

*MODEL CROSS CONNECTION CONTROL PROGRAM
FOR PUBLICLY OWNED WATER SYSTEMS*

Cross Connection Control Program for the
Whiteford Township Michigan

I. Introduction

In accordance to the requirements set forth by the Michigan Department of Environmental Quality (“MDEQ”), Whiteford Township has officially adopted the state of Michigan cross connection rules to protect the public water supply system. A cross connection is defined as a connection or arrangement of piping or appurtenances through which a backflow could occur. Backflow is defined as the undesirable reversal of flow of water of questionable quality, wastes or other contaminants into a public water supply. The purpose of this program is to avoid contamination of the public water supply by preventing and eliminating cross connections. It is Whiteford Township’s intent to carry out a comprehensive and effective cross connection control program (“CCCP”) to ensure public health is protected and the requirements of the Michigan Safe Drinking Water Act are complied with.

II. Authority

The authority to carry out and enforce the local CCCP is granted pursuant to the Whiteford Township Water Supply Cross Connection Ordinance 73, the Michigan Safe Drinking Water Act (“Act 399”), the MDEQ, Water Bureau Cross Connection Rules Manual, and the Michigan Plumbing Code.

III. Program Approach

The objectives of this program will be met primarily by:

- Routinely inspecting water customers for cross connections or potential cross connections.
- Requiring water customers to test backflow prevention assemblies.
- Maintaining cross connection control records.
- Actively enforcing violations of the program.
- Providing public education.
- Reporting the status of the program to the MDEQ.

Whiteford Township shall ensure that there are adequate personnel and resources to carry out the necessary field and administrative requirements for this program. Whiteford Township adopts the MDEQ, Water Bureau Cross Connection Rules Manual as a guide to prevent and eliminate cross connections.

IV. Inspections

The water connections and plumbing systems of all water customers or accounts shall be initially inspected for the presence of cross connections. As a result of the initial inspection, a detailed record of each account shall be established (see Section VI). The township plumbing inspector or other township official agent shall be responsible for inspections. Individuals responsible for conducting inspections shall have obtained sufficient training on cross connection rules, identification, and corrective actions.

Inspections shall consist of entering a residence, building or facility from the point where water service enters the residence, building or facility (usually the meter) and tracing the piping to each end point of use. Using the inspection forms in Appendix "A" the inspector shall identify and note the location and nature of any direct and potential cross connections, location and details of backflow prevention devices, and other pertinent information. Inspectors having proper identification, shall be permitted to enter the building/premises at reasonable times for the purpose of cross connection inspections. If the inspector is refused proper access or if customer plumbing is untraceable, Whiteford Township will assume a cross connection is present and take the necessary action to ensure the public water supply is protected.

The highest priority for inspections shall be placed on residences, buildings and facilities that pose a high degree of hazard, that have a high probability that back flow will occur or are known/suspected to have cross connections.

Once initial inspections of all accounts are complete, then a re-inspection frequency shall be determined for each account based on the degree of hazard and potential for backflow. The MDEQ Cross Connection Rules Manual will be a guide in classifying the degree of hazard of each account. However, in general, situations in which backflow could cause illness or death shall be considered high hazard. Accounts that pose a high hazard or have a high potential for back flow to occur, must be re-inspected at least once per year. All other accounts must be re-inspected once every 1-5 years based on the degree of risk. Other factors such as new construction, water quality complaints, or anomalies in customer billing, may prompt an immediate re-inspection. After initial cross connection inspections are complete, a comprehensive list or inventory of all backflow prevention devices shall be on record including all pertinent data.

Following an inspection, Whiteford Township shall inform the customer of their compliance status with the cross connection rules. Template notices in Appendix B may be used to inform customers of upcoming inspections, required corrective actions, compliance status, etc.

V. Testing Backflow Prevention Assemblies

When all initial inspections have been completed, a comprehensive list of backflow preventors installed on customer plumbing systems will be on record. The backflow preventors that are testable assemblies shall be placed on a routine testing schedule. Based on the associated degree of hazard and probability of backflow, each assembly will be assigned a testing frequency. Assemblies in place on high hazard connections must be tested annually. All other accounts must be tested once every 3 years. In addition, all assemblies must be tested immediately following installation and repair. Only individuals holding an active ASSE 5110 Certification (backflow prevention assembly testing) shall perform such testing.

Upon notice from Whiteford Township, it shall be the responsibility of the water customer to arrange for the assembly to be tested and submit the completed test form.

Following the initial cross connection inspections and subsequent classification of accounts (e.g. assigning a degree of hazard), assembly testing notices shall be sent to customers each year. The notices shall be sent out in a timely manner in order to provide adequate time for customers to comply, and the timing will consider seasonal assemblies. Template notices in Appendix C may be used to inform customers of testing requirements. These notices will:

- Clearly identify the assembly requiring testing (size, make, model, location, etc.)
- Stipulate the date by which the assembly must be tested.
- Indicate that tests must be completed by an ASSE certified tester.
- Enclose a standard test form (see Appendix D).

When assembly testing reports are received by Whiteford Township, they will be checked for the following:

- All the necessary information was provided
- Name and certification number of the tester is provided
- The test results appear valid
- The assembly tested matches the assembly requiring testing (Make, Model, etc.)
- The assembly is ASSE certified

Cross connection control program staff will follow up with owner or tester on questionable test forms. A customer may be asked to have an assembly re-tested if the original test results do not appear valid. Test forms must be received and kept on record for each required test.

VI. Record Keeping

A system of cross connection record keeping shall be maintained. Special software specifically for cross connections may be used for:

- Efficient record searches
- Easy reporting
- Simple updating
- Automatic letter generation
- Automatic deadline notification

All cross connections account information must be in the records including:

- Address and location
- Owner name and contact information
- List of testable assemblies
- Description of other cross connections within the facility
 - Air gaps
 - Non-testable assemblies
- Degree of hazard classification and basis
- Required re-inspection frequency
- Photos or sketches if available

All testable assemblies must be in the records including:

- Location of the assembly
- Name and contact information of assembly owner
- Make, model, and size of assembly
- ASSE standard number
- Degree of hazard classification
- Required testing frequency and basis
- Seasonal or permanent status

Tracking changes in water use or tracking new customers is a critical part of the cross connection program. Whiteford Township shall make every attempt to prevent/eliminate cross connections at installation to ensure future compliance. An effort shall be made to cooperate and communicate with the local plumbing code inspector to better accomplish this goal.

Standard letter, form, and report templates may be used to simplify the program requirements including:

- Inspection forms
- Assembly testing forms
- Inspection and/or assembly testing notification letters
- Non-compliance letters
- Water service termination notice
- Hydrant use authorization forms

Copies of the written cross connection control program, ordinance, and DEQ approval letter should be kept on file. Copies of the MDEQ annual reports shall be kept for a minimum of 10 years.

VII. Enforcement

To protect public health, water customers found to be in violation of the cross connection rules will be brought into compliance in a timely manner or lose their privilege to be connected to the public water system. To properly enforce these rules the Whiteford Township Water Supply Cross Connection Ordinance 73 provides authority to inspect facilities, terminate water service, and assess fines.

Following an inspection, the customer will be sent either a compliance notice or a non-compliance notice. The timeframe to complete the necessary corrective actions is at the discretion of Whiteford Township and will be based primarily on the degree of risk posed by the violation but should also consider the complexity/cost of the necessary corrective actions. Cross connections that pose an imminent and extreme hazard shall be disconnected immediately and so maintained until proper protection is in place. Cross connections that do not pose an extreme hazard are generally expected to be eliminated within 30-60 days. The necessary corrective action and deadline shall be described in the non-compliance notice to the customer.

Failure to perform a required backflow prevention assembly test or pass a test constitutes a cross connection and must be corrected.

If a water shut off is necessary to protect the public water system, the local health department, fire department, local law enforcement and Whiteford Township Supervisor may need to be notified.

VIII. Public Education

The cross connection control program staff must have a good understanding of the program. Whiteford Township shall ensure their cross connection control staff receives proper in-the-field training as well as classroom education focusing on terminology, back flow prevention devices, regulations, and hydraulic concepts. In addition, cross connection control staff will be encouraged to receive continuing education to be made aware of new backflow prevention devices, regulation changes (i.e. plumbing code updates), new water use devices that pose cross connection concerns, etc.

Furthermore, attempts to educate the public about cross connections will be made by distributing pamphlets on common residential cross connections, visiting schools, providing onsite education of facility management and maintenance staff during routine inspections, speaking at condominium association meetings, showing videos on local access channels, or posting newspaper announcements.

Cross connection staff shall also be available upon request to provide backflow prevention education to pertinent community officials and Whiteford Township employees.

IX. Annual Report

Part 14 of the Michigan Safe Drinking Water Act requires that each community report the status of their program to the MDEQ annually. The report summarizes testing, inspection, and corrective action efforts. Cross connection records shall be on file to document each number on the report. The annual report form shall be filled out completely and submitted by the deadline. A narrative description shall be included explaining any unusual numbers or significant events such as:

- The addition or loss of a cross connection staff person
- Greatly expanded/contracted number of cross connection accounts
- Status of accounts not currently in compliance

Appendix A
Inspection Form – Plumbing Inspector

**Residential Cross Connection
Survey Form**

_____ **Water Supply**

Customer Name _____

Customer Address _____

Account Number _____

- | | Yes | No |
|---|--------------------------|--------------------------|
| 1. Underground lawn irrigation system? | <input type="checkbox"/> | <input type="checkbox"/> |
| If yes, is it protected by a testable backflow preventer? | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Swimming pool or hot tub? | <input type="checkbox"/> | <input type="checkbox"/> |
| If yes, is it protected by a testable backflow preventer? | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Photo, chemical, medical, or other lab facilities? | <input type="checkbox"/> | <input type="checkbox"/> |
| If yes, is it protected by a testable backflow preventer? | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Private well or other source of water? | <input type="checkbox"/> | <input type="checkbox"/> |
| If yes, is it protected by a testable backflow preventer? | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Boiler heat or water to air heat pump? | <input type="checkbox"/> | <input type="checkbox"/> |
| If yes, is it protected by a testable backflow preventer? | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Garden hoses connected to possible contaminants? | <input type="checkbox"/> | <input type="checkbox"/> |
| If yes, is it protected by a hose bibb vacuum breaker? | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Water softener? | <input type="checkbox"/> | <input type="checkbox"/> |
| If yes, is it protected by an air gap? | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Other _____ | | |
| _____ | | |

Inspector Name _____

Date _____

Cross Connection Inspection Form

	Date Received	Facility Account No	Customer ID No	Facility ID No	Install ID No	Test ID
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A. Municipality <i>(Please check <input checked="" type="checkbox"/> the following facility location)</i>	
<input type="checkbox"/> Victoria <input type="checkbox"/> Esquimalt <input type="checkbox"/> Oak Bay <input type="checkbox"/> Saanich <input type="checkbox"/> Central Saanich <input type="checkbox"/> Sidney <input type="checkbox"/> North Saanich <input type="checkbox"/> Sooke <input type="checkbox"/> East Sooke <input type="checkbox"/> Metchosin <input type="checkbox"/> Colwood <input type="checkbox"/> View Royal <input type="checkbox"/> Langford <input type="checkbox"/> Highlands	Backflow Protection (BFP) Type Glossary AG - Air Gap RP - Reduced Pressure Principle Assembly DC - Double Check Valve Assembly AVB - Atmospheric Vacuum Breaker PVB - Pressure Vacuum Breaker DuCh - Dual Check

B. Designated Facility Contact Person Info <i>(Please fill out this section)</i>			
Contact Person Name	Contact Person Title	Contact Person Organization	
Contact Person Mailing Address (Unit no, Street no, Street Name, City, Prov. Postal Code)			
Contact Person Email Address	Contact Phone No	Contact Fax No	Contact Cell No (other)

C. Facility Info <i>(Please fill out this section)</i>		
Facility Name (Common name of building/structure of installed device)	Facility Type (See list on web site below)	
Facility Unit No	Facility Address (Street no, Street Name or Park Name)	Designer Project No
Facility Municipality	Name of Owner or Organization	Facility Hazard Level

D. Service Info <i>(Please check <input checked="" type="checkbox"/> and fill out this section)</i>	
Service Connection(s) and Water Meter Size (Inch) <input type="checkbox"/> Combined Size: _____ <input type="checkbox"/> Domestic <input type="checkbox"/> 1/2 <input type="checkbox"/> 3/4 <input type="checkbox"/> 1 <input type="checkbox"/> 1 1/2 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> Other _____ <input type="checkbox"/> Fire <input type="checkbox"/> 1/2 <input type="checkbox"/> 3/4 <input type="checkbox"/> 1 <input type="checkbox"/> 1 1/2 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> Other _____ <input type="checkbox"/> Irrigation <input type="checkbox"/> 1/2 <input type="checkbox"/> 3/4 <input type="checkbox"/> 1 <input type="checkbox"/> 1 1/2 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> Other _____	Premises Isolation at the Water Meter? <input type="checkbox"/> Yes <input type="checkbox"/> AG <input type="checkbox"/> RP <input type="checkbox"/> DC <input type="checkbox"/> Other _____ <input type="checkbox"/> No Explain _____ <input type="checkbox"/> Fire Line <input type="checkbox"/> RP <input type="checkbox"/> DC <input type="checkbox"/> Other _____ Design Line Pressure: _____ (psi)

E. BFP Info <i>(Please check <input checked="" type="checkbox"/> and fill out this section)</i>			
Water Usage	Downstream Process	BFP Type <small>(AG, AVB, PVB, RP, DC, DuCh)</small>	Location <small>(Floor Level, Room No, Equipment Tag, Etc)</small>
<input type="checkbox"/> Auxiliary Water Supply	<input type="checkbox"/> Well or Surface Water	⇒ BFP Type: _____	⇒ Location: _____
	<input type="checkbox"/> Storage Tank	⇒ BFP Type: _____	⇒ Location: _____
	<input type="checkbox"/> Reclaimed Water	⇒ BFP Type: _____	⇒ Location: _____
	<input type="checkbox"/> Rainwater Harvesting	⇒ BFP Type: _____	⇒ Location: _____
	<input type="checkbox"/> Other _____	⇒ BFP Type: _____	⇒ Location: _____
<input type="checkbox"/> Fire Sprinkler System	<input type="checkbox"/> Anti-freeze (glycol system)	⇒ BFP Type: _____	⇒ Location: _____
	<input type="checkbox"/> Wet or Dry system	⇒ BFP Type: _____	⇒ Location: _____
	<input type="checkbox"/> Other _____	⇒ BFP Type: _____	⇒ Location: _____

Please Turn Over and Complete Other Side

Appendix B
Notice of Intent to Inspect

NOTICE OF CROSS CONNECTION INSPECTION
Whiteford Township

[insert name and address of landowner]
Ottawa Lake, Michigan 49267

Re: Cross Connection Inspection

Whiteford Township will be conducting a public water system cross connection control inspection at your property within the next several months.

Why does Whiteford Township want to inspect the property?

The Michigan Department of Environmental Quality (“MDEQ”) requires all municipal water suppliers to have a Cross Connection Control Program.

In addition, the Whiteford Township Water Supply Cross Connection Ordinance No. 73 prohibits cross connections to the municipal water supply. A cross connection is a connection or potential connection between any part of a potable water system and any other substance that is not potable. A critical part of the cross connection program is the completion of a thorough, on-site, cross connection control inspection of properties served by the public water supply.

What may happen as a result of the inspection?

The inspector will simply look for potential cross connection problems at your property and evaluate the need for installation of protection such as backflow prevention devices. In some cases, modifications of the building plumbing may be necessary to achieve the necessary protection of the public water distribution system.

Your assistance with this phase of the cross connection program is critical. Whiteford Township inspector or a designated representative will conduct the cross connection inspection at your facility. All inspections will be done during normal and reasonable business hours. To properly perform its work, the Whiteford Township inspector will need complete access to your property to inspect the plumbing system.

Your cooperation and assistance will ensure a quick and accurate assessment.

If you have any questions about the facility inspection, or about the Cross Connection Control Program, please call the Whiteford Township Clerk at 734-856-5383.

Appendix C
Letter to Landowner – Request to Self-Inspect Assembly

NOTICE OF REQUIRED BACKFLOW PREVENTER TESTING

[insert address of landowner]
Ottawa Lake, Michigan 49267

Re: [insert address of landowner]

The Whiteford Township records indicate that the backflow preventer(s) located at the above address are due for testing. The Michigan Department of Environmental Quality (“MDEQ”) requires all municipal water suppliers to have a Cross Connection Control Program. In addition, the Whiteford Township Water Supply Cross Connection Ordinance No. 73 prohibits cross connections to the municipal water supply.

A cross connection is a connection or potential connection between any part of a potable water system and any other source of water or substance that is not potable. A critical part of the cross connection program is the required testing of all backflow preventers on a periodic basis to make sure they are in good working order to prevent possible backflow of non-potable or contaminated water into the public supply.

A list of the testable backflow preventers on your premises, local certified testers and a test form are enclosed with this letter. It is your responsibility to contact one of the testers and have the backflow preventer(s) tested.

A test form must be filled out for each assembly and signed by the tester and returned to this office within fifteen days.

We appreciate your cooperation and look forward to receiving the results of your backflow preventer(s) testing soon.

If you have any questions about the required backflow preventer testing, or about the Cross Connection Control Program, please call the Whiteford Township Clerk at 734-856-5383.

Appendix D
Standard Test Form for Landowners to Complete
And return to Whiteford Township

Backflow Assembly Test Report Form

Mail Completed Form to:

Name of Premises: _____

Service Address: _____

Mailing Address: (if different) _____

Use and location of the assembly: _____

Manufacturer: _____ Model #: _____

Serial #: _____ Size: _____

Line pressure at time of test: _____

New Installation Replacement Assembly Existing Assembly

RPZ DCVA PVB

Check Valve #1	Check Valve #2	Differential Pressure Relief Valve	Pressure Vacuum Breaker
<input type="checkbox"/> Leaked <input type="checkbox"/> Closed Tight	<input type="checkbox"/> Leaked <input type="checkbox"/> Closed Tight	Opened at _____ PSI <input type="checkbox"/> Did Not Open	Air Inlet opened at _____ PSI <input type="checkbox"/> Did Not Open
Drop Across CV #1 _____ PSI	Drop Across CV #2 _____ PSI	Buffer _____ PSI	Check Valve _____ PSI <input type="checkbox"/> Leaked

Condition of number 2 Control Valve: Closed Tight Leaking

Remarks: _____

CERTIFICATION: I have completed the above test and hereby certify that this backflow device performed satisfactory and meets all Federal, State, and local codes and regulations as required.

Date: _____ Time: _____ Tester Certification #: _____

Name of Tester (Print): _____ Tester ID# _____

Company Name: _____ Company Telephone: _____

Signature of Tester: _____

Gauge Manufacturer and Model: _____ Serial #: _____

Date of Last Calibration of Test Gauges: _____

THIS ASSEMBLY: PASSED FAILED

DEVICE TEST FORM		DUE DATE:	
Contact: Facility: Address: City:		OCDC Account #:	
Date of Test:		Device/Manuf/Model/Size:	
SECTION 1. Device Information		Serial #:	
Protection: Location:			
Line Pressure	1st Shutoff C <input type="checkbox"/> L <input type="checkbox"/>	2nd Shutoff C <input type="checkbox"/> L <input type="checkbox"/>	
psi	Reduced Pressure Principle Assembly		Pressure Vacuum Breaker Spillproof Vacuum Breaker
Double Check Valve Assembly			
SECTION 2. First Test			
1st Test	1st Check C <input type="checkbox"/> L <input type="checkbox"/>	2nd Check C <input type="checkbox"/> L <input type="checkbox"/>	Relief O <input type="checkbox"/> M <input type="checkbox"/>
	PSID <input type="text"/>	PSID <input type="text"/>	PSID <input type="text"/>
		Confirm <input type="text"/>	Air Inlet O <input type="checkbox"/> M <input type="checkbox"/> Check C <input type="checkbox"/> L <input type="checkbox"/>
			PSID <input type="text"/> PSID <input type="text"/>
Pass <input type="checkbox"/> Fail <input type="checkbox"/> If 1 st test passed, go to Sec. 5, otherwise complete sections 3-6. **NOTE: All failed tests are required to be submitted.			
SECTION 3. Repairs			
Repairs, if necessary			
SECTION 4. Final Test			
Final Test	1st Check C <input type="checkbox"/> L <input type="checkbox"/>	2nd Check C <input type="checkbox"/> L <input type="checkbox"/>	Relief O <input type="checkbox"/> M <input type="checkbox"/>
	PSID <input type="text"/>	PSID <input type="text"/>	PSID <input type="text"/>
		Confirm <input type="text"/>	Air Inlet O <input type="checkbox"/> M <input type="checkbox"/> Check C <input type="checkbox"/> L <input type="checkbox"/>
			PSID <input type="text"/> PSID <input type="text"/>
Pass <input type="checkbox"/> Fail <input type="checkbox"/>			
Notes			

SECTION 5. Certification On this date the above device was tested per applicable codes and the required performance standards.

Tester Name: _____ Tester Certification #: _____

Testing Firm: _____ Testing Firm Phone #: _____

Testing Firm Address: _____

Tester Signature: _____ Date: _____

SECTION 6. Gauge

Make: _____ Model: _____

Serial #: _____ Date of last calibration: _____

Web Version

Certificate

I, Angela Christensen, do hereby certify that I am the duly elected and acting Clerk of Whiteford Township, and I do hereby certify that this Model Cross Connection Control Program for Publicly Owned Water Systems was approved by the Township Board of the Township of Whiteford, County of Monroe, State of Michigan, at a regular meeting of the Township Board held at the Whiteford Township Hall, 8000 Yankee Road, Suite 100, Ottawa Lake, Michigan 49267, on the 17th day of July, 2018.

Dated: July 17, 2018

Angela Christensen,
Whiteford Township Clerk

ATTEST:

Walter Ruhl,
Whiteford Township Supervisor