncommunity Public Water Supplies is regulated under the provisions of the Michigan Safe Drinking Water Act, Act 399 P.A. 1976 and Administrative Rules as amended. The Act defines specific water sampling and monitoring requirements which suppliers must follow. ***(Name of water supply)* failed to sample for the parameters indicated below, during the listed monitoring period:**

Contaminant ----- **Coliform Bacteria**

Monitoring Period ----- **Failed to collect bacteria sample within 24 hours of notification of a positive coliform result on (date of positive result)**

This facility (is in the process of obtaining water quality samples) or (has since obtained the necessary repeat samples as required by the Safe Drinking Water Act. The administration will work to make sure that the required water quality testing schedule is observed in the future.

If you have questions concerning water quality sampling at this facility, please contact:

Facility Representative Phone: _____

Date: _____

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IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

(System Name) WATER CONTAINS ELEVATED LEVELS OF LEAD

Recent water sampling carried out in accordance with the United States Environmental Protection Agency (USEPA) mandated procedures has shown lead concentrations in some first draw water samples from this facility to be above the lead action level of 15 parts per billion.

We are currently evaluating various means to reduce lead levels. This may include replacing fixtures and piping which may be contributing lead to the water, and/or installing chemical corrosion control treatment. The program selected will be conducted in accordance with the requirements of the USEPA and the MDEQ. If you have questions about how we are carrying out the requirements of the lead regulation, please contact the management at this facility.

HEALTH EFFECTS OF LEAD

This is not an emergency. Lead is a common metal found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery, porcelain, pewter, and in drinking water. **Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.**

Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome plated brass faucets, and in some cases, pipes made of lead.

STEPS TO REDUCE EXPOSURE TO LEAD IN DRINKING WATER

The following simple steps can be taken to reduce your exposure to lead in drinking water. This is a simple and inexpensive measure you can take to protect your health. "Flush" the tap before using the water for consumption. *Flushing* the tap means running *the cold water faucet* until the water gets noticeably colder, usually about 15-30 seconds. *Do not cook with, or drink water from the hot water tap.* Hot water can dissolve more lead, more quickly than cold water. You can consult a variety of sources for additional information. Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead. Local and state government agencies that can be contacted include:

- 1) Your local county or district health department.
- 2) The MDEQ at 517-241-1370 or 906-346-8530 in the Upper Peninsula.

Signature: _____ Date: _____

Title: _____ Telephone: _____

PUBLIC EDUCATION DRINKING
WATER FIXTURE POSTING

- § In conjunction with the distribution of the mandatory public education narrative on lead in drinking water for all regular users, the *optional sample posting* below may also be displayed at drinking fountains and taps used primarily for drinking purposes.

NOTICE

Lead levels in some first draw water samples have tested above the EPA action level of 15 parts per billion. To minimize the potential exposure to lead, flush all drinking water taps for 15-30 seconds prior

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< Date >

Dear Water Supply Owner:

SUBJECT: Annual Water Quality/Consumer Confidence Reporting for K-12 Schools and Child Care Facilities

Your facility has been identified as a nontransient noncommunity water supply (school or child care facility with its own well) under the Safe Drinking Water Act, 1976 PA 399, as amended. The Act requires ***K-12 schools and day care facilities that are nontransient noncommunity water supplies to prepare and make available an annual water quality.*** This is to notify you and provide information to help you comply.

The annual water quality report must contain:

- ÿ A summary of water sampling results and compliance information for the previous calendar year OR copies of the laboratory results and any violation notices for all compliance monitoring.
- ÿ A notification that a source water assessment has been completed and that a copy is available upon request (provided to you by the local health department.)

Notification of Availability:

- ÿ Customers (staff, students, and parents or legal guardians of student less than 18 years of age) must be notified that the report is available for inspection. This can be done via letter, handout, or school newsletter.
- ÿ A notice of availability must also be posted for at least 30 days in a public area of the building.
- ÿ Copies of the annual report and the notice must be retained for no less than 5 years.

If the annual water quality report is made available for review in the form of copies of sample results, they should be organized by date collected and made available for review upon request by the customers. Copies of any violation notices or public notices must also be included for review. *If you choose to provide a summary of water quality compliance directly to your customers, the enclosed form must be completed and attached to the list of sampling requirements that is also included with this letter.*

If you have any questions regarding this new requirement, please contact this office.

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**Annual Water Quality Report
(Safe Drinking Water Act, 1976 PA 399, as amended)**

The table below lists the drinking water quality compliance information for _____ WSSN _____ during the _____ calendar year. Unless otherwise noted, the data presented in this table is from testing done January 1 - December 31, _____. Sampling for certain contaminants is done less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All of the data is representative of the water quality, but some are more than one year old.

A complete list of what the drinking water is required to be tested for is enclosed. It includes information regarding possible sources of the contaminants, vulnerable sub-populations; the maximum contaminant level allowed or established action level, and possible health effects.

Contaminant Group	Required Samples Collected (YES/NO)	Date of Violation	Meets Drinking Water Standards YES/NO	Date of Violation	Sampling Frequency	Date of Last Sample
Coliform bacteria					Monthly/Quarterly/Annual (circle one)	
Nitrates					Annual	
Nitrites					One sample every 36 months	
Metals					One sample every ____ months	
Volatile Organic Chemicals					One sample every ____ months	
Synthetic Organic Chemicals					One sample every ____ months	
Lead					____ sample(s) every ____ mos.	
Copper					____ sample(s) every ____ mos.	

Submitted by: _____ Title: _____ Date: _____

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Attn: Mr/Ms facility owner
Facility
Street Address
City, Michigan, Zip

RE: Imminent Public Health Concern at < > Water Supply
WSSN: < >

Dear < >:

On < **date** > a follow-up inspection was made on the water supply system at < **facility** >. The purpose of this follow-up inspection was to confirm that the required corrections had been made on the water supply as outlined in the prior sanitary survey letter of < **date** >.

The items of noncompliance were as follows:

1. < >
2. < >

The follow-up inspection showed that the necessary corrections have not been made and this facility remains in noncompliance with Michigan's Safe Drinking Water Act, Act 399, P.A. 1976 and Administrative Rules. The failure to correct these deficiencies in a timely manner continues to allow a public health concern to remain. The < **noncompliant item** > can allow contaminants to directly enter the water well. The < **noncompliant item** > is to be replaced/repaired at once. Information regarding the < **noncompliant item** > is also to be provided to our office.

Until the < **noncompliant item** > is replaced/repaired the water is considered at risk for contamination. Precautionary measures are to be **immediately implemented** until the < **noncompliant item** > is replaced/repaired. Precautionary measures include:

- Ø Providing an alternate source of potable water to users of the supply (bottled water).
- Ø Provide public notice posting indicating that the source of the water supply has been compromised due to a construction deficiency. The posting must include the following information:
 1. Steps that the water system is taking to correct the problem.
 2. The availability of an alternate source of drinking water.

3. Preventative measures the consumer should take until the violation is corrected.
 4. Telephone number where additional information can be obtained.
- Ø A copy of the required public notice posting is enclosed. Please sign a copy of the posting and return it to our office within 30 days.

The public notice posting is to be placed in a prominent location and stay in place until the construction violation is corrected. After the **< noncompliant item >** has been replaced/repared, and before the well is put back into service, at least 2 consecutive total coliform bacteriologic samples shall be collected with the results showing the absence of coliform organisms.

Your water supply serial number is WSSN **< >**, and must be recorded on the water sample form. Act 399 specifies that it is the owner/operator's responsibility to collect and submit the required water samples for analysis and to maintain and operate the water system in a sanitary condition.

Both the correction of the construction deficiency and the required special purpose water sampling must be done immediately. Please contact this office as soon as the required posting and corrective actions are complete. If you have questions regarding the sanitary survey, the construction deficiencies or the sampling requirement, please call 517-743-2218. Thank you.

Sincerely,

**< NC Staff Name >
Noncommunity Sanitarian
County Health Department**

Enclosure
cc: **< >** DEQ

(date)

(name)

Dear :

Enclosed is a formal Notice of Violations, as required by the Michigan Safe Drinking Water Act, 1976 PA 399, that details the deficiencies with the bacteriologic monitoring at (system name).

An informal conference to discuss and resolve this problem has been scheduled as noted in the Notice of Violations.

If you choose not to attend, please contact me immediately at (staff's phone #). If we do not hear from you by (date) or if you fail to attend the informal conference, we will proceed with formal enforcement action.

Sincerely,

Noncommunity Unit
Drinking Water and
Environmental Health Section
Water Bureau
517-241-

Enclosure

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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER BUREAU
DRINKING WATER AND ENVIRONMENTAL HEALTH SECTION

In the matter of administrative proceedings against _____ for failure to construct and operate a water works system adequately to protect the public health pursuant to state law and administrative rules.

NOTICE OF VIOLATIONS

AND

NOTICE OF INFORMAL OPPORTUNITY TO SHOW COMPLIANCE WITH
STATUTORY AND REGULATORY REQUIREMENTS

TO:

This proceeding arises from Michigan Department of Environmental Quality investigations regarding alleged violations of state law and administrative rules by (name of supply) relating to the construction and operation of a public water supply system.

YOU ARE HEREBY ADVISED that the Michigan Department of Environmental Quality (hereinafter "Department") will commence enforcement action against you and will issue an order for compliance with applicable statutory and regulatory requirements, or other appropriate relief, unless the deficiencies and violations are promptly remedied.

YOU ARE FURTHER ADVISED that these enforcement actions are predicated upon evidence of deficiencies associated with the public water supply serving (name of supply). These deficiencies are in violation of the provisions of 1976 PA 399 (MCLA 325.1001 et seq.) and Act 368 P.A. 1978, Part 125 and administrative rules promulgated by the Department pursuant to authority of those Acts (Michigan Administrative code R325.12701 et seq., and R325.1601 et. seq (herein the Rules)). The specific violations forming the basis for this proposed enforcement action are summarized as follows:

- a. Pursuant to Section 15 of Act 399 (MCLA 325.1015 (1), (2), (4), 325.10703) the Department has determined that certain water supply facilities have been operating at the above named facility which do not meet the state drinking water standards. Specifically, (brief explanation of violation)

- b. Pursuant to Section 19 of Act 399 (MCLA 325.10404), the supply has been operating without required public notification for failure to monitor.
- c. Pursuant to R325.1007, the above named water supply has been operating without collecting and analyzing water samples or reporting the sample results to the department as prescribed. Specifically, (brief explanation of violation)

Representatives of the Michigan Department of Environmental Quality participating in the investigations and who are able to document the aforementioned requirements, deficiencies and violations include:

Name(s) of sanitarian

YOU ARE FURTHER ADVISED that you will be provided and informal opportunity to show compliance with applicable statutory and regulatory requirements; or to submit a plan of correction by which you agree to be bound; or to show cause, if any, why formal enforcement proceedings should not be commenced against you by the Department.

Unless you inform the Department that you choose not to attend, the informal conference has been scheduled as follows:

DATE:

TIME:

PLACE:

The following persons have been designated to represent the Michigan Department of Environmental Quality at such conference:

Name(s) of persons involved from enforcement agency.

Other members of the staff of the Department may also be present.

HEALTH OFFICER: _____

DATE _____

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER BUREAU
DRINKING WATER AND ENVIRONMENTAL HEALTH SECTION

In the matter of: (name and address of supply)

_____ /

ORDER

The above matter having come before (name of hearing officer, title, department name) regarding the failure to meet the Michigan Safe Drinking Water Act, 1976 P.A. 399, MCLA 325.1001, et seq.; and, a Consent Agreement to correct this violation having been reached between the Department's Environmental Health Section and (supply owners name) which is acceptable to the Department and in the public interest;

IT IS THEREFORE ORDERED that the Consent Agreement of (date of agreement) is incorporated by reference into this Order, and is adopted in this Order as if fully set forth.

This Order is made and dated on the _____ day of _____, in (county of origin), Michigan.

Health Officer

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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

In the Matter of (system name), and operated by (owner)	County, owned
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CONSENT AGREEMENT

The Michigan Department of Environmental Quality, hereinafter referred to as the "Department" and (name of supply owner) water system, (county name) County, hereinafter referred to as "supplier," agree that the Supplier has violated the (Construction Standards/Monitoring Requirements) of 1976 P.A. 399, MCL 325.1001 et seq. and administrative rules promulgated by the Department pursuant to authority of that Act, Michigan Administrative Code R325.10102 et seq.

The department and the supplier agree that the following violations have occurred:

- A. Pursuant to Section 7 of Act 399, the supplier of water shall collect water samples or have them collected on a schedule at least equal to that outlined in the rules. Specifically, the supplier is required by Rule R325.10705 to collect samples of water from representative locations of a distribution system to be analyzed for the presence of coliform bacteria at regular time intervals and in numbers according to the population served by the system. The frequency of sampling as set forth in Table 1 in Rule R325.10737 is _____ sample per month.

(Include public notice requirements for monitoring violations)

(list further violations)

In order to correct these violations, the Department and the Supplier agree that the Supplier will collect and submit to a laboratory certified by the Department, at least (# of required samples). The Supplier also agrees to promptly collect check samples or other re-samples in response to the laboratory results as required by Rules R325.10707 and R325.10708.

The Supplier also acknowledges that the number of routine and check samples required by the Rules may be increased in the future. The Department agrees to notify the Supplier in writing whenever a change in monitoring requirement(s) occurs.

Michigan Department of Environmental Quality

Health Officer: _____

Date: _____

System Name

Owner of Supply: _____

Date _____

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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

Proceedings Against: (name)
for Failing to Perform Required
Monitoring of a Noncommunity Public
Water Supply

_____ /

DEPARTMENT ORDER

TO: (owner name)

YOU ARE HEREBY NOTIFIED that the Michigan Department of Environmental Quality has determined that after investigation and evaluation of the monitoring record for (owner name), owner of (supply name), there is noncompliance with the provisions of Public Act 1976 PA 399, MCLA 325.1001 et seq., and administrative rules promulgated hereunder, Administrative Code R325.10101 et seq., in that the owner has failed and is failing to adequately monitor the public water for bacteriologic quality.

The Department has determined that continued operation of this supply is in noncompliance with the provisions of the Act and Rules.

Specific violations are as follows:

1. The supplier of water has failed to collect samples and cause analysis to be made for coliform bacteria to determine compliance with state drinking water standards as required by R325.10704.
2. The supplier of water has failed to collect samples of water from representative locations on the distribution system to be analyzed at regular intervals and in numbers according to the population served by the system. The sampling frequency established for (system name) by R325.10705 and 325.10737 is ___ sample(s) per _____. Department records show that (owner name) has not collected samples in a consistent manner and failed to sample: (list sampling failures)

NOW THEREFORE YOU ARE HEREBY ORDERED to correct the inadequate monitoring of a public water supply system pursuant to Section 15 of Act 399 of the Public Acts of

1976, MCLA 325.1015, in accordance with the following requirements, conditions, and restrictions:

1. The following shall be accomplished:

Collect the required ___ bacteriologic sample(s) from the water system and submit such sample(s) to a Michigan Department of Environmental Quality certified laboratory for analysis in accordance with R325.10705. Such sampling shall continue as long as the public water supply is in operation. Sample results are to be submitted to this Department.

YOU ARE FURTHER NOTIFIED in accordance with Section 15(2) of the Act, that you are provided an opportunity to request a public contested case hearing on the facts and the above Order within thirty (30) days after receipt of this Order to be held by the Michigan Department of Environmental Quality. If such hearing is not requested within thirty (30) days after receipt of this Order, the Order shall be final and binding.

YOU ARE FURTHER NOTIFIED that if a hearing is requested, it will be duly noticed and will proceed in accordance with Part 2 of the Department's Administrative Rules entitled, "Supplying Water to the Public," being R325.10201 to R325.10208 of the Michigan Administrative Code, and Chapter 4 of the Administrative Procedures Act of 1969, MCLA 24.271 et seq.

YOU ARE FURTHER NOTIFIED that in accordance with the Act, MCLA 325.1022, a person who violates an Order issued pursuant to this act may be fined by the circuit court up to \$5,000.00 for each day of violation. Criminal charges may also be brought pursuant to MCLA 325.1021.

This order is issued by the Michigan Department of Environmental Quality on _____, 19__, in accordance with the provisions of the Act.

Health Officer

Draft
[Local Health Department]

[Date]

Subject: Noncommunity Civil Fine Appeal, WSSN: 20000-00

Dear [Public Water Supply Owner/Operator],

In response to your request to waive the civil fine issued by this office, an informal hearing to discuss compliance with the requirements of the Safe Drinking Water Act, 1976 PA 399 as amended will be scheduled. You will be required to bring the following to the meeting:

1. Proof of payment of any delinquent noncommunity water supply annual fee(s) from the Michigan Department of Environmental Quality, Drinking Water and Environmental Health Section. Please contact (noncommunity staff person at phone number) to determine if fees are past due and arrange for payment. (if applicable)
2. Water sample results for current monitoring period. You will need sample results from a certified laboratory for (parameters due this monitoring period).
3. Proof of compliance with the schedule to upgrade or modify the drinking water system as per the attached letter from this agency dated____. (if applicable)
4. A written plan of action indicating how you will meet future sampling requirements to be used in forming a compliance agreement with this agency.

When you have the above documents, please contact this office for an appointment to meet and discuss the waiver of the civil fine and establishing a plan for future compliance including signing a bilateral compliance agreement.

If you have any questions concerning this letter please contact_____ at (LHD).

Sincerely,

cc: Noncommunity Staff Person, DEQ
Environmental Health Director

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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER AND ENVIRONMENTAL HEALTH SECTION
WATER BUREAU

**Permit Application for Noncommunity Public Water Supply Systems
Construction-Alteration-Addition or Improvement
Required Under Authority of Act 1976 PA 399, as amended**

County Health Department Name, Street Address, City, State & Zip code

Plan Review for installing equipment for the purpose of injecting treatment chemicals

Facility Name _____

Street Address _____

City _____ State _____ Zip _____

Public Water Supply System Number (WSSN): _____ - _____

Facility Owner

Name _____ Ph. ____/____/____

Address _____

City _____ State _____ Zip _____

Email _____

Treatment System Designer

Name _____ Co. _____ Ph. ____/____/____

Address _____

City _____ State _____ Zip _____

Email _____

The Basis of Design for the proposed treatment must be documented. Please include the following information in the plan submittal:

Number of wells -
Pumping rate of each well -
Peak demand of water system in gpm -
Make and model of injection pump -
Pumping Rate of injection pump -
What will be injected into the water supply – (usually 12.5% NSF 60 certified sodium hypochlorite)

Number of service connections -
Reason for injecting chemicals into the water supply –
Target free chlorine residual -
Total population served -
Operating pressure and system controls -

Other Treatment Description and basis of design for other treatment applied such as softening, disinfection, iron removal, etc.

Water Quality (Untreated) Provide results from water testing of the raw water as follows:

Nitrates _____ (mg/l)	Iron _____ (mg/l)	Silica _____ (mg/l)
Conductivity _____ (mg/l)	Manganese _____ (mg/l)	Phosphate _____ (mg/l)
Sulfates _____ (mg/l)	Total Hardness _____ (mg/l)	Sodium _____ (mg/l)
Sulfides _____ (mg/l)	Total Arsenic _____ (mg/l)	pH _____ (mg/l)
Chlorides _____ (mg/l)	Arsenic III _____ (mg/l)	Other _____ (mg/l)

Plans & Specifications Identify the following on all plans

- 1) Piping schematic identifying:
 - a. all piping
 - b. tanks
 - c. pumps
 - d. valves
 - e. gauges
 - f. meters
 - g. sampling locations
 - h. backwash discharge/receiving system

Operation & Maintenance

Provide the following information:

- 1) Operation manual Including:
 - a. Routine operation and maintenance activities
 - b. Troubleshooting guide
 - c. Permanent tags/labels for piping, valves, gauges, sample taps, key components
 - d. Process and plan for regeneration of media

Certified Operator Identify an operator certified at or above the D5 level (limited treatment)

Name	Cert Number / Level

Chlorine Residual Testing Manufacturer's literature, operation and maintenance manual and test kit information are to be provided. These materials are to be made available on-site to the operator.

Test Kit Manufacturer	Model Number	Range of Detection	Degree of Accuracy

Operation Report Monthly operation report (attached) is to be submitted by the certified operator.

Other Relevant Information

Alternate Source If another approved water source is available (by connection or drilling a new well) that source shall be used in lieu of treating a source that exceeds drinking water standards

Distance and name of nearest municipal water system:

Is connection to municipal water possible? Yes _____ No _____

Comments; _____

Third Party Standards. Equipment, materials, and additives in contact with potable water must meet ANSI/NSF Standards 60 and 61.

- 1) Provide ANSI/NSF listing if any “Drinking Water Treatment Chemicals are involved in treatment system.
- 2) Provide ANSI/NSF certification listing for “Drinking Water Treatment Units”. Standards 42 Drinking Water Treatment Units - Aesthetics, 44 Residential Cation Exchange Water Softeners, 53 Drinking Water Treatment Units – Health Effects, 55 Ultraviolet Microbiological Water Treatment Systems, 58 Reverse Osmosis Drinking Water Treatment Systems and 62 Drinking Water Distillation System).
- 3) Provide ANSI/NSF product listing for “Drinking Water System Components”. (Standard 61)

Provide a copy of the permit application and plans and specifications to the local health department and:

Department of Environmental Quality
Noncommunity Unit
Drinking Water and Environmental Health Section
Water Bureau
525 W Allegan Street
P.O. Box 30273
Lansing, Michigan 48909-7773



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER AND ENVIRONMENTAL HEALTH SECTION
WATER BUREAU

**Permit Application for Noncommunity Public Water Supply Systems
Construction-Alteration-Addition or Improvement
Required Under Authority of Act 1976 PA 399, as amended**

County Health Department Name, Street Address, City, State & zip code

Plan Review for Arsenic Treatment Type: Iron-Based Media Adsorption

Facility Name _____

Street Address _____

City _____ State _____ Zip _____

Public Water Supply System Number (WSSN): _____ - _____

Facility Owner

Name _____ Ph. ____/____/____

Address _____

City _____ State _____ Zip _____

Email _____

Treatment System Designer

Name _____ Co. _____ Ph. ____/____/____

Address _____

City _____ State _____ Zip _____

Email _____

The Basis of Design for the proposed treatment must be documented. Please include the following information in the plan submittal:

Type and volume of media
Contact time
Filtration rate -
Rated capacity per unit in gpm per square foot -
Effective size and uniformity coefficient of media -
Total population served -
Number of service connections -

Peak demand of water system in gpm -
Operating pressure and system controls -
Backwash discharge (volume, frequency & arsenic concentration) -
Location & approval for backwash discharge -

Other Treatment Description and basis of design for other treatment applied such as softening, disinfection, iron removal, etc.

Water Quality (Untreated) Provide results from water testing of the raw water as follows:

Nitrates _____ (mg/l)	Iron _____ (mg/l)	Silica _____ (mg/l)
Conductivity _____ (mg/l)	Manganese _____ (mg/l)	Phosphate _____ (mg/l)
Sulfates _____ (mg/l)	Total Hardness _____ (mg/l)	Sodium _____ (mg/l)
Sulfides _____ (mg/l)	Total Arsenic _____ (mg/l)	pH _____ (mg/l)
Chlorides _____ (mg/l)	Arsenic III _____ (mg/l)	Other _____ (mg/l)

Plans & Specifications Identify the following on all plans

- 1) Piping schematic identifying:
 - a. all piping
 - b. tanks
 - c. pumps
 - d. valves
 - e. gauges
 - f. meters
 - g. sampling locations
 - h. backwash discharge/receiving system

Operation & Maintenance

Provide the following information:

- 1) Operation manual Including:
 - a. Routine operation and maintenance activities
 - b. Troubleshooting guide
 - c. Permanent tags/labels for piping, valves, gauges, sample taps, key components
 - d. Process and plan for regeneration of media

Certified Operator Identify an operator certified at or above the D5 level (limited treatment)

Name	Cert Number / Level
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Arsenic Testing Manufacturer’s literature, operation and maintenance manual and test kit information are to be provided. These materials are to be made available on-site to the operator.

Test Kit Manufacturer	Model Number	Range of Detection	Degree of Accuracy
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Operation Report Monthly operation report (attached) is to be submitted by the certified operator.

Other Relevant Information

Alternate Source If another approved water source is available (by connection or drilling a new well) that source shall be used in lieu of treating a source that exceeds drinking water standards

Distance and name of nearest municipal water system:

Is connection to municipal water possible? Yes _____ No _____

Comments; _____

Third Party Standards. Equipment, materials, and additives in contact with potable water must meet American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standards 60 and 61.

- 1) Provide ANSI/NSF listing if any “Drinking Water Treatment Chemicals are involved in treatment system.
- 2) Provide ANSI/NSF certification listing for “Drinking Water Treatment Units”. Standards 42 Drinking Water Treatment Units - Aesthetics, 44 Residential Cation Exchange Water Softeners, 53 Drinking Water Treatment Units – Health Effects, 55 Ultraviolet Microbiological Water Treatment Systems, 58 Reverse Osmosis Drinking Water Treatment Systems and 62 Drinking Water Distillation System).
- 3) Provide ANSI/NSF product listing for “Drinking Water System Components”. (Standard 61)

Backwash Discharge Approval is required for disposal of backwash water. Requirements are dependent on the type of disposal and waste water to be discharged. Identification of the waste receiving systems, approval for discharge and characterization of the backwash water will be required for approval to install an arsenic removal system on a public water supply.

Backwash water will be discharged to: Municipal sewer _____,

Septic tank/drainfield _____, Storm sewer _____, Lagoon _____,

Other _____, If other describe location:

Provide a copy of the permit application and plans and specifications to the local health department and:

Department of Environmental Quality
Noncommunity Unit
Drinking Water and Environmental Health Section
Water Bureau
525 W Allegan Street
P.O. Box 30273
Lansing, Michigan 48909-7773



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER AND ENVIRONMENTAL HEALTH SECTION
WATER BUREAU

**Permit Application for Noncommunity Public Water Supply Systems
Construction-Alteration-Addition or Improvement
Required Under Authority of Act 1976 PA 399, as amended**

County Health Department Name, Street Address, City, State & zip code

Plan Review Submitted for Green Sand Iron Removal Filter
Facility Name _____
Street Address _____
City _____ State _____ Zip _____
Public Water Supply System Number (WSSN): _____ - _____

Facility Owner
Name _____ Ph. ____/____/____
Address _____
City _____ State _____ Zip _____
Email _____

Treatment System Designer
Name _____ Co. _____ Ph. ____/____/____
Address _____
City _____ State _____ Zip _____
Email _____

The following information must be included with your plan submittal:

Type of greensand media used -
Media Layers (if applicable) -
Depth of media layer(s)-
Diameter and number of treatment vessel(s) -
Backwash flow rate and duration -
Backwash frequency (days) -

Oxidant Used (Usually sodium hypochlorite or potassium permanganate, brand and concentration, NSF 60 certified) –
Method of greensand regeneration (continuous or intermittent) -
Method of controlling regeneration (ex. Continuous regeneration injection pump electrically interconnected with well pump, intermittent regeneration triggered by____)
Total population served -
Number of service connections -
Peak demand of water system in gpm -

Other Treatment

Description and basis of design for other treatment applied such as aeration, chemical addition, softening, disinfection, etc.

Water Quality (Untreated)

Total Hardness _____ (mg/l)	Iron _____ (mg/l)	pH _____ (mg/l)
Nitrates _____ (mg/l)	Chlorides _____(mg/l)	Other _____(mg/l)
Total Arsenic _____ (mg/l)		

Plans & Specifications

- 1) Include with the proposal plans and specifications identifying:
 - a. all piping, valves, gauges, meters, sampling locations
 - b. chemical injection location (if applicable)
 - c. concentrate discharge/receiving system
 - d. mechanical warning alarm
 - e. labeled “Raw Water” and “Treated Water” taps
 - f. make and model of equipment including chemical injection pumps
 - g. method of controlling chemical injection or regeneration process

Operation & Maintenance

- 1) Include with the proposal an operation manual Including:
 - a. Routine operation and maintenance activities
 - b. Troubleshooting guide
 - c. Permanent tags/labels for piping, valves, gauges, sample taps, key components
 - d. Critical factors affecting operation and maintenance of treatment system

Certified Operator Identify an operator certified at or above the D5 level (limited treatment)

Operator Name	Cert. Number / Level

Free Chlorine Residual Field Test Kit Information (If using chlorine): Manufacturer’s literature, operation and maintenance manual and test kit information are to be provided. These materials are to be made available on-site to the operator.

Test Kit Manufacturer	Model Number	Range of Detection	Degree of Accuracy

Operation Report Monthly operation report (attached) is to be submitted by the certified operator.

Other relevant Information

Alternate Source If another approved water source is available (by connection or drilling a new well) that source shall be used in lieu of treating a source that exceeds drinking water standards

Distance and name of nearest municipal water system:

Is connection to municipal water possible? Yes _____ No _____

Third Party Standards Equipment, materials, and additives in contact with potable water must meet American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standards 60 (chemicals) and 61 (equipment).

- 1) Provide ANSI/NSF product listing for “Drinking Water Treatment Chemicals.” (Standard 60)
- 2) Provide ANSI/NSF product listing for “Drinking Water System Components.” (Standard 61)

Concentrate Discharge Approval is required for disposal of concentrate waste water. Requirements are dependent on the type of disposal and waste water to be discharged. Identification of the waste receiving systems, approval for discharge and characterization of the backwash water will be required for approval to install an arsenic removal system on a public water supply.

Backwash water will be discharged to: Municipal sewer _____,

Septic tank/drainfield _____, Storm sewer _____, Lagoon _____,

Other _____, if other describe location:

Provide a copy of the permit application and plans and specifications to the local health department and:

Department of Environmental Quality
Noncommunity Unit
Drinking Water and Environmental Health Section
Water Bureau
525 W Allegan Street
P.O. Box 30273
Lansing, Michigan 48909-7773



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER AND ENVIRONMENTAL HEALTH SECTION
WATER BUREAU

**Permit Application for Noncommunity Public Water Supply Systems
Construction-Alteration-Addition or Improvement
Required Under Authority of Act 1976 PA 399, as amended**

County Health Department Name, Street Address, City, State & zip code

Plan Review Submitted for Arsenic Treatment Type: Reverse Osmosis
Facility Name _____
Street Address _____
City _____ State _____ Zip _____
Public Water Supply System Number (WSSN): _____ - _____

Facility Owner
Name _____ Ph. ____/____/____
Address _____
City _____ State _____ Zip _____

Treatment System Designer
Name _____ Co. _____ Ph. ____/____/____
Address _____
City _____ State _____ Zip _____

The following information must be included with your plan submittal:

Type of Membrane Filter -
Filtration rate (permeate water) -
Discharge in GPM (concentrate) -
Operating pressure and system controls -
Holding capacity of permeate water storage tank -
Location and approval of backwash discharge -

Arsenic concentration in concentrate water -
Total population served -
Number of service connections -
Number of point of use outlets -
Location of point of use outlets -
Peak demand of water system in gpm -

Other Treatment

Description and basis of design for other treatment applied such as softening, disinfection, iron removal, etc.

Water Quality (Untreated)

Conductivity _____ (mg/l)	Iron _____ (mg/l)	Silica _____ (mg/l)
Nitrates _____ (mg/l)	Manganese _____ (mg/l)	Phosphate _____ (mg/l)
Sulfates _____ (mg/l)	Total Hardness _____ (mg/l)	Sodium _____ (mg/l)
Sulfides _____ (mg/l)	Total Arsenic _____ (mg/l)	pH _____ (mg/l)
Chlorides _____ (mg/l)	Arsenic III _____ (mg/l)	Other _____ (mg/l)

Plans & Specifications

- 1) Include with the proposal a piping schematic identifying:
 - a. all piping
 - b. valves
 - c. gauges
 - d. meters
 - e. sampling locations
 - f. concentrate discharge/receiving system
 - g. mechanical warning alarm

Operation & Maintenance

- 1) Include with the proposal an operation manual Including:
 - a. Routine operation and maintenance activities
 - b. Troubleshooting guide
 - c. Permanent tags/labels for piping, valves, gauges, sample taps, key components
 - d. Critical factors affecting expected lifespan of membrane filter

Certified Operator Identify an operator certified at or above the D5 level (limited treatment)

Operator Name	Certi. Number / Level

Arsenic Testing Manufacturer’s literature, operation and maintenance manual and test kit information are to be provided. These materials are to be made available on-site to the operator.

Test Kit Manufacturer	Model Number	Range of Detection	Degree of Accuracy

Operation Report Monthly operation report (attached) is to be submitted by the certified operator.

Other relevant Information

Alternate Source If another approved water source is available (by connection or drilling a new well) that source shall be used in lieu of treating a source that exceeds drinking water standards

Distance and name of nearest municipal water system:

Is connection to municipal water possible? Yes _____ No _____

Third Party Standards Equipment, materials, and additives in contact with potable water must meet American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standards 60 and 61.

- 1) Provide ANSI/NSF listing if any “Drinking Water Treatment Chemicals are involved in treatment system.
- 2) Provide ANSI/NSF certification listing for “Drinking Water Treatment Units”. Standards 42 Drinking Water Treatment Units - Aesthetics, 44 Residential Cation Exchange Water Softeners, 53 Drinking Water Treatment Units – Health Effects, 55 Ultraviolet Microbiological Water Treatment Systems, 58 Reverse Osmosis Drinking Water Treatment Systems and 62 Drinking Water Distillation System).
- 3) Provide ANSI/NSF product listing for “Drinking Water System Components”. (Standard 61)

Concentrate Discharge Approval is required for disposal of concentrate waste water. Requirements are dependent on the type of disposal and waste water to be discharged. Identification of the waste receiving systems, approval for discharge and characterization of the backwash water will be required for approval to install an arsenic removal system on a public water supply.

Backwash water will be discharged to: Municipal sewer _____,

Septic tank/drainfield _____, Storm sewer _____, Lagoon _____,

Other _____, if other describe location:

Provide a copy of the permit application and plans and specifications to the local health department and:

Department of Environmental Quality
Noncommunity Unit
Drinking Water and Environmental Health Section
Water Bureau
525 W Allegan Street
P.O. Box 30273
Lansing, Michigan 48909-7773



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER AND ENVIRONMENTAL HEALTH SECTION
WATER BUREAU

**Permit Application for Noncommunity Public Water Supply Systems
Construction-Alteration-Addition or Improvement
Required Under Authority of Act 1976 PA 399, as amended**

County Health Department Name, Street Address, City, State & zip code

Plan Review for Arsenic Treatment Type: Ion Exchange Water Softener

Facility Name _____

Street Address _____

City _____ State _____ Zip _____

Public Water Supply System Number (WSSN): _____ - _____

Facility Owner

Name _____ Ph. ____/____/____

Address _____

City _____ State _____ Zip _____

Email _____

Treatment System Designer

Name _____ Co. _____ Ph. ____/____/____

Address _____

City _____ State _____ Zip _____

Email _____

The Basis of Design for the proposed treatment must be documented. Please include the following information in the plan submittal:

Type and volume of media -
Size of treatment tanks -
Peak demand of water system in gpm -
Rated capacity per unit in gpm per square foot -
Total population served -
Number of service connections -
Backwash system controls -

Backwash discharge (volume, frequency & arsenic concentration) -
Location & approval for backwash discharge -

Other Treatment Description and basis of design for other treatment applied such as softening, disinfection, iron removal, etc.

Water Quality (Untreated) Provide results from water testing of the raw water as follows:

Nitrates _____ (mg/l)	Iron _____ (mg/l)	Sodium _____ (mg/l)
Chlorides _____ (mg/l)	Total Hardness _____ (mg/l)	pH _____ (mg/l)
Total Arsenic _____ (mg/l)	Arsenic III _____ (mg/l)	Other _____ (mg/l)

Plans & Specifications Identify the following on all plans

- 1) Piping schematic identifying:
 - a. all piping
 - b. tanks
 - c. pumps
 - d. valves
 - e. gauges
 - f. meters
 - g. sampling locations
 - h. backwash discharge/receiving system

Operation & Maintenance

Provide the following information:

- 1) Operation manual Including:
 - a. Routine operation and maintenance activities
 - b. Troubleshooting guide
 - c. Permanent tags/labels for piping, valves, gauges, sample taps, key components
 - d. Process and plan for regeneration of media

Certified Operator Identify an operator certified at or above the D5 level (limited treatment)

Name Cert Number / Level

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Arsenic Testing Manufacturer's literature, operation and maintenance manual and test kit information are to be provided. These materials are to be made available on-site to the operator.

Test Kit Manufacturer Model Number Range of Detection Degree of Accuracy

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Operation Report Monthly operation report (attached) is to be submitted by the certified operator.

Other Relevant Information

Alternate Source If another approved water source is available (by connection or drilling a new well) that source shall be used in lieu of treating a source that exceeds drinking water standards

Distance and name of nearest municipal water system:

Is connection to municipal water possible? Yes _____ No _____

Comments; _____

Third Party Standards Equipment, materials, and additives in contact with potable water must meet American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standards 60 and 61.

- 1) Provide ANSI/NSF listing if any “Drinking Water Treatment Chemicals are involved in treatment system.
- 2) Provide ANSI/NSF certification listing for “Drinking Water Treatment Units”. Standards 42 Drinking Water Treatment Units - Aesthetics, 44 Residential Cation Exchange Water Softeners, 53 Drinking Water Treatment Units – Health Effects, 55 Ultraviolet Microbiological Water Treatment Systems, 58 Reverse Osmosis Drinking Water Treatment Systems and 62 Drinking Water Distillation System).
- 3) Provide ANSI/NSF product listing for “Drinking Water System Components”. (Standard 61)

Backwash Discharge Approval is required for disposal of backwash water. Requirements are dependent on the type of disposal and waste water to be discharged. Identification of the waste receiving systems, approval for discharge and characterization of the backwash water will be required for approval to install an arsenic removal system on a public water supply.

Backwash water will be discharged to: Municipal sewer _____,

Septic tank/drainfield _____, Storm sewer _____, Lagoon _____,

Other _____, If other describe location:

Provide a copy of the permit application and plans and specifications to the local health department and:

Department of Environmental Quality
Noncommunity Unit
Drinking Water and Environmental Health Section
Water Bureau
525 W Allegan Street
P.O. Box 30273
Lansing, Michigan 48909-7773



Michigan Department of Environmental Quality
Drinking Water and Environmental Health Section - Water Bureau
Arsenic Treatment Monthly Operation Report - Media Adsorption (Without Chlorination)

Facility Name: _____ WSSN: _____

Certified Operator: _____ # _____ Month/Year: ____/____

Table with 6 columns: Day, Flow Meter Reading, Arsenic Untreated PPB, Arsenic Treated PPB, Inspection (check) / Comments, Analyzed by. Rows 1-31.

Certified Operator Signature: _____ Date _____

See back for instructions on completing form

Completion of this form is required by Rule 325.11502, 1976 PA 399
Submit a copy of this MOR to the Local Health Department within 30 days after the end of the month.

Instructions for completion of MOR: *Media Adsorption (Without Chlorination)*

Flo Meter Reading: Record at beginning and end of month. If reading meters from multiple valve units add the readings and record totals. If flow meter is automatically reset after backwash record readings daily.

Arsenic Untreated: Raw water arsenic level. Required once every 3 years.

Arsenic Treated: Treated water arsenic level. Required quarterly through a certified lab. Field test analysis required every month that a certified lab result is not obtained.

Visual Inspection: Weekly to verify treatment unit operation/not bypassed/identify leaks.

Comments: Record maintenance or any unusual events. See below for additional space.

Analyzed by: Person making entry and/or testing laboratory.

Operator signature: Certified operator attesting to the submitted information in the report.

Additional Comments _____

Submit a copy of the MOR to the Local Health Department within 30 days after the end of the month



Michigan Department of Environmental Quality
 Drinking Water and Environmental Health Section - Water Bureau
Arsenic Treatment Monthly Operation Report - Media Adsorption (With Chlorination)

Facility Name: _____ WSSN: _____

Certified Operator: _____ # _____ Month/Year: _____ / _____

Chlorine Manufacturer/Trade Name _____ Concentration _____ %

Day	Quantity Chlorine Added	Chlorine Residual PPM	Flow Meter Reading	Arsenic Untreated PPB	Arsenic Treated PPB	Inspection (check)	Comments	Analyzed by
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
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30								
31								

Operator Signature: _____ Date _____

See back for instructions on completing form

Completion of this form is required by Rule 325.11502, 1976 PA 399

Submit a copy of this MOR to the Local Health Department within 30 days after the end of the month.

Instructions for completion of MOR: *Media Adsorption (With Chlorination)*

Quantity Chlorine Added: Record when chlorine added to tank and how much was added. (Must be approved as a drinking water additive meeting ANSI/NSF Standard 60.) Alternatively, chlorine tank can be weighed and pounds used recorded.

Chlorine Residual: Analyze and record a minimum of once a week.

Flow Meter Reading: Record at beginning and end of month.

Arsenic Untreated: Raw water arsenic level. Required once every 3 years.

Arsenic Treated: Treated water arsenic level. Required quarterly through a certified lab. Field test analysis required every month. Field test with quarterly certified lab test to verify field accuracy.

Visual Inspection: Daily check to verify pump operational & solution in tank, etc.

Comments: Record maintenance/or any unusual events e.g. manual backwash. See below for additional space.

Analyzed by: Person making entry and/or testing laboratory.

Operator signature: Certified operator attesting to the submitted information in the report.

Additional Comments _____

Submit a copy of the MOR to the Local Health Department within 30 days after the end of the month



Michigan Department of Environmental Quality
Drinking Water and Environmental Health Section - Water Bureau
Arsenic Treatment Monthly Operation Report - Media Adsorption (With Chlorination and pH adjustment)

Facility Name: _____ WSSN: _____
 Certified Operator: _____ # _____ Month/Year: _____ / _____
 Chlorine Manufacturer/Trade Name _____ Concentration _____ %
 Acid Manufacturer/Trade Name _____ Concentration _____ %

Day	Quantity Chlorine Added	Chlorine Residual PPM	Quantity Acid Added	Treated Water pH	Flow Meter Reading	Arsenic Jntreated PPB	Arsenic Treated PPB	Inspection (check)	Comments	Analyzed by
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

Operator Signature: _____ Date _____

See back for instructions on completing form

Completion of this form is required by Rule 325.11502, 1976 PA 399

Submit a copy of this MOR to the Local Health Department within 30 days after the end of the month.

**Instructions for completion of MOR: *Media Adsorption*
(With Chlorination and pH adjustment)**

Quantity Chlorine Added: Record when chlorine added to tank and how much was added. (Must be approved as a drinking water additive meeting ANSI/NSF Standard 60.) Alternatively, chlorine tank can be weighed and pounds used recorded.

Chlorine Residual: Analyze treated water and record a minimum of once a week.

Quantity Acid Added: Record when acid added to tank and how much was added. (Must be approved as a drinking water additive meeting ANSI/NSF Standard 60.) Alternatively, acid tank can be weighed and pounds used recorded.

pH of Treated Water: Analyze treated water and record once a day.

Flow Meter Reading: Record at beginning and end of month.

Arsenic Untreated: Raw water arsenic level. Required once every 3 years.

Arsenic Treated: Treated water arsenic level. Required quarterly through a certified lab. Field test analysis required every month. Field test with quarterly certified lab test to verify field accuracy.

Visual Inspection: Daily check to verify pump operational & solution in tank, etc.

Comments: Record maintenance/or any unusual events e.g. manual backwash. See below for additional space.

Analyzed by: Person making entry and/or testing laboratory.

Operator signature: Certified operator attesting to the submitted information in the report.

Additional Comments _____

Submit a copy of the MOR to the Local Health Department within 30 days after the end of the month



Michigan Department of Environmental Quality
 Drinking Water and Environmental Health Section-Water Bureau
Arsenic Treatment Monthly Operation Report – Reverse Osmosis

Facility Name: _____ WSSN: _____

Certified Operator: _____ # _____ Month/Year: _____ / _____

Day	Total Dissolved Solids	Flow Meter Reading	Pre Filter Changes	Arsenic Untreated PPB	Arsenic Treated PPB	Cartridge Filter	Visual Inspection /Comments	Analyzed by
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
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24								
25								
26								
27								
28								
29								
30								
31								

Operator Signature: _____ Date _____

See back for instructions on completing form

Completion of this form is required by Rule 325.11502, 1976 PA 399
 Submit a copy of this MOR to the Local Health Department within 30 days after the end of the month.

Instructions for completion of MOR: Reverse Osmosis

Total Dissolved Solids /Conductivity: Record monthly if required.

Flow Meter Reading: Record at beginning and end of month.

Filter Changes: Record when pre-filter, post-filter, cartridge, and RO membrane is changed.

Arsenic Untreated: Raw water arsenic level. Required once every 3 years.

Arsenic Treated: Treated water arsenic level. Required quarterly through a certified lab. Field test analysis required every month. Field test with quarterly certified lab test to verify field accuracy.

Visual Inspection: Weekly to verify treatment unit operation/not bypassed/alarm/meter working, etc.

Comments: Record any unusual events. See below for additional space.

Analyzed by: Person making entry and/or testing laboratory.

Operator signature: Certified operator attesting to the submitted information in the report.

Additional Comments _____

**Completion of this form is required by Rule 325.11502, 1976 PA 399
Submit a copy of this form to your Local Health Department within 30 days after the end of the month.**



Michigan Department of Environmental Quality
 Drinking Water and Environmental Health Section-Water Bureau
Arsenic Treatment Monthly Operation Report – Cartridge Filter

Facility Name: _____ WSSN: _____

Certified Operator: _____ # _____ Month/Year: _____ / _____

Day	Flow Meter Reading	Filter Changes	Arsenic Untreated PPB	Arsenic Treated PPB	Visual Inspection / Comments	Analyzed by
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
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27						
28						
29						
30						
31						

Operator Signature: _____ Date _____

See back for instructions on completing form

Completion of this form is required by Rule 325.11502, 1976 PA 399
 Submit a copy of this MOR to the Local Health Department within 30 days after the end of the month.

Instructions for completion of MOR: *Cartridge Filter*

Flow Meter Reading: Record at beginning and end of month.

Filter Changes: Record when filter is changed and record the volume of water treated by that filter in comments area.

Arsenic Untreated: Raw water arsenic level. Required once every 3 years.

Arsenic Treated: Treated water arsenic level. Required quarterly through a certified lab. Field test analysis required every month. Field test with quarterly certified lab test to verify field accuracy.

Visual Inspection: Weekly to verify treatment unit operation/not bypassed/leaks.

Comments: Record maintenance or any unusual events. See below for additional space.

Analyzed by: Person making entry and/or testing laboratory.

Operator signature: Certified operator attesting to the submitted information in the report.

Additional Comments _____

**Completion of this form is required by Rule 325.11502, 1976 PA 399
Submit a copy of this form to your Local Health Department within 30 days after the end of the month.**



Michigan Department of Environmental Quality
 Drinking Water and Environmental Health Section - Water Bureau
Arsenic Treatment Monthly Operation Report – Green Sand Filter

Facility Name: _____ WSSN: _____

Certified Operator: _____ # _____ Month/Year: _____ / _____

Permanganate Manufacturer/Trade Name _____ Concentration _____ %

Day	Flow Meter Reading	Quantity Potassium Permanganate	Backwash Y / N	Arsenic Untreated PPB	Arsenic Treated PPB	Visual Inspection / Comments	Analyzed by
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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19							
20							
21							
22							
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24							
25							
26							
27							
28							
29							
30							
31							

Operator Signature: _____ Date _____

See back for instructions on completing form

Completion of this form is required by Rule 325.11502, 1976 PA 399
 Submit a copy of this MOR to the Local Health Department within 30 days after the end of the month.

Instructions for completion of MOR: *Green Sand Filter*

Flow Meter Reading: Record at beginning and end of month.

Quantity Potassium Permanganate: Record the volume of potassium permanganate used. (Must be approved as drinking water additive meeting ANSI/NSF Standard 60.)

Arsenic Untreated: Raw water arsenic level. Required once every 3 years.

Arsenic Treated: Treated water arsenic level. Required quarterly through a certified lab. Field test analysis required every month that a certified lab result is not obtained.

Visual Inspection: Daily to verify treatment unit operation/not bypassed/leaks/valves.

Comments: Record any unusual events. See below for additional space.

Analyzed by: Person making entry and/or testing laboratory.

Operator signature: Certified operator attesting to the submitted information in the report.

Additional Comments _____

**Completion of this form is required by Rule 325.11502, 1976 PA 399
Submit a copy of this form to your Local Health Department within 30 days after the end of the month.**



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER AND ENVIRONMENTAL HEALTH SECTION
WATER BUREAU

**Permit Application for Noncommunity Public Water Supply Systems
Construction-Alteration-Addition or Improvement
Required Under Authority of Act 1976 PA 399, as amended**

County Health Department Name, Street Address, City, State & zip code

Plan Review Submitted for Nitrate Treatment: Reverse Osmosis
Facility Name _____
Street Address _____
City _____ State _____ Zip _____
Public Water Supply System Number (WSSN): _____ - _____

Facility Owner
Name _____ Ph. ____/____/____
Address _____
City _____ State _____ Zip _____
Email address _____

Treatment System Designer
Name _____ Co. _____ Ph. ____/____/____
Address _____
City _____ State _____ Zip _____
Email address _____

Submit the following information with your plans, specifications, and operation and maintenance manual:

Make and Model of Reverse Osmosis Unit -
Filtration rate (permeate water) -
Type of Membrane Filter -
Operating pressure and system controls -
Holding capacity of permeate water storage tank -

Total population served -
Number of point of use outlets -
Location of point of use outlets -
Peak demand of water system in gpm -

Other Treatment

Description and basis of design for other treatment applied such as softening, disinfection, iron removal, etc.

Water Quality (Untreated)

Nitrate _____ (mg/l)	Iron _____ (mg/l)	Silica _____ (mg/l)
Nitrite _____ (mg/l)	Total Hardness _____ (mg/l)	pH _____ (S.U.)
Chlorides _____ (mg/l)	Sodium _____ (mg/l)	Other _____ (mg/l)

Plans & Specifications

- 1) Include with the proposal a piping schematic identifying:
 - a. piping
 - b. valves
 - c. gauges
 - d. meters
 - e. sampling locations
 - f. concentrate discharge/receiving system
 - g. mechanical warning alarm

Operation & Maintenance

- 1) Include with the proposal an operation and maintenance manual Including:
 - a. Routine operation and maintenance activities
 - b. Troubleshooting guide
 - c. Permanent tags/labels for piping, valves, gauges, sample taps, key components
 - d. Critical factors affecting expected lifespan of membrane filter

Certified Operator Identify an operator certified at or above the D5 level (limited treatment)

Operator Name	Certification Number / Level

Operation Report Monthly operation report (attached) is to be submitted by the certified operator.

Other relevant Information

Alternate Source If another approved water source is available (by connection or drilling a new well) that source shall be used in lieu of treating a source that exceeds drinking water standards

Distance and name of nearest municipal water system:

Is connection to municipal water possible? Yes _____ No _____

Third Party Standards Equipment, materials, and additives in contact with potable water must meet American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standards 60 (Chemicals) and 61 (Equipment).

- 1) Provide ANSI/NSF 60 certification if any “Drinking Water Treatment Chemicals are involved in treatment system.
- 2) Provide ANSI/NSF 58 certification listing for Reverse Osmosis Drinking Water Treatment Systems.
- 3) Provide ANSI/NSF 61 certification listing for “Drinking Water System Components”.

Concentrate Discharge Approval is required for disposal of concentrate waste water. Requirements are dependent on the type of disposal and waste water to be discharged. Identification of the waste receiving systems, approval for discharge and characterization of the backwash water will be required for approval to install an arsenic removal system on a public water supply.

Backwash water will be discharged to: Municipal sewer _____,

Septic tank/drainfield _____, Storm sewer _____, Lagoon _____,

Other _____, if other describe location:

Provide a copy of the permit application and plans and specifications to the local health department and:

Department of Environmental Quality
Noncommunity Unit
Drinking Water and Environmental Health Section
Water Bureau
525 W Allegan Street
P.O. Box 30273
Lansing, Michigan 48909-7773



Michigan Department of Environmental Quality
 Drinking Water and Environmental Health Section-Water Bureau
Nitrate Treatment Monthly Operation Report – Reverse Osmosis

Facility Name: _____ WSSN: _____

Certified Operator: _____ # _____ Month/Year: _____ / _____

Day	Flow Meter Reading (Gallons)	Nitrate Treated (mg/L)	Filter Changes (Y/N)	Visual Inspection (Y/N)	Comments	Analyzed/ Inspected By
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
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24						
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27						
28						
29						
30						
31						

Operator Signature: _____ Date _____

See back for instructions on completing form

Completion of this form is required by Rule 325.11502, 1976 PA 399

Submit a copy of this MOR to the Local Health Department within 30 days after the end of the month.

Instructions for completion of MOR: Reverse Osmosis Nitrate

Flow Meter Reading: Record treated water meter reading at beginning and end of month. Flow data may be read from the face of a shut off valve or other metering device.

Nitrate Treated: Sample nitrate levels at the faucet where treated water is obtained **quarterly** and analyze through a certified lab. After getting the nitrate sample result from the lab, write the result in this column for the day that it was obtained. The Maximum Contaminant Level (MCL) for nitrate is 10 mg/L which is 10 parts per million. If the lab results are higher than 10 mg/L, change the filter(s) and resample or contact your local health department to determine what steps to take to maintain compliance.

Filter Changes: Change the cartridge filter(s) when the shut-off valve shuts off the flow of water or the performance indicating device signals it is time to change the cartridge filter(s), whichever is applicable for your treatment system or every 6 months, whichever comes first. Record a "Y" in the filter change cartridge column and sign for that day. The RO membrane should be changed every 3 – 5 years or if the treated water level of nitrate exceeds 10 mg/L or water production from the unit is reduced.

Visual Inspection: Visually inspect the treatment system weekly to verify the treatment unit is operating properly. Mark a "Y" in this column every day the treatment system is inspected and sign your name in the "Analyzed/Inspected By" column for that day.

Comments: Record maintenance or any unusual events. See below for additional space.

Analyzed/Inspected By: Person obtaining nitrate sample, changing cartridge filter, or inspecting system signs for that day. Signatures are not needed on days a sample, cartridge filter change, or inspection has not occurred.

Operator signature: Certified operator signs and dates bottom of MOR attesting to the information submitted in the report and then submits the MOR to their local health department within 30 days after the end of the month. Submittal of an MOR is required for every month the treatment system is in operation even if a nitrate sample is not taken that month.

Local Health Department Address: _____

Local Health Department Contact Person: _____
Local Health Department Phone Number: _____

Nitrate Untreated: Sampling the raw water (untreated) nitrate levels once a year. Sampling the raw water (untreated) nitrite levels once every 3 years. Clearly label the point description "Raw Water" on the lab slip and write the sampling date, nitrate or nitrite result, and that it is raw water in the comment section below so they are not used in determining compliance with the nitrate MCL.

Additional Comments _____

Submit a copy of the MOR to the Local Health Department within 30 days after the end of the month



Michigan Department of Environmental Quality
 Drinking Water and Environmental Health Section-Water Bureau
Nitrate Treatment Monthly Operation Report – Ion Exchange

Facility Name: _____ WSSN: _____

Certified Operator: _____ # _____ Month/Year: _____ / _____

Day	Water Meter Reading	Pounds Salt Added	NO3 Untreated Mg/L	NO3 Treated Mg/L	Visual Inspection/Comments	Analyzed by
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

Operator Signature: _____ Date _____

See back for instructions on completing form

Completion of this form is required by Rule 325.11502, 1976 PA 399
 Submit a copy of this MOR to the Local Health Department within 30 days after the end of the month.

Instructions for completion of MOR: Nitrate Ion Exchange

Water Meter Reading: Record weekly.

Pounds Added Salt: Record pounds of salt when added.

Nitrates Untreated: Record nitrate level of untreated water in milligram per liter (mg/l). Required annually in the quarter with historically highest nitrate levels.

Nitrates Treated: Record nitrate level of treated water in milligram per liter (mg/l). Required weekly with field test kit and quarterly at certified laboratory.

Visual Inspection: Daily to verify treatment unit operation/not bypassed/alarm/meter working, etc.

Comments: Record any unusual events. See below for additional space.

Analyzed by: Person that performed the field test or name of certified testing laboratory.

Operator signature: Certified operator attesting to the submitted information in the report.

Additional Comments _____

**Completion of this form is required by Rule 325.11502, 1976 PA 399
Submit a copy of this form to your Local Health Department within 30 days after the end of the month.**

INSERT LHD LETTERHEAD

Date

Water Supply Owner Name and Address

Dear M Water Supply Owner

SUBJECT: Arsenic Treatment System Follow-up – Water Supply Name, WSSN

This letter is intended to follow-up on the sampling, operation, and maintenance of the arsenic treatment system (System) installed at your water supply and to assist in correcting any problems you may be having with the System.

Design of the System for your water supply was approved by the Michigan Department of Environmental Quality (DEQ) on Date and final approval to operate was granted on date by the County Health Department. The point of entry System uses 27 cubic feet of Adsorbsia GTO arsenic adsorption media in one 36 inch diameter tank and is designed to meet a peak demand of 40 gpm.

Water supply owners that use arsenic treatment equipment to maintain compliance with the arsenic Maximum Contaminant Limit (MCL) of 0.010 mg/L (10 parts per billion) must sample the treated water, and operate and maintain the treatment system among other requirements. The following paragraphs and enclosed documents provide information on sampling, operating and maintaining the System. Compliance with the arsenic MCL is determined by a running annual average of quarterly samples from the last four quarters. If the arsenic running annual average exceeds the MCL, the water supply owner will be required to propose a remedy. Significant modifications to the System require approval by the DEQ and this health department. You may contact Mr. Kevin Holdwick, P. E. of the DEQ at (517) 241-1395 to discuss modifications to your system if needed.

(For POE systems) Taking arsenic samples from an improper location or mislabeling the point description on the lab slip has been causing compliance problems at many water supplies with arsenic treatment. All arsenic compliance samples are to be collected directly after arsenic treatment at the “Entry Point to Distribution System.” At your water supply, this tap is located after the arsenic treatment vessel before water piping branches out into the distribution system. Please label this sample tap, “Entry Point to Distribution System (take arsenic samples here).” On the lab slip for arsenic samples from this location, label the sampling point “EPTDS” or “Treated Water.”

(For POU systems) Taking arsenic samples from an improper location and mislabeling the point description on the lab slip has been causing compliance problems at many water supplies with arsenic treatment. Arsenic compliance samples are to be taken from the treated water faucet (i.e. where treated water is obtained for consumption) or the sample tap if there is one. On the lab slip, label the sampling point “Treated Water Faucet.” Since you have more than one Point of Use (POU) System, each treatment system must be named and sampled separately. For instance, a POU System in a break room could be named and labeled “Break Room Arsenic Treatment System” and labeled as such in the point description area of the lab slip. A POU System in the kitchen could be named and labeled “Kitchen Arsenic Treatment System” and labeled as such in the point description area of the lab slip and so on. The water system is in violation of the arsenic

Maximum Contaminant Level (MCL) if the running annual average of any of the treatment systems exceeds the arsenic MCL of 0.010 mg/L.

Please label the sample tap where water enters the building from the well before any treatment or chemical injection "Raw Water Sample Tap." Raw water samples are required for some purposes. Please label the sample point for any samples from this sample tap "Raw Water" on the lab slip. Arsenic sampling is not required at the raw water tap but may be conducted by the water supply for their purposes. If an arsenic sample from the raw water tap is analyzed at a certified lab and the point description is not clear, it may be used in compliance determination. This may cause a violation of the arsenic MCL even though the treated water may meet the MCL.

(Delete for POU Systems) If samples of backwash wastewater from your water supply are analyzed at a certified lab, please label the point description "Backwash Water" and do not use your Water Supply Serial Number (WSSN) on the lab slip to avoid having those samples included when calculating drinking water compliance with the arsenic MCL. Sampling of backwash wastewater is not required under the Safe Drinking Water Act, 1976 PA 399, as amended (SDWA). Arsenic sampling in the distribution system is not recommended.

A Monthly Operation Report (MOR) form and Operation and Maintenance (O&M) Manual supplement is enclosed for your use. Please use the attached MOR form instead of the form you are currently using. Instructions for completing the MOR are on the back of the MOR form. The enclosed O&M Manual supplement contains simplified instructions on how to operate your arsenic treatment system and is intended to supplement the O&M manual from the system installer. If a modification to your System makes a different MOR or O&M Manual supplement necessary, one will be supplied to you during the approval process required to make the modification. A change from previous requirements is that sampling and analysis of arsenic levels at a certified lab is required quarterly. Monthly arsenic testing is no longer required.

If you have any questions, please contact me.

Sincerely,

LHD Noncommunity Coordinator
Signature Block

Enclosures

cc: District Staff, DEQ
Mr. Kevin Holdwick, DEQ
Certified Operator, name of water supply
Installer?

**SAMPLE COVER LETTER FOR FILTRATION AND CONTINUOUS DISINFECTION
COMPLIANCE AGREEMENT**

Dear (System Owner):

SUBJECT: Compliance Agreement for Filtration and Continuous Disinfection,
System Name: WSSN: 20xxxxx

Enclosed is a compliance agreement for the operation of a filtration and continuous disinfection treatment system at the subject public water system. Without this treatment the water from your well can not be considered safe. It is important that you read and understand the agreement before signing it.

From a public health perspective, treatment of an unsafe source of drinking water to make is safe is much less desirable than obtaining water from a safe source and would not be permitted if a safe source of drinking water was available. Further, if an approved source of water becomes available you will be required to use it and discontinue continuous treatment of the unsafe source.

Geologic conditions in the area can feature rapid movement of shallow ground water through cracks in the near surface bedrock and the lack of any significant ability to filter contaminants from the water before it reaches drinking water wells. Contamination can be consistent or intermittent and include fecal indicators or not. Sampling the water does not prevent the contamination or exposure. Therefore, continuous treatment is required and any treatment interruption is cause for immediate action. The compliance agreement outlines what is required under normal operation of the treatment system and what is required in the event of treatment failure or failure to operate, maintain, and report as required.

Please read the enclosed agreement carefully, sign and return the agreement to (LHD). When the LHD authorizes the agreement, a signed copy will be returned to you as indication of acceptance. Please contact me if you have additional questions about this agreement or what is required. Thank you.

Sincerely,

LHD Signature

cc: DEQ District Staff

Agreement Between the
LOCAL HEALTH DEPARTMENT

And

Name, WSSN, and address of supply

For

Operation of a Drinking Water Treatment System to Provide Filtration and Disinfection

A. STATEMENT OF PURPOSE

This Agreement is entered into by and between the parties indicated above. Hereinafter, the Noncommunity Water Supply shall be known as the “supplier of water” and the - _____ County Health Department shall be known as the “LHD”

Whereas, under the Michigan Safe Drinking Water Act 399, PA 1976 as amended, the LHD has determined under section 15 (2) the above named waterworks system is inadequate to protect public health, the supplier agrees to make alterations in the waterworks system and it’s method of operation to assure the water supply is adequate, healthful and in conformance with state drinking water standards.

B. SUPPLIER OF WATER REQUIREMENTS

The Supplier of Water shall perform the following activities including, but not limited to:

1. Obtain a permit from the LHD to install an approved system for continuous treatment of drinking water by date .
2. Have the approved treatment installed, inspected in accordance with permit requirements and operational by date .
3. Employ a water system operator with at least a valid F5 or higher level certification to oversee daily operation and reporting of the water system and treatment. A non-certified operator may perform daily checks, measurements and record keeping with training and oversight by the certified operator if the certified operator is not present on a daily basis. Any operator change shall be reported to the LHD within the next business day of operation. The certified operator must be reasonably available on call, must visit the supply at least weekly to review operations and reporting, and sign each monthly operation report.

- a. (if the owner or employee plans to train & write F5 exam) For an interim period of X months of operation (persons name) must conduct daily operations and reporting under the supervision of certified operator (cert op name / level). The certified operator must be available on call, must visit the supply at least weekly to review operations and reporting, and sign each monthly operation report.
- 4. Monitor and record all and required treatment / operational, and sampling data. Submit information as required on monthly operation reports.
- 5. Maintain and utilize an up to date contingency plan for providing safe water in the event of interruption of treatment as approved by LHD.
- 6. In the event of failure of the treatment including filtration and disinfection (free chlorine residual below minimum level required) or other emergency conditions as described in the contingency plan, the owner/operator shall initiate immediate corrective action to restore the treatment system per the operations manual, and if necessary, implement the contingency plan and notify the LHD.
- 7. Connect to an approved water source when available in accordance with a compliance schedule between the LHD that is reasonable, commensurate with the scope of the work, and is protective of public health.

C. ENFORCEMENT

Failure to comply with the requirements of this agreement may result in enforcement action. This action may include corrective orders, administrative fines, or civil penalty.

It is further agreed this Compliance Agreement may be terminated by the LHD without hearing upon 30 days written notice upon finding that the supplier of water has failed to comply with any requirements of said agreement or immediately upon finding that such termination is necessary to protect the public health. This agreement shall not prevent LHD from taking any other lawful action deemed necessary to obtain compliance with the Act or to protect the public health.

F. AUTHORIZATION

FOR THE SUPPLIER OF WATER: Facility Name/Address/Telephone:

DRINKING WATER CONTINGENCY PLAN

Water Supply Name:

WSSN:

Facility Address:

Owner/Manager Name:

- A. **Purpose:** The Contingency Plan outlines actions to take and persons to contact in the event of a problem or emergency related to the drinking water supply. This system obtains water from a suspected Subpart H water source that is unsafe to drink without proper treatment. Therefore, problems related to treatment must be addressed promptly to protect public health. This Contingency Plan meets the requirements of R325.12302 (2) and R325.12303 of the Safe Drinking Water Act 1976 PA 399, as Amended, and Administrative Rules (Act 399).
- B. **Applicability:** This Contingency Plan applies to a noncommunity water supply that obtains water from a Subpart H ground water well source and employs a membrane filtration and continuous disinfection water treatment system for public health protection.
- C. **Water System Events Requiring A Prompt Response**
1. **No Water/Water Pressure:** If water is not available for sanitary or consumptive use and service is unable to be quickly restored, the facility must close unless a safe and prior-approved alternate source of water is available. If system water pressure is lost, water can not be used for consumption until the system pressure is fully restored, the system is disinfected, and two successive samples for bacteriologic analysis show no presence of coliform bacteria. Notify the local health department about the system pressure loss within 24 hours of learning that system pressure was lost.
 2. **Bacteriologic Maximum Contaminant Level Violation (MCL):** An MCL violation occurs if 2 or more samples at the sample point of entry to the distribution system (after treatment) are positive for coliform bacteria. This requires immediately posting all drinking water locations as unsafe to drink, providing an alternate source of water for consumption (bottled water and commercial ice when provided), investigating the cause, and restoring the required treatment. Notify the local health department within 24 hours of when the facility becomes aware of the analysis results.
 3. **No Free Chlorine Detected at Sample Point After All Treatment:** Post drinking water outlets as unsafe, provide a prior-approved

alternate source of water for consumption, investigate cause of problem, and restore the required treatment. Notify the local health department on the next monthly operating report of all actions taken.

4. **Less Than 0.8 mg/l (minimum) Free Chlorine Detected at Sample Point After CT Treatment Tanks and Prior to Distribution:**
Investigate chlorine pump adjustments, feed lines, solution tank injector etc/ and restore minimum free chlorine residual within 4 hours. If the chlorine level can be restored within 4 hours, restore the chlorine level to the target range and record what happened on the monthly operation report. If the chlorine level cannot be restored within 4 hours, the facility must be closed and must immediately notify the local health department. At the discretion of the local health department, the facility may stay open by providing bottled water for consumption and posting outlets as unsafe to drink in a manner as directed by the local health department.
5. **Suspect Tampering or Foreign Substance Introduced into Water Supply:** Prevent consumption or contact with water (cover or “bag” fixtures) and immediately contact law enforcement officials. Also immediately notify the local health department of the suspected tampering.
6. **Illness Complaints by Consumers of Water:** Obtain names and contact information of individuals and contact the local health department.

D. Contingency Plan for Alternate Water and Emergency Conditions

1. If the water supply source or treatment system should become unusable as a potable water source, and if the facility does not immediately shut down, alternate water must be provided on a temporary basis as detailed in this plan.
 - a) Bottled or hauled water provided from (enter source)
 - b) The amount of water hauled or bottled water purchased each day will be: (enter amount)
 - c) The hauled or bottled water will be dispensed in the following manner: (enter dispensing plan)
 - d) Describe any other method of alternate water planned: (enter description or delete this section if not applicable)

2. If the water supply should become unusable as a potable water source the following potential drinking water taps will be either mechanically removed from use or will be posted as non-potable.
 - a) List drinking fountains
 - b) List bathroom, kitchen, and other sink taps
 - c) List coffee, soda, and other liquid vending machines
 - d) List ice makers
 - e) List any other outlet available for water consumption

3. Public Notification: Consumers must be advised not to consume the tap water and about the availability of alternate water. Post public notice at sinks and all other drinking water outlets that cannot be mechanically turned off. List below the locations to be posted.
 - a)
 - b)
 - c)
 - d)
 - e)

4. Emergency Treatment System Component Repairs: The water supply will maintain at the facility a backup pump and related tubing and equipment for the chlorine disinfection injection system. If any other component of the treatment system should fail, replacement parts will be obtained from the below-listed suppliers and repairs made as soon as feasibly possible.
 - a) Pre-treatment devices:

 - b) Membrane filter units:

 - c) Pumps:

 - d) Chlorine and Turbidity monitoring devices:

 - e) Valves, meters, pipes, tanks:

 - f) Controls:

E. Emergency Contacts:

Contacts	Name	Phone
Owner/Official		
Certified Operator		

Local Health Dept.		
Certified Laboratory		
Well Contractor		
Plumber		
Electrician		
Treatment Equip. Supplier		
Local Law Enforcement		
Other		

**APPROVAL FROM THE LOCAL HEALTH DEPARTMENT IS REQUIRED PRIOR TO
RESUMING USE OF THE WATER SUPPLY FOR CONSUMPTION AFTER AN EMERGENCY
EVENT**

DEQ/WB 4/07

MONTHLY OPERATION REPORT OF A NONCOMMUNITY WATER SUPPLY

ver: 4/19/07

MEMBRANE FILTRATION PLANT

SUPPLY

NAME: _____

WSSN: _____

Operator-in-Charge _____

Month/Year of Report

Certification of Operator-in-Charge _____

Report Reviewed By: _____ Date

Signature of Operator-in-Charge ** _____

Agency of Reviewer

Treatment Rate

Maximum Treatment Rate: _____ Gallons per Day

Rated Plant Capacity: _____ Gallons per Day

Maximum Flux Rate: _____ (indicate units)

Maximum Approved Flux Rate: _____ (indicate units)

Maximum TMP: _____ psi

Maximum Approved TMP: _____ psi

Total Water Treated: _____ Gallons per month

Wash or Concentrate Water Use: _____ Percent of Treated Water

Chemical Data

Chlorine on hand: _____ lb. Est. supply: _____ days

If applicable softener salt on hand: _____ lb. Est. supply: _____ days

If applicable CIP chemical on hand: _____ lb. Est. supply: _____ days

Remarks

Number of filter confluence samples > 0.3 NTU: _____

Number of filter confluence samples collected: _____

Percent of filter confluence samples > 0.3 NTU: _____

Any turbidity readings at 1 NTU or higher? _____

If yes, indicate date(s), value, & corrective actions on a separate sheet.

Did POE disinfectant residual fall below 0.2 ppm during the month? _____

If yes, indicate date(s) and duration on a separate sheet.

Was minimum C*T credit achieved for the entire month? _____

If no, indicate on a separate sheet the date(s) not achieved.

Membrane Integrity

What was the frequency of pressure decay integrity testing during the month? _____

Did any units fail the pressure decay integrity testing? _____

If yes, indicate units, date(s) and corrective actions on a separate sheet.

** Signature certifies that all information entered on this 3-page form is true and accurate

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
 MONTHLY OPERATING REPORT FORM FOR NONCOMMUNITY WATER SUPPLY with
 MEMBRANE FILTRATION AND CONTINUOUS DISINFECTION TREATMENT

WATER SUPPLY
NAME:

WSSN:

MONTH/YEAR:

Sample Type		Sample Date		Analysis Results

Page 2 Chart Comments, Maintenance Remarks, Page 1 Remarks, Other Notable Issues (attach extra pages if needed)

**Submit a copy of the Monthly Operating Report (MOR) to Chippewa County Health Department by 10th day of the next month.
 Keep a copy of each Monthly Operating Report for your files for at least ten years.
 Completion of this MOR form is required by R 325.11502, 1976 PA 399, as amended, and Administrative Rules.
 Failure to complete and submit a MOR form may result in monetary penalties.**

Agreement Between the
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
Water Bureau

And

«SystemName»
WSSN: «Wssn»
«AddressLine1»
«City», «State» «Zip»

For

Bottled Water Alternative for Elevated Arsenic in Existing
Noncommunity Water Supplies

A. STATEMENT OF PURPOSE

This Agreement is entered into by and between the parties indicated above. Hereinafter, the Noncommunity Water Supply shall be known as the "Facility" and the Department of Environmental Quality shall be known as the "DEQ."

A new standard for arsenic in drinking water of 0.010 milligrams per liter was effective January 23, 2006. Unless a new source meeting the standard is available, public water systems that exceed the standard are required to install treatment equipment to remove the arsenic. The DEQ believes that under certain conditions, bottled water is a viable alternative to treatment for arsenic removal. This Agreement is designed to allow the use of bottled water under specific conditions. However, this practice while protective of the individual consumers, conflicts with Federal Regulations. Systems under this agreement can not be called "in compliance" and a violation of the arsenic drinking water standard must be reported. As long as the terms of the agreement are met this violation will be considered "addressed." This means further enforcement or penalties are not being considered for the violation. The use of bottled water under this agreement does not alter the requirements for monitoring arsenic and other required contaminants unless notified in writing.

Whereas, the United States Environmental Protection Agency prohibits the use of bottled water to comply with a drinking water standard on a permanent basis. Whereas, the Facility agrees to follow conditions prescribed in this Agreement in providing approved bottled water for consumptive purposes in lieu of treating the on-site water supply to comply with the arsenic standard. The DEQ agrees to allow the use of approved bottled water and consider the violation of the arsenic drinking water standard to be addressed.

B. FACILITY REQUIREMENTS

The Facility shall perform the following activities including, but not limited to:

1. Provide an adequate supply of bottled drinking water from a Michigan approved source with arsenic levels at or less than .002 milligrams per liter and make it readily available on a continuous basis.
2. Maintain records of bottled water purchase agreement, purchases, daily inspections of bottled water dispensers, use, availability, water quality results, maintenance, periodic cleaning, and consumer comments. Submit reports monthly to (local health department) on an approved form (enclosed).
3. Disconnect all water fountains or other devices where water is dispensed for consumption from the on-site water source and provide bottled water for all consumptive uses.
4. Permanently post the required full public notice in conspicuous locations in the facility such as lobby, break room, cafeteria and permanently post all sink faucets with an appropriate notice, such as “Not for Drinking – Exceeds Arsenic Standard.” A copy of a signed dated full public notice must be returned to the DEQ as verification of “delivery” of the notice
5. Project participants that are schools and child care centers must include notice of participation in the bottled Water Alternative Project in their Annual Water Quality Report.
6. Participant will continue all required monitoring for arsenic and other contaminants unless notified in writing.

C. DEQ REQUIREMENTS

The DEQ shall perform the following activities including, but not limited to:

1. Allow a Facility meeting the requirements of this Agreement to provide bottled water as an alternative to arsenic treatment for the duration of the Agreement.
2. Report a violation of the arsenic drinking water standard for the facility and consider the violation addressed, not warranting additional enforcement of the violation as long as the terms of the agreement are met.
3. In conjunction with local health departments, provide consultation and surveillance as necessary, review operation reports, and generally assess public health protection provided through use of bottled water.

D. CHANGES

- 1. Either the DEQ or the Facility may, following consultation with and upon the written consent by the other party, make changes within the general scope of the Agreement or the work to be performed.

E. CANCELLATION & EXPIRATION

- 1. This Agreement may be terminated by the DEQ for any of the following reasons:
 - a. The Facility fails to fulfill its obligations under the Agreement.
 - b. An approved water source meeting all drinking water standards becomes available to the Facility.
- 2. This Agreement may be terminated by the Grantee upon a 30-day written notification to the DEQ.
- 3. This Agreement expires 3 years from the date of authorization by DEQ.

F. AUTHORIZATION

FOR THE FACILITY: Facility Name/Address/Telephone:

Name and Title

Signature

Date

FOR THE DEPARTMENT OF ENVIRONMENTAL QUALITY

James K. Cleland, P.E., Chief, Lansing Operations Division

Name and Title

Signature

Date

Please Return To: Department of Environmental Quality
 Water Bureau
 Drinking Water & Environmental Health Section
 Noncommunity Unit
 525 West Allegan, P.O. Box 30273
 Lansing, Michigan 48909-7773

Public Notice
Water Quality Maximum Contamination Level Violation
For Arsenic in Tap Water – Approved Bottled Water Provided

Facility Name: «SystemName»

WSSN: «Wssn»

Date of violation: January 1, 2008

Approved Bottled Water Provided Since: «BW Cnsnt Order Date»

We have been providing bottled water meeting the arsenic standard under an operational agreement with the State of Michigan, Department of Environmental Quality (DEQ) since it was determined our well water did not meet the new arsenic standard. Federal law prohibits using bottled water to meet a drinking water standard. However, we can continue to use it under the agreement with the DEQ, and we are required to notify consumers our tap water does not meet the standard. The following (**bold**) is required language for this public notice:

Under the provisions of the Safe Drinking Water Act, 1976 PA 399, and Rules as amended, the United States Environmental Health Agency (USEPA) has set the MCL for arsenic at 10 parts per billion, ppb. The annual running average of the arsenic concentration detected at this facility is:

«MCL Viol Value ppb» ppb

The USEPA sets drinking water standards and has determined that the presence of arsenic above the established MCL could pose a long-term health concern. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer. Major sources of arsenic in drinking water may occur from the erosion of natural deposits, runoff from orchards, or runoff from glass and electronics production wastes.

All taps are posted as not for drinking and bottled water is made available for all consumptive purposes. Incidental tap water arsenic exposure at these levels via hand washing or cleaning is not a health concern. We anticipate continuing to use bottled water to protect our consumers indefinitely. Our agreement with the DEQ, State of Michigan expires in December of 2010 and can be renewed.

Thank you for your cooperation. If you have questions about this notice or how we are addressing the public health issues you may contact the local health department or facility representative: _____

Name

Facility Representative Signature

Phone

Date



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER AND ENVIRONMENTAL HEALTH SECTION**

**ORIGINAL APPLICATION FOR LICENSE
TO HAUL WATER FOR DRINKING OR
HOUSEHOLD PURPOSES IN ACCORDANCE
WITH ACT 1976 PA 399**

**COMPLETION OF THIS APPLICATION IS
MANDATORY TO OBTAIN A WATER HAULING
LICENSE.**

APPLICANT – DO NOT WRITE IN THIS SPACE
HAULER LICENSE NO. | DATE ISSUED

APPLICATION REVIEWED BY: _____

PLEASE TYPE OR PRINT IN INK. COMPLETE ALL SECTIONS AND SIGN

1. NAME OF BUSINESS		
2. NAME OF OWNER/FIRM REPRESENTATIVE		TITLE/POSITION
3. BUSINESS ADDRESS	CITY	STATE
4. BUSINESS TELEPHONE (AREA CODE & NUMBER)	COUNTY	ZIP
5. LIST MICHIGAN COUNTIES SERVED		
6. SOURCE OF WATER TO BE HAULED MUNICIPAL _____ WELL _____ OTHER - _____		7. NAME (IF MUNICIPAL)
8. OWNER OF SOURCE(S)	9. ADDRESS OF SOURCE(S)	
10. LIST CUSTOMERS WHICH ARE <u>NOT</u> PRIVATE RESIDENCES		
ESTABLISHMENT NAME	STREET ADDRESS	CITY OR TOWNSHIP
A.		
B.		
C.		
D.		
E.		
F.		
G.		
H.		

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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER BUREAU

WATER HAULER INSPECTION REPORT

License No. _____ Date _____

Business Name _____ County _____

Address _____ Owner _____

Water Source _____ Approved: Yes No
 (municipal, well, other)

Source Name or Location _____

Does Hauler Chlorinate: Yes No Comments _____

No. Tanks _____ No. Licensed _____ Tank Lettered: Yes No Seal: Yes No

Problems/Comments _____

Trip Records: Adequate: Yes No Retained for two years: Yes No

Water Transportation Tanks: Fill out a section for each tank being operated		
Key: Compliance <input type="checkbox"/>	Noncompliance <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
A. License No. _____ Capacity _____ gal Vehicle _____ (truck, trailer, other)	B. License No. _____ Capacity _____ gal Vehicle _____ (truck, trailer, other)	C. License No. _____ Capacity _____ gal Vehicle _____ (truck, trailer, other)
___ 1. Materials or Coating ___ 2. Tank Outlet ___ 3. Outlet Valve ___ 4. Manhole Covers ___ 5. Fill Connections ___ 6. Baffles ___ 7. Pumps ___ 8. Transfer Hose ___ 9. Couplings, Caps ___ 10. Hose Carrier Bracket	___ 1. Materials or Coating ___ 2. Tank Outlet ___ 3. Outlet Valve ___ 4. Manhole Covers ___ 5. Fill Connections ___ 6. Baffles ___ 7. Pumps ___ 8. Transfer Hose ___ 9. Couplings, Caps ___ 10. Hose Carrier Bracket	___ 1. Materials or Coating ___ 2. Tank Outlet ___ 3. Outlet Valve ___ 4. Manhole Covers ___ 5. Fill Connections ___ 6. Baffles ___ 7. Pumps ___ 8. Transfer Hose ___ 9. Couplings, Caps ___ 10. Hose Carrier Bracket
Approved: Yes <input type="checkbox"/> No <input type="checkbox"/>	Approved: Yes <input type="checkbox"/> No <input type="checkbox"/>	Approved: Yes <input type="checkbox"/> No <input type="checkbox"/>

Remarks: _____

Health Department Representative _____

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Date

Applicant Name

Dear Applicant:

SUBJECT: Application and requirements for approval of out of state bottled water sources

This letter is in response to your inquiry concerning regulations for the sale and distribution of bottled water in the State of Michigan. Michigan's Safe Drinking Water Act, 1976 PA 399, as amended (Act) requires the source of water for bottling be approved by the Michigan Department of Environmental Quality (MDEQ), Water Bureau, prior to use by the public. Approval is required whether the source is located in Michigan, or the water is transported into the state from another state or country.

Out of country source and bottling facility approval by the MDEQ is the first step in the process to distribute or sell bottled water products in Michigan. Please complete the enclosed application and return it with the following required information:

- Documentation of current approval of the source and bottling facility by the regulatory agency with jurisdiction.
- Provide a statement signed by the owner or authorized representative that the water meets drinking water standards of the Michigan (EPA) Safe Drinking Water Act.

The MDEQ will review the application and return a signed copy to the applicant and copy the Michigan Department of Agriculture (MDA) if approved. The MDA regulates the packaging (bottling) facilities and labeling. The MDA may be contacted at P.O. Box 30017, Lansing, Michigan 48909, telephone: 517-373-1060. Additional information is available off the MDA web site: http://www.michigan.gov/mda/0,1607,7-125-1569_16958_21506-54185--,00.html

If you have additional questions regarding the bottled water approval process, please feel free to contact me.

Sincerely,

John Chickering, R.S.
Noncommunity Unit
Drinking Water & Environmental Health Section
Water Bureau
517-241-1371/chickerj@michigan.gov

jcc:sw
Enclosure



Michigan Department of Environmental Quality
 Water Bureau, Drinking Water and Environmental Health Section
 Application for Out of State Bottled Water Source Approval

Applicant Information

Business name: _____

Owner: _____

Contact person: _____

Address: _____

Phone: _____ Fax: _____ E-mail: _____

Source name: _____

Source location: _____

The following is required for each source approval, please attach:

1. Documentation (current certificate, license, inspection report, or authorization) indicating the source and bottling facility are approved by the governmental agency with jurisdiction.
2. A statement signed by the owner or an authorized representative that the water meets drinking water standards (see <http://www.epa.gov/safewater/mcl.html>) for listing of Safe Drinking Water Act maximum contaminant levels/treatment techniques.

**Send to: Michigan Department of Environmental Quality
 Water Bureau, Drinking Water and Environmental Health Section
 Constitution Hall, 525 West Allegan
 P.O. Box 30273, Lansing, Michigan 48909-7773**

MDEQ Office Use Only	
Application received ___/___/___	
Approved ___/___/___	Denied ___/___/___
By _____	
Comments: _____	

LEVEL 5 CERTIFIED DRINKING WATER OPERATOR CONTINUING EDUCATION CREDIT WORKSHEET

Use this to keep track of your Continuing Education Credits (CEC's) that you earn.

- ü Your certification is good for a 3 year period.
- ü It is YOUR responsibility to obtain the proper credits and **SEND** in your **RENEWAL** form before your expiration date.
- ü The Renewal Form is mailed to your HOME address 2 months before your expiration date.

- ü In this 3 year period you must get 0.9 CEC's (9 hours of training) in order to renew your certification for another 3 years.
- ü Courses must be MDEQ approved.
- ü You will **NOT** receive credit for taking the **SAME** Course in a 3 year certification period (course code number*).

DATE COURSE TAKEN	COURSE CODE NUMBER*	COURSE TITLE	COURSE LOCATION	INSTRUCTOR'S NAME	NUMBER OF CEC's FOR THIS CLASS	TOTAL CEC's EARNED

Your Operator ID # WSSN of the facility you are operating

For Certified Operator Information go to:
www.michigan.gov/deqoperatortraining click on "Check your CEC's online"

Your Name

Level 5 Drinking Water Examinations

Applications to take the Level 5 exams can be found at www.michigan.gov/deqoperatortraining. Once on the website, in the column under Drinking Water, click on **Exam Applications and Study Guides**

Exam Content: Level 5 exams are 25 questions in length and are multiple choice. The design of the questions has been selected so that they are clear, not misleading or tricky. Note that the exam subjects and the number of questions on the exam may change without notice.

Things to focus on when studying for the exam:

(Basically know the definitions and some general information about the following items)

S- 5 & D- 5 Level Exams

Water Quality

Water hydrology, what an aquifer is, groundwater characteristics, what a water table is, the difference between ground water and surface water, drinking water aesthetics (hardness, iron, sulfur, manganese, etc.)

Well Construction

Types of wells, drawdown, well screens, components of a well, well depth & construction requirements, importance/when you need a permit, what grout is, well pump general information, casing requirements, how to prevent contamination of wells

Wellhead Protection

Standard isolation distances, well abandonment

Public Health

Acute vs. chronic illness, coliform bacteria, pathogenic organisms, waterborne disease outbreaks, disinfection, "blue-baby syndrome"

Compliance & Safe Drinking Water Act (general questions)

What primacy is, what law governs drinking water, where samples should be taken, sampling requirements, certified operator requirements, waivers, sanitary surveys

Monitoring & Reporting

What a public notice is, when to issue public notices, where you can send samples, use of lab bottles, handling of bottles, how to properly sample, filling out lab forms, sample holding times, what to do with lab results, follow up sampling requirements, how many samples are needed per analyte* test, where samples for each analyte* is to be taken, how long you have to keep sample results, why substances are added to sample bottles.

*an analyte is a substance or chemical constituent that is undergoing analysis.

Maximum Contaminant Levels (MCLs)

What an MCL is, what a monitoring violation is, what the MCLs are for each analyte, what can cause an MCL, what the presence of E. Coli indicates, what the purpose of enforcing an MCL is.

Lead & Copper Rule

What the lead & copper action levels are, where to collect samples, what “lead-free” means, how many samples are required, what “first draw” means, health effects of lead/copper exposure, what 90th percentile action level means, how lead/copper gets into the drinking water supply.

Record Keeping

How long records are to be kept for each analyte, public notice & emergency posting, where records are to be kept.

General Questions

Proper materials & design of distribution system, storage & pumps purpose of sampling site plans, what continuous positive pressure is.

Cross Connection Control

Be able to define backflow, back siphonage, cross connection, know what the backflow prevention devices are (air gap, check valves, atmospheric vacuum breakers, reduced pressure zone device, etc.) and when to use them, how cross connections occur, and how to prevent cross connections.

Operation & Maintenance

Who is responsible, what it means to be NSF/ANSI approved, what the essential elements are for the operation of a water system, problem solving when trouble occurs, contingency plans, emergency responses, safety issues, what federal law regulates safety issues, confined space regulations

Additional D-5 Level Exam topics:

Chlorination/disinfection

What chlorine is used for, what free chlorine residual is, handling of chlorine, chlorine characteristics, what test kits to use, how to disinfect

Treatment Technologies

What the different methods for treating water are, what phosphate is used for, advantages/disadvantages of using treatment, how to maintain a treatment system, what potassium permanganate is

Review materials recommended for study:

Most review materials can be found at the following website: www.michigan.gov/deg, click on **Water, Drinking Water, Noncommunity Water Supply**. Once on this site, you will find the Safe Drinking Water Act (SDWA), Act 399 of 1976, as revised as well as brochures & other information on Operator Certification.

Other references on drinking water that may be helpful (these are suggestions; you do not have to purchase all of these; see www.michigan.gov/degoperatortraining “Publications...” for ordering some of the following and/or other references)

- Small Water system Operation & Maintenance, California State University, Sacramento, CA, 4th edition
- Water Distribution System Operation & Maintenance, California State University, Sacramento, CA, 4th edition
- AWWA Manual on Recommended Practice for Backflow Prevention and Cross-connection Control (<http://www.AWWA.org>)
- *MDEQ Cross Connection Rules Manual* (contact MDEQ Water Bureau)
- Practices, Waterborne Pathogens, AWWA M48, American Water Works Association, 1999
- <http://www.epa.gov/safewater/index.html>

