DRINKING WATER SOURCE PROTECTION PLAN

For the City of St. Marys, Ohio

PWS ID# OH0600612

April 2014

Prepared by:
Dave Sprague, Supt. Water & Wastewater

Table of Revisions			
Section	**Revision**	**Revision Date**	**Approved By**

ATTACHMENT A

Ohio EPA Review of the City of St. Marys' Drinking Water Source Protection Plan

Endorsement Statement

Ohio EPA endorses the City of St. Marys' drinking water source protection plan as meeting the requirements of Ohio's Source Water Protection Program. The plan identifies priority contaminant sources within the delineated protection area and proposes protective strategies for them that are appropriate for a protection area with a relatively large number of potential pollution sources and with numerous oil and gas wells that breach the confining layer. Improperly sealed wells can provide a direct pathway for contaminants to reach the underlying aquifers.

The protective strategies emphasize zoning changes, the creation of a protection team and education and outreach. To restrict land uses within the source water protection areas for the city that could significantly increase the potential for contamination of the aquifers, a Groundwater Protection Overlay District Zoning Regulations Ordinance was passed in August 2012. Further, a ground water protection team, composed of City department representatives, local officials and local business representatives was established in November 2013 to develop and implement the Source Water Protection Plan. Additionally, education of and outreach to land-owners in the source water protection areas is to occur, including an intent to locate and seal any improperly sealed wells. Education and outreach activities will also serve to inform the community how their activities can potentially impact ground water and what they can do to prevent contamination.

The City of St. Marys commits to reviewing the protection plan every three years.

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1.0 INTRODUCTION

The City of St. Marys has developed a Source Water Protection Plan (Protection Plan) to document implementation strategies to protect the aquifers that supplies our drinking water from land-based contamination. Components of the Protection Plan include: contaminant source control strategies, education and outreach strategies, contingency plan update, and, in some cases, ground water monitoring.

This Protection Plan builds on the Source Water Assessment Report that was completed for the City of St. Marys in October 2000 by Jones and Henry Engineers LTD. This assessment includes:

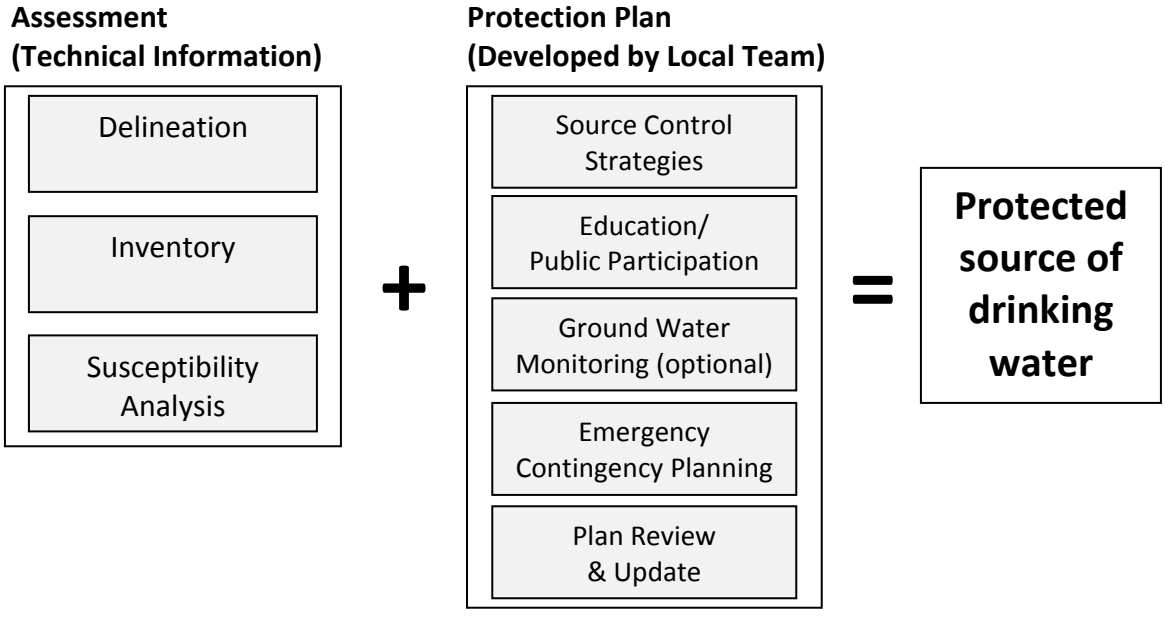
1. Delineation of Wellhead Protection Area Report (see Appendix F) which includes a delineation of the one year and five year time of travel areas, from November 1999.
2. Potential Pollution Sources Inventory Report (See Appendix G) from October 2000.

The susceptibility analysis was completed by Ohio EPA in 2004. The potential contaminant source inventory was updated in 2004 by Ohio EPA and in 2013 by City of St. Marys, to ensure the protective strategies documented herein are based on currently existing contaminant sources.

1.1 BENEFITS OF A PROTECTION PLAN

The Protection Plan:

1. Helps the City of St. Marys provide the safest and highest quality drinking water to its customers at the lowest possible cost;
2. Helps to plan for future expansion, development, zoning, and emergency response issues;
3. Can provide more opportunities for funding in order to improve infrastructure, purchase land in the protection area, and other improvements to the wellfields.



1.2 SUMMARY OF THE CITY OF ST. MARYS SOURCE WATER ASSESSMENT

The City of St. Marys relies entirely on groundwater for its water supply. Consequently, it is necessary that the wellfields will be capable of meeting current and future "Average-Day" water demand. The City currently operates two wellfields to meet the City's water demand. The first wellfield to be developed was the Barrington (South) Wellfield, which is located approximately ½ mile south of South Park Drive on the east side of County Road 66A. The second wellfield developed was the Jackson (North) Wellfield between State Route 66 and County Road 66A and north of South Park Drive. The following is a brief description of the characteristics of each wellfield.

Barrington (South) Wellfield

Development of the South Wellfield began in 1943 with the construction of an 8-inch well that has since been sealed. The drilling of Well No. 4 was completed in 1946. The aquifer was intercepted at approximately 311 feet. The well was drilled to a depth of 343 feet and intercepts 32 feet of aquifer. An artesian effect was also noted in this well, causing the groundwater level in the well to rise to within six feet below the ground surface. However, the effect did not produce a flow of water over the top of the casing.

The drilling of Well No. 5 was completed in December 1998. During its construction, it was noted that the main aquifer was encountered at a depth of 354 feet, and that the bottom six feet was reported to contain a substantial percentage of clay. Based on information derived from the well log of Well No. 5, it is estimated that the main aquifer is approximately 60 feet thick. Overlaying the main aquifer are alternate layers of clay, and clay with sand and/or gravel. Due to the artesian effect described previously, the water level in the well rises to near ground level (approximately 12 feet), depending on the activity in the wellfield. It is estimated that if operations in the wellfield should be suspended for a prolonged period of time, water levels would rise above the ground surface.

The aquifer intercepted by the wells located in the South Wellfield consists of sand and gravel deposits from the Teays Valley Aquifer. This aquifer is overlaid by more than 250 feet of glacial till and moraine. The information available indicates that the glacial deposits in the South Wellfield area may be over 400 feet think.

Jackson (North) Wellfield

Development of the North Wellfield began in November 1967 with the construction of a 12-inch well, currently identified as Well No. 1. Construction of Well No. 2, also 12-inch, began in May 1968, immediately after the construction of Well No. 1. Both wells intercept a bedrock aquifer.

The bedrock aquifer in the vicinity of St. Marys consists of alternating layers of light gray, blue, and yellow consolidated limestone. In certain locations there is some evidence of sandstone. In the area of Well No. 1, the limestone aquifer is approximately 190 feet thick and is overlaid by 75 feet of glacial deposits consisting mainly of clay, clay and gravel, and boulders. In the

area of Well No. 2, the limestone aquifer is 171 feet thick and is overlaid by 94 feet of glacial deposits consisting mainly of clay. Underlying the limestone aquifer is a blue shale formation, which according to the well logs, is over 20 feet thick. Both wells were finished in the shale formation, leading to the conclusion that the wells fully intercepted the limestone aquifer. An artesian effect was also noted in both North Wellfield wells, resulting in groundwater levels at approximately 27 feet below ground surface at the time of construction.

Aquifer Sensitivity

The South Wellfield draws water from a confined sand and gravel aquifer with an approximate confining layer thickness of 200 feet. The South Wellfield consists of two wells that are cased to an average depth of 346 feet.

The North Wellfield draws water from a confined limestone bedrock aquifer with an average confining layer thickness of 75 feet. The North Wellfield contains two ground water wells that are cased to an average depth of 85 feet.

The regional topography is relatively gently sloping to flat and the soils are clay loam, which are poorly drained and will cause precipitation to pond or run off the ground surface instead of infiltrating to the aquifer.

The significant thickness of the clayey tills at the wellfields and the confined conditions of the sand and gravel and limestone aquifers should pose a formable barrier to potential downward migration of contamination from the surface. However, numerous improperly sealed oil and gas wells in the area may compromise the sensitivity of the aquifers.

Wellhead Protection Area

In 1999, Jones & Henry Engineers LTD completed a delineation of the St. Marys Wellhead Protection Area. The delineation identified the one year and five year time of travel areas around the City of St. Marys wellfields, i.e. the City of St. Marys Wellhead Protection Area.

Potential Contaminant Sources

There are 15 potential contaminant sources within the one year time of travel area of the North Wellfield and one potential contaminant source within the one year time of travel area of the South Wellfield. There are four potential contaminant sources located within the North Wellfield's five year time of travel area and no potential contaminant sources located within the South Wellfield's five year time of travel. See Appendix C for a list and map of the potential contaminant sources.

The types of potential contaminant sources present include 14 industrial and or commercial facilities, auto repair facilities, lime sludge haulers and lagoons, numerous oil and gas wells, gas transmission lines, oil transmission lines, roads, railroads, the Miami and Erie Canal, as well as a cemetery and a water treatment facility. Additionally, there are two facilities located within or near the North Wellfield's one year time of travel that are generators of hazardous waste and

one of these facilities is also listed in the Ohio Spills Database, the Toxic Release Inventory (TRI), the Comprehensive Environmental Response Compensation, and the Liability Information System (CERCLIS) database.

Protective Strategies

Protective strategies are activities that help protect a drinking water source from becoming contaminated or further contaminated. Implementing these activities can provide a number of long-term benefits, including protecting the health of consumers, preserving water resources for future generations, avoiding the expense of cleaning up a contaminated water supply or finding alternative sources of water, and preserving or enhancing the economic value of the area by securing an abundant supply of clean water. Details of the protective strategies that the City of St. Marys may consider are documented in Section 3.0.

Susceptibility

The aquifers that supply drinking water to the City of St. Marys have a moderate susceptibility to contamination. A moderate susceptibility has been provided instead of a low susceptibility because of the types of potential contaminant sources that exist within the City of St. Marys Protection Areas and because the integrity of the confining layer, within and near the Protection Areas, has been compromised by numerous oil and gas wells that breach the confining layer providing a direct pathway for contaminants to reach the underlying aquifers. In addition to the number and types of potential contaminant sources, the City of St. Marys' susceptibility analysis was also based on the aquifers' geologic sensitivity to contamination.

2.0 FORMING A PROTECTION TEAM

The Source Water Protection Plan was developed by a local team made up of water system staff, elected officials, emergency responders, and representatives from industry, business and agriculture in the protection area.

2.1 BUY-IN BY DECISION MAKERS

On August 13, 2012, the St. Marys City Council passed an ordinance that acknowledges the importance of source water protection through authorization of Groundwater Protection Overlay District Zoning Regulations. A copy of this ordinance is included in Appendix A.

On November 11, 2013, St. Marys Council also passed an ordinance authorizing the creation of a Groundwater Protection Team to develop and implement a Drinking Water Source Protection Plan. A copy of this ordinance also is included in Appendix A.

2.2 PROTECTION TEAM MEMBERS:

Table 2-1. List of Protection Team Members			
Name	**Title**	**Organization / Contact Information**	**Appointed By**
Jeff Thompson &/or ???	Supt. Water & Wastewater &/or Supt. Water & Wastewater Plants	City of St. Marys	Standing Member(s)
Wayne Sweigart	Fire Chief	City of St. Marys	Standing Member
Chad Hicks	Fire Chief	St. Marys Township	Standing Member
Troy Anderson	Auglaize County EMA Director	Auglaize County	Standing Member
Todd Fleagle	St. Marys City Council Representative	City of St. Marys	St. Marys Council President
Chad Elshoff	St. Marys Township Trustee Representative	St. Marys Township	St. Marys Township Trustees
Dave Reichelderfer	Auglaize County Commissioner Representative	Auglaize County	Auglaize County Commissioners
Eric Langsdon	Industrial Representative	Industry	St. Marys Mayor
Doug Moran	Commercial Representative	Commercial	St. Marys Mayor
Karl Dammeyer	Agricultural Representative	Agriculture	St. Marys Mayor

3.0 STRATEGIES FOR CONTAMINANT SOURCES

The goal of this section is to develop protective strategies for potential contaminant sources in City of St. Marys' protection area. The potential contaminant sources listed in the Potential Pollution Sources Inventory Report (see Appendix G) were evaluated. The City of St. Marys developed specific protective strategies that the community will use to protect its drinking water from the types of potential contaminant sources identified.

A listing of the potential contaminant sources in or near the City of St. Marys' protection area and the respective priority rank of potential source of contamination is presented in the tables provided in Appendix C.

3.1 MISCELLANEOUS POTENTIAL POLLUTION SOURCES

Miscellaneous pollution sources are shown in Table 3.2 presented in Appendix C.

3.2 INDUSTRIAL & COMMERCIAL POTENTIAL POLLUTION SOURCES

Industrial and commercial potential pollution sources are shown in Table 3.3 and on a map presented in Appendix C. The industrial and commercial potential pollution sources and Site I.D. numbers are per Figure 7 & Table 7 (Page 23), Report on Potential Pollution Sources Inventory, by Jones & Henry Engineers in 2000 (see Appendix G). Sites were visually updated by Ohio EPA in 2004 and again by the City of St. Marys in 2013.

3.3 PROTECTIVE STRATEGIES

Protective strategies that the City of St. Marys may consider while developing its Drinking Water Source Protection Plan includes the following. Questions related to protective strategies should be directed to the City of St. Marys Water Department at 419-394-4114.

Industrial and Commercial Facilities: Inform local industrial facilities located within or near the City of St. Marys Protection Areas of their location with respect to the City's Protection Areas and of the importance of practicing Best Management Practices (BMPs) throughout their facility. Industrial facilities should also be made aware that the development of industrial solid waste landfills are prohibited within an Ohio EPA endorsed Drinking Water Source Protection Area for groundwater-based community public water systems.

Abandoned Oil & Gas Wells: Work with landowners and the Ohio Department of Natural Resources, Division of Mineral Resources Management, to ensure that abandoned oil & gas wells that are located within or near the City of St. Marys Drinking Water Source Protection Areas have been properly sealed.

Transportation (State, County, & Local Roads, Railroads): There is a potential for spills along State Route 66, South Park Dr., County Roads (66A, Koop, Aqueduct, Waesch, Greenville), and other local roads, and the railroad. The City of St. Marys has advised the local fire departments (St. Marys City and St. Marys Township) and the local emergency planning agency about the location of the drinking water source protection area, so that strategies can be developed to avoid spilled materials impacting the aquifer. The City of St. Marys will be placing signs on State Route 66 and other roads within the protection area indicating the area is a drinking water protection area.

Agricultural & Residential: Educate about the importance of using Agricultural Best Management Practices and recommended additional practices, road safety with agricultural chemicals, methods to control negative impacts to surface water, etc. Educate on the importance of drinking water protection, the use/maintenance of septic systems, illegal dumping, proper well abandonment, etc.

Table 3-1. Protective Strategies for Specific Potential Contaminant Source Type			
Strategy	**Responsible Party**	**Implementation**	**Comments**
Unused and Unsealed Oil & Gas Wells: 1. Locate oil & gas wells in protection area using ODNR's well locator map application. 2. Contact ODNR Division of Oil & Gas Resources, as needed, to verify status of existing wells. 3. Conduct outreach to owners of unsealed wells to discuss sealing. 4. Work with ODNR staff to obtain funding under Orphan Well Program.	Water Department Supt. Water Department Supt. Water Department Supt. Water Department Supt.	Anticipated Start by September 2014 Anticipated Start by November 2014 Anticipated Start by March 2015 Anticipated Start by March 2015	Progression through steps dependent on progress in each step and completion dates dependent on funding & owner cooperation.
Unused & Unsealed Water Wells: 1. Locate unused water wells in protection area. 2. Conduct outreach to owners of unsealed wells to discuss sealing.	Water Department Supt. Water Department Supt.	Begin by September 2014 Begin by March 2015	Same as above.
Industrial & Commercial Facilities: 1. Distribute source water protection information to facility managers.	Water Department Supt.	By July 2014 & every year thereafter	
Highways & Roads, Installing Source Water Protection Signs: 1. Contact ODOT Region 7 (Sidney) about installing signs on SR 66. 2. Contact Auglaize County and St. Marys Township about installing signs on County & Township roads. 3. Develop & install signs on City streets. 4. Advise local emergency response agencies about location of drinking water source protection area.	Water Department Supt. & Engineering Supt. Water Department Supt. & Engineering Supt. Water Department Supt. & General Services Supt. Water Department Supt.	By July 2014 By July 2014 By July 2014 By June 2014 & every year thereafter	
Agricultural & Residential: • See Table 4-1			

4.0 EDUCATION AND OUTREACH

The purpose of the Protection Team's education and outreach efforts is to inform people who live and work within the City of St. Marys' drinking water source protection area about where their drinking water comes from and why it is important to protect this valuable resource. Education and outreach efforts will also inform the community how their activities can potentially impact groundwater and what they can do to prevent contamination.

Educational strategies that the City of St. Marys may consider while implementing its Drinking Water Source Protection Plan includes the following:

Table 4-1. Educational Strategies			
Education and Outreach Strategies	**Target Audience**	**Timeline**	**Person Implementing Strategy**
Consumer Confidence Report (Annual Water Quality Report)	Water Customers	Annually by July 1st	Water Department Supt. in coordination with Utility Dept.
Distribute information to water customers with Utility Bills (see Appendix D)	Water Customers	Annually	Water Department Supt. in coordination with Utility Dept.
Distribute information to non-water customers (see Appendix D)	Land Owners Not Using City Water	Annually	Water Department Supt.
Include Information on Website	General Public	Current	Water Department Supt. in coordination with Personnel Director
Informative Road Signs	Visitors to Area, Truck Drivers	By September 2014	Water Department Supt. in coordination with General Services Dept., Auglaize County, St. Marys Township, & ODOT
Local School Programs	School Children	Ongoing	Coordinate with School System
Local Civic Groups	Interested Parties	Ongoing	Per Request

5.0 UPDATE OF CONTINGENCY PLAN

A well-formulated contingency plan enables a utility to prepare for, respond to, and recover from crisis conditions without wasting time on futile or unnecessary efforts or spending funds unnecessarily. The plan defines the duties, responsibilities, and functions of all City of St. Marys personnel with respect to each specific emergency condition. The City of St. Marys has developed procedures to address specific situations that can be expected to arise, and these are documented in City of St. Marys' Water Treatment Plant Emergency Preparedness Manual.

The following are issues that are specific to drinking water source protection. This information has been included in the water plant contingency plan.

5.1 DRINKING WATER SHORTAGE – SHORT TERM LOSS OF SOURCE

The City of St. Marys can provide water from existing storage (water towers and clearwell) for up to 1.75 days under yearly average flow conditions, provided it is not necessary to flush out the entire distribution system.

1,850,000 gallons storage in towers and clearwell ÷ (10,500 customers x 100 gal/day) = **1.75 days storage**

If the City of St. Marys experiences a short-term loss of its drinking water source (such as through a short-lived emergency on the wellfield, collapse of a well, etc.), it will:

1. Since there are four wells with capacities between 800 gpm to 1,000 gpm each, the short-term loss of one or two of the four wells would not prevent treatment of an adequate supply of potable water, provided that the demand for water does not exceed the capacity of the wells that remain in service. See Section XIII of the Water Treatment Plant Emergency Preparedness Manual (page 44) for more details.
2. If necessary, established procedures to conserve water are contained in Section XV of the Water Treatment Plant Emergency Preparedness Manual (page 48).
3. If necessary, procedures have been established to haul water into the City from area water systems, including Celina, Wapakoneta, New Bremen, and Minster. See Section V of the Water Treatment Plant Emergency Preparedness Manual (page 23) for more details.
4. In the case of the loss of low service (well) piping, there are two feed lines into the treatment plant that allow for switching between one or the other in the event of a break or other loss. Temporary lines can be laid above ground until repairs to buried piping are completed. See Section XIII of the Water Treatment Plant Emergency Preparedness Manual (page 44) for more details.

5.2 DRINKING WATER SHORTAGE – LONG-TERM LOSS OF SOURCE

In the event of complete loss of a current wellfield, the City of St. Marys would most likely:

1. Move to secure another wellfield in the vicinity.
2. Possibly investigate tying in with another municipal supply near the City of St. Marys, until such time such as an additional well and/or wellfield can be developed.

5.3 FUNDING FOR WATER EMERGENCIES

1. The amount budgeted for an emergency is contingent upon the nature of the emergency and fund balances at the time. If an extreme emergency occurs, the City's full financial resources would be tapped to solve the problem.
2. The following is a list of expenditures which various employees can spend without approval for <u>true emergency</u> repairs. This list is applicable only when no one of higher authority is available to approve needed expenditures.
    1. Water & Wastewater Plant Operators: $500.00;
    2. Water Distribution Personnel: $1,000.00;
    3. Maintenance Personnel: $1,500.00;
    4. Operations Coordinator: $2,000.00;
    5. Supt. Water Distribution and Wastewater Collection: $5,000.00;
    6. Supt. Water & Wastewater Treatment: $5,000.00;
    7. Supt. Water & Wastewater Department: $10,000.00;
    8. Director of Public Service & Safety, Mayor, City Council: >$10,000.00
3. The City of St. Marys also would contact state, local, or regional lenders and officials with the authority to make loans in an emergency situation.

5.4 PLANNING FOR THE FUTURE

A. Current average daily flow pumped to system = 1.206 MGD (2012 yearly average)
B. Current daily City of St. Marys design treatment capacity = 2.4 MGD (as of 2013)
C. Wellfield capacity (the maximum amount the wells can pump, based on 2013 pump capacity) = 5.0 MGD.
D. The City of St. Marys currently is pumping about 50**%** (A/B) of its design capacity and about 24% (A/C) of its wellfield capacity.

Census figures indicate that the area served by the City of St. Marys Water System has maintained a relatively steady population for at least the past ½ century. Currently no significant growth or decline of population is anticipated. Due to the depth of the aquifer, ground water levels in the vicinity have remained fairly steady even during major drought years. Also, at this time, St. Marys does not anticipate a sudden spike in industrial use of the water.

Based on this, the City of St. Marys does not anticipate the need to expand the wellfields or significantly increase pumpage within the next 5-10 years.

5.5 EMERGENCY RESPONSE TO A TOXIC SPILL/RELEASE IN THE PROTECTION AREA

Accidental chemical spills and releases in the protection area will be handled by agencies that have the training and expertise to respond to and initiate response activities. Those agencies and the contact numbers are as follows:

1. Ohio EPA, Division of Environmental Response and Revitalization:
    a. 24-Hr. Phone 800-282-9378
2. Auglaize County Office of Homeland Security and Emergency Management:
    a. Troy Anderson, Director
    b. Phone 419-739-6725
3. St. Marys City Fire Department (spills inside City corporate limits):
    a. Emergency Phone 911
    b. Office Phone 419-394-2361
4. St. Marys Township Fire Department (spills outside City corporate limits):
    a. Emergency Phone 911
    b. Office Phone 419-394-2834
5. City of St. Marys Water Department:
    a. 24-Hr. Phone 419-394-2325 (St. Marys Police Dept.)
    b. Office Phone 419-394-4114

St. Marys Water Department officials should ensure that response activities are being handled timely and adequately. The checklist in Appendix E has been developed to assist in this endeavor.

6.0 Ground Water Monitoring

The City of St. Marys source water protection team has decided not to incorporate ground water monitoring in its Source Water Protection Plan at this time. Although the source water protection area is moderately susceptible to contamination, it is believed that ongoing visual monitoring and inspection of activities within the source water area will serve as a substitute for the chemical warning given by a ground water monitoring program.

Additionally, since the establishment of St. Marys' wellfields (the South Wellfield in 1943, the North Wellfield in 1967), no historical contamination has been detected. Plumes within the wellfield capture zone are not believed to be present. If such contamination became known or highly suspected, St. Marys would re-consider the option of a ground water monitoring program.

7.0 Periodic Review

A protection plan is not a static document. Over time many issues related to protection planning will change: wells will be added or removed from the wellfields, existing potential contaminant sources will close, new potential contaminant sources may develop, new education and outreach opportunities may become available, and new partners in protecting the drinking water source will be identified. The protection plan needs to plan for these and other events. The City of St. Marys commits to reviewing the Drinking Water Source Protection Plan every three years.

7.1 Updating the SWAP Assessment

<u>Delineation Updates</u>

1. Has the amount of pumping significantly increased or decreased since the date that Ohio EPA or the City's consultant provided the Drinking Water Source Assessment report?
2. Have any wells been added or removed?
3. Has a new wellfield been added or are there any plans for a new wellfield?
4. Is there new hydrogeologic data to refine the delineation model (e.g., flow direction, pump tests, new well logs etc.)?

If the answer to any of the above questions is yes, the City of St. Marys will contact Ohio EPA's Source Water Assessment and Protection Program staff in the Northwest District office to determine whether the protection area should be re-delineated.

<u>Potential Contaminant Source Inventory</u>

1. Has the extent of the protection area changed?

2. Has the community developed rapidly?
3. Have land uses in and around the protection area changed?
4. Has management of businesses in the protection area changed?

If the answer to any of the above questions is yes, the City of St. Marys will update the inventory or conduct a new inventory. The City of St. Marys may contact Ohio EPA's SWAP staff in the district office for guidance or assistance in conducting the inventory.

Other

1. Is the list of Protection Team members and contact numbers current?

7.2 Evaluating the Effectiveness of the Protective Strategies

In order to evaluate if the protective strategies in this Source Water Protection Plan are achieving the desired outcomes, City of St. Marys will consider the following types of questions and write any changes into the Protection Plan.

1. St. Marys has developed Groundwater Protection Overlay District Zoning Regulations, which were authorized by Council in August 2012. Has the ordinance achieved its purpose? If not, why not? Should it be revised to be more effective?

Pollution Source Control Strategies:

1. Have we followed our own schedule of implementation/timeline (Section 3) for each of the pollution source control strategies?
2. Are there new potential contaminant sources that need to be addressed with new pollution source control strategies?
3. Have we implemented any new protective strategies that are not documented here?
4. Did any of our strategies result in removal or elimination of a potential source?
5. Did any of our strategies result in business owners or individuals modifying practices to decrease the risk of contaminating the drinking water source?
6. Did our coordination with other groups contribute to the implementation of protective strategies?
7. Have the partnerships developed during plan implementation been productive?

Education and Outreach:

1. Have we followed our own schedule of implementation/timeline (Section 4) for each of the educational strategies?
2. Are there any new groups in the population that we need to target with education and outreach strategies?
3. Have we implemented any new educational strategies that are not already documented here?
4. Has education and outreach targeting any specific group resulted in actions that reduced or could potentially reduce the risk of contaminating the drinking water source

(e.g., septic owners conducting regular maintenance, farmers using best management practices, properly sealing abandoned wells)?

5. Have we received additional funding to continue any particular education and outreach strategy?
6. Have we received any accolades, awards or recognition from outside entities or organizations for our educational efforts?
7. Have we had any unsolicited requests for SWAP-related education (such as requests for plant tours, requests for presenters/speakers at events, etc.)?
8. Did our coordination with other groups contribute to the successful development and dissemination of SWAP-related information?
9. Did we have sufficient staff and resources to complete all the planned educational efforts?
10. Have educational efforts been cost effective? Efficient? (Consider level of attendance, attentiveness, and participation by audience, comments received, etc., vs. the cost to facilitate the event.) Should the frequency of the outreach be increased, decreased, or remain the same?
11. Have the partnerships developed during plan implementation been productive?
12. Have any of the target groups contacted the City of St. Marys for additional information about something they saw or heard about through these activities?

<u>Drinking Water Shortage/Emergency Response:</u>

1. Are there any updates to the Drinking Water Shortage/Emergency Response Plan?
2. Did our coordination with emergency responders at the local and county level result in better communication and handling of spill incidents that could impact our drinking water?

<u>Ground Water Monitoring:</u>

The City of St. Marys source water protection team has decided not to incorporate ground water monitoring in its Source Water Protection Plan at this time (see Section 6).

1. Have there been any significant changes to our water quality?
2. Is there new water quality, potential contaminant source, or land use issues that may make it necessary to develop and implement a ground water monitoring program?

7.3 Revising the Plan

Upon review, if any revisions of the SWAP Assessment Report are needed, the City of St. Marys will contact Ohio EPA's Northwest District office for guidance. Also, if the local planning team makes any substantial changes to the City of St. Marys' Protection Plan, a copy will be forwarded to Ohio EPA for concurrence. The revision will be documented on the front cover in the "Table of Revisions".

CITY OF ST. MARYS, OHIO
DRINKING WATER SOURCE PROTECTION PLAN

Appendix A

City of St. Marys
Groundwater Protection Overlay District
Zoning Regulations Ordinance

City of St. Marys
Groundwater Protection Team Ordinance

CITY OF ST. MARYS, OHIO
DRINKING WATER SOURCE PROTECTION PLAN

Appendix B

Ohio EPA Susceptibility Analysis

CITY OF ST. MARYS, OHIO
DRINKING WATER SOURCE PROTECTION PLAN

Appendix C

Potential Pollution Sources Tables

CITY OF ST. MARYS, OHIO
DRINKING WATER SOURCE PROTECTION PLAN

Appendix D

Education & Outreach Materials

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Appendix E

Checklist
Accidental Chemical Spill or Release
Within the Protection Area

CITY OF ST. MARYS, OHIO
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Appendix F

Delineation of Wellhead Protection Area Report

CITY OF ST. MARYS, OHIO
DRINKING WATER SOURCE PROTECTION PLAN

Appendix G

Potential Pollution Sources Inventory Report