DRINKING WATER SOURCE PROTECTION PLAN

For the

Village of Utica, Ohio

PWS ID#4503012

NOV 20
~~DATE~~, 2009

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Glen Richards

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Appendices

1.0 INTRODUCTION

This document presents the Drinking Water Source Protection Plan for the Village of Utica, Ohio (Protection Plan). The 1996 Amendments to the Safe Drinking Water Act established the Source Water Assessment and Protection Program. The Source Water Assessment and Protection Program was established to help public water systems develop plans to protect their drinking water resources. This document is based on Ohio EPA's "Protection Planning Template for Public Water Systems using Ground Water and serving less than 5,000 people." To prepare this report the Village also consulted Ohio EPA's guidance document, "Developing Local Drinking Water Source Protection Plans in Ohio, Guidance for Public Water Systems Using Ground Water" (July 2003).

1.1 What are the benefits of a Drinking Water Source Protection Plan?

- ✓ It helps the Village of Utica provide the safest and highest quality drinking water to its customers at the lowest possible cost.
- ✓ It establishes strategies to minimize the potential threats to our source of drinking water.
- ✓ It helps to plan for expansion, development, zoning and emergency response issues.
- ✓ It can provide more opportunities for funding in order to improve infrastructure, purchase land in the protection area, and other improvements to the well field.

1.2 What is included in a Source Water Assessment and a Drinking Water Source Protection Plan?

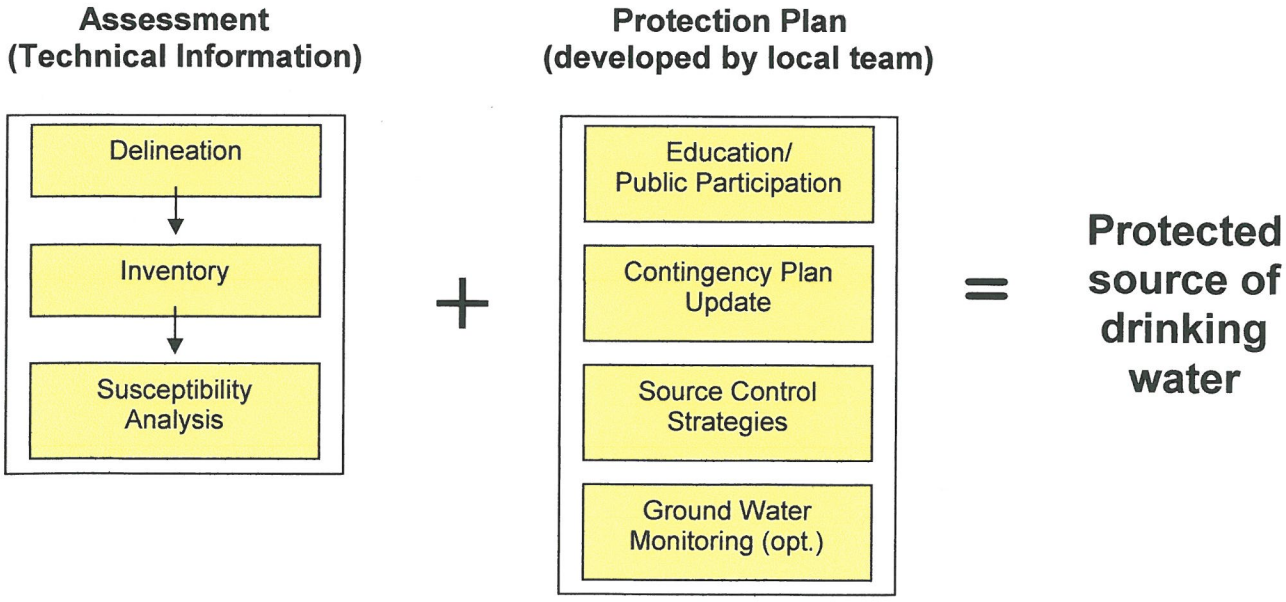
Drinking Water Source Protection involves two efforts:

The Assessment. [Village of Utica]'s assessment was completed by [Ohio EPA or a private consultant] on [date: month and year], and is attached to the Appendix (optional). It includes:

- Delineation of the protection area. This outlines the areas around the public water supply wells that contribute water in a one- and five-year time period.
- Potential contaminant source inventory. This identifies potential contaminant sources in and around the protection area that could pose a threat to drinking water.
- Susceptibility analysis . This determines how susceptible the aquifer is to contamination. A susceptibility of low, moderate or high is assigned based on the hydrogeologic setting, potential contaminant sources and a review of the ground water quality data.

The Protection Plan. This plan is developed by the public water system and interested parties, and explains how the drinking water source will be protected using strategies tailored to the community. It includes:

- Education strategies
- Contingency Plan update
- Site-specific strategies, as appropriate
- Ground water monitoring plan (optional)



2.0 The Village of Utica Drinking Water Source Protection Planning Team

Village officials in Utica acknowledge the importance of protecting the drinking water supply. The Village has passed a resolution recognizing the importance of developing a drinking water source protection plan and selected a drinking water source protection planning team (Protection Team) to develop and implement this Protection Plan

2.1 Buy-in by Decision Makers

The Village of Utica held a source water protection planning meeting attended by Scott Brown, Glen Richards and Larry Friesel on July 7, 2009. The Village council passed a resolution that acknowledges the importance of developing a drinking water source protection plan and to develop and implement a drinking water source protection plan. The Village named a person to oversee development of this Protection Plan.

System Decision Makers Meeting

Date of presentation to decision makers _7/7/09_____

Was a resolution passed __x___Yes _____No

Person in charge of oversight of the protection plan development

___Glen Richards_____ _____Operator_____
Name Title

_____740-8924056_____
Phone Number

Following are the members of the Village of Utica's protection team. The team has been tasked with developing and implementing this protection plan for the village

2.2 Protection Team

DATE PROTECTION TEAM FORMED: July, 2009

Name	Organization	Title	Phone Number
Glen Richards	Utica	Operator	740-8924056
Wayne Raines	Utica	Street	740-5014821
Rob Hergenrother	Utica	Water	740-5014818
Jud Brechler	Utica	Administrator	740-5014815
Larry Friesel	Utica	Mayor	740-5014807

3.0 Potential Contaminant Source Control Strategies

The goal of this section is to develop protective strategies for the potential contaminant sources in **Village of Utica**'s protection area. The potential contaminant sources listed in the Assessment Report (see Appendix A) were evaluated. The Village considered the protective strategies recommended by Ohio EPA in the Assessment Report (see Appendix A) and developed specific protective strategies 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 the Village's protection area and the protective strategies selected to address them is presented in the following table.

3.1Potential Contaminant Source Control Strategies

Potential Contaminant Source	Priority/ Level of Threat	Protective Strategies	Timeline for Implementa-tion	Who Will Implement? [Name/Title]
State RT. 13	1	1) ODOT Drinking water protection area signs. 2) Provide local EM officials a copy of the protection area and explain the importance of using containment of runoff and dry cleanup methods for chemical spills/releases.	July 2009 Completed	Glen Richards
Cemetery	2	1) Provided educational information and a letter that they are within the Source Water Protection Area. 2) Review compliance with regulatory agencies.	July 2009 Completed	Glen Richards
Agriculture	3	1) Provide education material to the local farming community (Tri-fold Brochure) 2) Write a letter to the local farmers notifying them that they are farming within the Drinking Water Protection Area	July 2010	Glen Richards
Electrical Substation (transformer)	4	1) Contact AEP and notify them that their Transformer is located within the Drinking Water Protection Area 2) Review Compliance with regulatory agency (OEPA, FERC)	July 2010	Glen Richards

Floor Drain	5	1) Capture all liquid in a concrete basin before discharged to Sanitary Sewer	1997 Completed	Glen Richards
Leaking underground storage tank	6	1) Tank was Removed 2) Contact BUSTR to determine if there are any ongoing problems with LUSTs within protection area and to confirm that no further action is warranted	Completed	Glen Richards
Gas Station	7	1) Gas Station Was Removed	Completed	Glen Richards
Sewer Line	8	1) Ambient Groundwater monitoring program	Every 18 months	Since 1996

4.0 Education and Outreach

The purpose of the Protection Team's education and outreach efforts is to inform people who live and work in Utica's 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. The protection committee addresses the protection plan in the villages annual CCR. Glen Richards the village water operator conducts water plant tours to the local school districts.

4.1Education and Outreach

Target Audience: Customers (CU), General Public (GP), Students (ST), Other (write out)

Education and Outreach Strategies	Target Audience	Time line for Implementation	Who (name and title) will implement this strategy?
ODOT SIGNS on state route at inner protection zone	CU	1 Year	Glen Richards
Tri-Fold Brochure	CU	1 Year	Glen Richards
Source water protection signs along New st. and Washington st.	CU	1 Year	Glen Richards
Water Plant Tours	GP,ST	Complete	Glen Richards
News Paper	GP	1 year	Glen Richards
CCR	GP,CU	Complete	Glen Richards
Add CCR to Web Site	GP,CU	Complete	Glen Richards
Post Map of Protection area at the Municipal Building	GP,CU	1 Year	Glen Richards

** The Village of Utica will send out an annual survey with the CCR to evaluate the continuity of the education and outreach activities and overall program effectiveness

5.0 Drinking Water Shortage/Emergency Response

The goal of this section is to identify how the **Village of Utica** will prepare for and respond to any drinking water shortages or emergencies that may occur. Most of this information is included in **Village of Utica** Contingency Plan, which addresses every kind of emergency, including loss of power, weather emergencies, etc. Copies of the contingency plan are kept at the village water plant, the municipal building, and the OEPA.

A: Emergency Response Plan Page 4 (Appendix C)

5.1 Drinking Water Shortage - Short Term Loss of Source

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SOURCE FAILURE
(Including Pumps, Wells, and/or Intakes)

1. (X) In the event of source failure:

   a. (X) Contact critical water users listed below.

Organization	Address	Telephone	Alternate Telephone
North Fork School District	312 Maple Ave	740-892-3666	
LEADS Head Start	308 N. Main	740-892-2532	
Utica Care Center	233 N. Main	740-892-3414	

   b. (X) Immediately contact the Ohio EPA and any other emergency personnel or agencies that are appropriate for the situation using the phone number(s) found in **Appendix A** of the Contingency Plan.

   c.(X) Issue use restrictions for the affected area. Determine the supply capacity relative to existing and potential demand. Notify critical water users of the situation. Provide notice by radio, television, handbill, or continuous posting within 72 hours. See the community water needs chart for additional information.

2. (X) Alternative sources of water and the method of disinfection that will be used for each source. Options include, but are not limited to:

   a. ( ) Hauling water using the approved haulers listed below.

Company	Contact	Telephone	Alternate Telephone

   b. ( ) Activating an existing emergency connection to another public water system or installing a new emergency connection to another public water system with approval of Ohio EPA.

System	Contact	Telephone	Alternate Telephone

c. (x) Providing bottled water for potable use from the following organization(s):

Company	Contact	Telephone	Alternate Telephone
Licking County EMA	Jeff Walker	740-670-5575	

24-Hour Phone Numbers

Organization	Day-Time Phone	In No Answer	After Hours
Ohio EPA District Office	614-7283869		1-800-282-9378
Ohio EPA Emergency Response	1-800-282-9378	1-800-282-9378	1-800-282-9378
County EMA	740-4045033	740-5076832	
Local Law Enforcement	740-8922211	740-8922842	
Sheriff	740-3496400	740-3973333	
Fire Department	740-8922211	740-8922842	
Health Department	740-3496535		
Electric Company	740-3453421		
Phone Company	740-		18004727253
Local Radio Station (1)	740-3971000		
Local Radio Station (2)	740-3454004		
Local Radio Station (3)			
Hospital(s)	740-		
EMS	740-8922211	740-8922842	
Ohio Utilities Protection			1-800-362-2764
Owner/Operator			

INORGANIC/ORGANIC CONTAMINATION

1. ( ) Attempt to determine the specific chemical which has caused the contamination and its hazard classification. There are four broad classifications of contamination as follows:

HAZARD TYPE	DESCRIPTION
Pollution Hazard	A condition through which an aesthetically objectionable or degrading material **NOT** dangerous to health may enter the public water system or a consumer's potable water system (for example - a food grade product)
System Hazard	A condition, device, or practice posing an actual or potential threat of damage to the physical properties of the public water system or a consumer's potable water system **but will not** cause an adverse health effect (for example - an inert material that may clog the water line but not cause illness if ingested)
Health Hazard	Any condition, device, or practice in a water supply system or its operation that creates, or **may create a danger to the health and well being** of others. **(For example, a fluoride overfeed that results in a concentration greater than 10 mg/L in the PWS)**
Severe Hazard	**Any health hazard that could reasonable be expected to result in significant morbidity or death** (for example - the contamination of a water system with a large amount of pesticide)

If the degree of hazard cannot be determined, assume the situation presents a ***severe hazard***.

2. ( ) Determine the following information:

Who made the first observation? What is their phone number and location?
When did it happen?
What is it? What are its qualities - color/taste/smell? Is an MSDS sheet available?)
How much of it entered the water system?
Where did it enter the water system?
Where is it now? Is it isolated to one area or is it wide spread? What area and population are affected?
Can it be isolated?
Can depressurization and or flushing of the affected area be done quickly and without serious consequences?

3. ( ) If the contamination is classified as either a ***health hazard*** or a ***severe hazard*** do the following:

   a. ( ) issue a no-use water advisory immediately (see **Appendix Q**). A boil advisory will not be adequate for most chemical contamination – boiling the water may only serve to concentrate the contaminant.

   b. ( ) If the contaminant could cause serious illness or death, can you isolate the water supply from users? (See **Appendix M**)

4. ( ) If a water advisory will be issued, contact the critical water users listed in **Appendix B** and notify them of the situation.

5. ( ) Immediately contact emergency personnel and agencies (i.e. fire dept., EMS, Ohio EPA, etc.) using the phone number(s) found in **Appendix A**. Notify them of the situation.

6. ( ) If possible, determine the cause and source of the contamination – eliminate the source. Consider the possibility that the cause may be due to a cross connection, backflow, or back siphonage.

7. ( ) Begin flushing the distribution system to eliminate the contaminant from the public water supply.

5.2 Short Term Water Loss Funding

The Village of Utica has $100,000 available for emergency use to purchase bottled water. The Village Clerk is authorized to commit the expenditures.

Drinking Water Shortage - Long Term Water Supply Planning

[Village of Utica] currently provides water at _29_% of pumping capacity and __25_% of plant capacity.

The following information is needed to calculate the above percentages:

A. Average production = ___180,000_____ gallons per day.
B. Pumping capacity = _____612,000___ gallons per day (% of pumping capacity is A/B)
C. Plant capacity = ____734,400_____ gallons per day. (% of plant capacity is A/C)

Given current conditions and projections of growth, Village of Utica anticipates the need to develop additional wells or well fields within __20 years.

Potential sources of funding include:

Rural Development

5.3 Emergency Response to Spills in the Protection Area

The fire department or hazardous materials response team can be reached at:

Emergency Phone #	Alternate Day-Time Phone #	Alternate After Hours Phone #
740-8922211	740-8922842	911

Ohio EPA's Division of Emergency and Remedial Response is capable of providing expertise and assistance related to prevention, containment, and clean-up of chemical spills. Ohio EPA Emergency Response 24-hour Phone # 1-800-282-9378

Ohio EPA District Office contact:		
Day-Time Phone #	Alternate Day-Time Phone #	After Hours Phone #
614-7283869		1-800-282-9378

Responsibility for coordinating the response procedures will rest upon a key water system staff. This person will oversee and coordinate activities with other water system staff and external organizations.

	Name	Day-Time Phone #	After Hours Phone #
Primary Contact	Glen Richards	740-8924056	740-8922211
Backup Contacts	Rob Hergenrother	740-5014818	740-8922211

Response Procedure:

Call Glen Richards First, Fire Department Second and OEPA Third.

6.0 Groundwater Monitoring

Groundwater monitoring is not required by Ohio EPA but Public Water Systems are required to assess the need for monitoring when preparing the Protection Plan. The Village's Protection Team assessed the need for groundwater monitoring. Ambient groundwater quality monitoring of one well and regular monitoring of treated water at the water treatment plant are already being conducted. The Protection Team determined that groundwater monitoring is not necessary. In the event of a spill or other activity that threatens the water supply, the need for groundwater monitoring will be re-evaluated.

6.1 Evaluating the Need for Groundwater Monitoring

The Village of Utica conducts water quality monitoring of treated water in accordance with the requirements of Ohio EPA.

The Village of Utica is part of Ohio EPA's Ambient Ground Water Monitoring Program. As part of this program, Ohio EPA samples raw water from Well #5 every 18 months. The samples are analyzed by Ohio EPA's Division of Environmental Services Laboratory. Sampling results are included in Appendix D of this document.

The Village of Utica Protection Team has determined that groundwater monitoring is not needed for the following reasons:

- The aquifer has a moderate susceptibility (see Appendix A).
- There is no immediate threat from potential contaminant sources within the protection area.
- There is no known plume of contamination from manmade sources in the protection area (leaking underground storage tanks at a gas station outside of the protection area were removed and the gas station was closed).
- No contamination of the aquifer has been identified based on water quality testing required by Ohio EPA and based on ambient groundwater sampling conducted by Ohio EPA.
- Ambient groundwater monitoring is ongoing and will provide data that the Village will use to monitor water quality in the aquifer.

7.0 Protection Plan Updates

The Village of Utica commits to reviewing the Drinking Water Source Protection Plan every year, beginning 2 years after OEPA endorses the plan. Any revisions of the Protection Plan will be documented on the front cover by adding "Revised [date]" beneath the date at the bottom of the page. Information that the protection team will update may include the following:

Instructions to Protection Team: *Information to update may include the following:*

Delineation Updates

- Has the amount of pumping increased or decreased since the date Ohio EPA provided the Drinking Water Source Assessment report?
- Have any wells been added or removed?
- Has a new wellfield been added or are there any plans for a new wellfield?
- 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, please contact Ohio EPA's Source Water Assessment and Protection Program staff at your district office, to determine whether the protection area should be re-delineated. Ohio EPA staff can provide this service without charge, or—if preferred—the community may contract with a private consultant.

Potential Contaminant Source Inventory

- Has the community developed rapidly?
- Have land uses in and around the protection area changed?
- Has management of businesses in the protection area changed?

Ohio EPA recommends re-inventorying the protection area at least every 10 years and encourages updates at shorter intervals, especially where development has been rapid.

Ohio EPA's Source Water Assessment and Protection Program staff can provide assistance, with inventory updates and can also provide an updated map of potential contaminant sources located within and near the protection area.

Protection Plan

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

--Pollution Source Control Strategies:

- Are there new potential contaminant sources that need to be addressed with new potential contaminant source control strategies?

--Education and Outreach:

- Should local businesses and residents be reminded about the location of the protection area by redistributing educational materials?
- Have educational efforts been cost effective? (Consider level of attendance, attentiveness and participation by audience, comments received, etc., vs. the cost to facilitate the event)
- Have educational efforts been affordable for your system?
- Is there any evidence (anecdotal or otherwise) that educational efforts assisted in the protection of your source water?

--Drinking Water Shortage/Emergency Response:

- Are there any updates to the Drinking Water Shortage/Emergency Response Plan?

--Ground Water Monitoring:

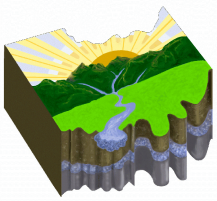
- Are there new water quality, potential contaminant source or land use issues that would influence the need to conduct or not to conduct ground water monitoring?

Appendices

Appendix A

Ohio EPA's Drinking Water Source Assessment for the Village of Utica

DRINKING WATER SOURCE ASSESSMENT for the Village of Utica PWS ID # 4503012



Protecting Ohio's Drinking Water Sources

OhioEPA

January 2003

INTRODUCTION. The 1996 Amendments to the Safe Drinking Water Act require all states to assess the drinking water source for all public water systems. Ohio's Source Water Assessment and Protection Program is designed to help public water systems protect their sources of drinking water from becoming contaminated. This assessment:

1. identifies the drinking water source protection area, based on the area that supplies water to the well(s),

2. inventories the potential contaminant sources in the area,

3. evaluates the susceptibility of the drinking water source to contamination, and

4. recommends protective strategies.

The purpose of the assessment is to provide information that the Village of Utica can use to help protect its source of drinking water from contamination.

SYSTEM DESCRIPTION & GEOLOGY. The Village of Utica Public Water System is a community public water system serving 2,235 people. This system operates 2 wells that pump approximately 175,000 gallons of water per day from a sand and gravel aquifer (water-rich zone) within the North Fork Licking River Buried Valley aquifer system. Pumping well information is presented in Table 1. The aquifer is covered by approximately 60 to 70 feet of low-permeability clay, which provides some protection from contamination. The top of the aquifer is approximately 70 feet below the ground surface.

Soils in the area are silty loams which are moderately well-drained, meaning that much of the rainfall and snowmelt will infiltrate into the soil, instead of running off or ponding. The topography is generally moderately sloping with an average relief of 20 feet. Ground water in this area is replenished by the gradual flow of water underground from higher to lower elevations and by approximately 4 to 7 inches per year of precipitation that infiltrates through the soil. At the Village of Utica wellfield, ground water flows generally toward the south-southeast, based on a water table elevation map completed by the Ohio Department of Natural Resources (ODNR).

Table 1. Village of Utica Production Well Data

Well	Total Depth (feet)	Casing Length (feet)	Screen Length (feet)	Pump Capacity (gallons per minute)	Well Status
5	144	124	20	500	In Use
6	146	117	20	500	In Use

PROTECTION AREA. The drinking water source protection area for the Village of Utica's wells is illustrated in Figure 1. This figure shows two areas, one inside the other. The "inner protection zone" is the area that provides ground water to the Village of Utica's wells within one year of pumping. A chemical spill in this zone poses a greater threat to the drinking water, so this area warrants more stringent protection. The "outer protection zone" is the additional area that contributes water when the wells are pumped for five years. Together, they comprise the drinking water source protection area.

Method Selection

An analytic element computer modeling program called GFLOW was used to determine the areal extent of the protection area. Protection areas based on computer modeling can be significantly more credible than those produced by simpler methods, especially in areas with complex geology. The time and effort required to develop a computer model are warranted when the wellfield is located in a complex hydrogeologic setting, and the hydrogeologic data needed to run the program are available for the area. Both criteria were met for the Village of Utica's source water assessment.

Model Set-up

The GFLOW model for the Village of Utica's well(field) was designed to simulate the characteristics of a sand and gravel buried valley aquifer that lies within sandstone bedrock. Figure 2 shows that the bedrock valley walls were modeled as "no-flow boundaries", meaning the bedrock does not contribute any water to the Village of Utica's wellfield. Since the bedrock in this area yields very little water, using no-flow boundaries is appropriate.

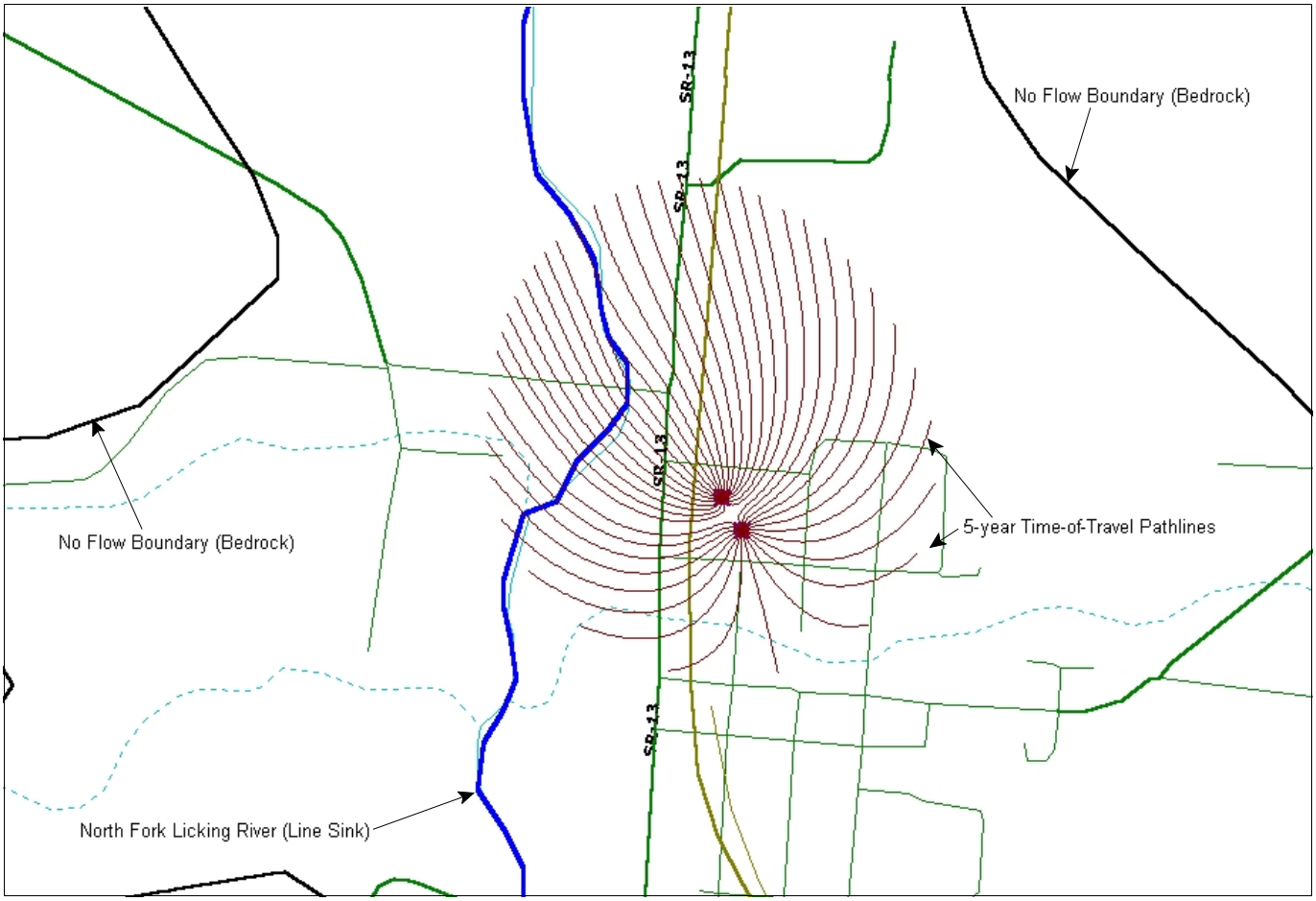


Figure 2. GFLOW Model output for the Village of Utica wellfield.

Model Values

Information needed to run the model includes, at a minimum, **pumping rate** of the well(s), **hydraulic conductivity** of the aquifer (that is, the ease with which water moves through it), **aquifer thickness**, and **aquifer porosity**. Model input data are presented in Table 2. For this model, the conservative pumping rate of 720,000 gallons per day was used. This value is the Utica Water Plant's treatment capacity, as documented in Ohio EPA's files. An aquifer thickness of 70 feet was used, based on well logs and glacial aquifer maps. Site specific information on the hydraulic conductivity of the sand and gravel aquifer and sandstone bedrock was not available, and measured porosity values were also unavailable. In these cases, the values used in the model were based on values typically found in these kinds of rock and sediments. They were: 20% porosity for the sand and gravel aquifer, 10% porosity for the sandstone bedrock, 250 feet per day hydraulic conductivity for the sand and gravel aquifer and 0 feet per day hydraulic conductivity for the sandstone bedrock.

Table 2. Summary of Ground Water Flow Model Input Parameters

Type of Information	Value Used	Source of Information
Pumping Rate (gallons/day)	720,000	Plant Capacity from Ohio EPA public drinking water files
Aquifer Porosity (%)	20	Estimated, based on typical porosity of sand and gravel aquifer
Aquifer Thickness (feet)	70	Well logs for area, filed at Ohio Department of Natural Resources, Division of Water
Hydraulic Conductivity of Aquifer (feet/day)	250	Estimated, based on typical hydraulic conductivity of sand and gravel aquifer
Precipitation Recharge (inches/year)	4-7	From Ohio Department of Natural Resources, 1995, *Ground Water Pollution Potential of Licking County, Ohio*, Report No. 31

The protection area was determined based on the best information available at the time of the assessment. If you would like to have more information about how this protection area was derived, or if you would like to collect additional information and revise your protection area, please call Ohio EPA staff listed at the end of this report. Also, a more detailed discussion of the technical aspects of modeling drinking water source protection areas, can be found in the Delineation Guidelines and Process Manual (Ohio EPA, 2000) on Ohio EPA's Source Water Assessment and Protection Web page (www.epa.state.oh.us/ddagw/pdu/swap.html).

INVENTORY. On August 1, 2002, an inventory of potential contaminant sources located within the drinking water source protection area was conducted by Ohio EPA with the assistance of Village of Utica personnel. Thirteen potential sources of contamination were identified within the protection area (see Figure 1). Table 3 provides additional information about these types of potential contaminant sources.

A facility or activity is listed as a potential contaminant source if it has the **potential** to release a contaminant, based on the kinds and amounts of chemicals typically associated with that type of facility or activity. It is beyond the scope of this assessment to determine whether any specific potential source is **actually** releasing (or has released) a contaminant to ground water. Also, the inventory is limited to what Ohio EPA staff were able to observe on the day of the site visit. Therefore, the Village of Utica staff should be alert to the possible presence of potential sources of contamination that are not on this list.

GROUND WATER QUALITY. A review of the Village of Utica's water quality record currently available in Ohio EPA's drinking water compliance database did not reveal any evidence of chemical contamination at levels of concern in the aquifer.

Please note that this water quality evaluation has some limitations:

- The data evaluated are for treated water samples only, as Ohio EPA's quality requirements are for the water being provided to the public, not the water before treatment.
- Sampling results for coliform bacteria and naturally-occurring inorganics were not evaluated for this assessment, because they are not a reliable indicator of aquifer contamination.

Current information on the quality of the treated water supplied by the Village of Utica's Public Water System is available in the Consumer Confidence Report for the system, which is distributed annually. It reports on detected contaminants and any associated health risks from data collected during the past five years. Consumer Confidence Reports are available from the Village of Utica.

SUSCEPTIBILITY ANALYSIS. This assessment indicates that the Village of Utica's source of drinking water has a moderate susceptibility to contamination because:

- The sand and gravel aquifer is covered by 60 to 70 feet of low-permeability material, offering some protection from contaminant movement from the ground surface to the aquifer;
- The depth to the top of the sand and gravel aquifer is 60 to 70 feet below the ground surface,
- Potential contaminant sources are present within the protection area, and
- there is no evidence to suggest that ground water has been impacted by any significant levels of chemical contaminants from human activities.

This susceptibility analysis is subject to revision if

new potential contaminant sources are sited within the protection area, or if water sampling indicates contamination by a manmade contaminant source.

PROTECTIVE STRATEGIES. Protective strategies are activities that help protect a drinking water source from becoming contaminated. Implementing these activities benefits the community by helping to:

- protect the community's investment in its water supply,
- protect the health of the community residents by preventing contamination of its drinking water source,
- support the continued economic growth of a community by meeting its water supply needs,
- preserve the ground water resource for future generations, and
- reduce regulatory monitoring costs.

Ohio EPA encourages the Village of Utica to develop and implement an effective Drinking Water Source Protection Plan. The plan can be developed from the information provided in this Drinking Water Source Assessment Report. The potential contaminant source inventory provides a list of facilities or activities to focus on. Table 4 lists protective strategies that are appropriate for the kinds of facilities/activities listed in the inventory.

Finally, a document titled "*Implementing Drinking Water Source Protection: Guidance for Public Water Systems Serving Municipalities and other Large Populations*" is available from Ohio EPA. This document offers comprehensive guidance for developing and implementing a municipal Drinking Water Source Protection Plan. Ongoing implementation of the plan will help protect the Village of Utica's valuable drinking water resources for current and future generations.

For further technical assistance on drinking water source protection, please contact the Ohio EPA Central District Office at 728-3778 or toll free at 728-3797 or visit the Ohio EPA Source Water Assessment and Protection Web page at: www.epa.state.oh.us/ddagw/pdu/swap.html.

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Ohio Department of Natural Resources, 2002, Potentiometric Surface Map of Licking County (digital).

Ohio EPA, 2002, *Drinking Water Source Protection Area Delineation Guidelines & Process Manual*, Draft (February, 2002).

LEGEND

- Public Water System Well Location
- Barber/Beauty Shop
- Cemetery
- Crops: corn, soybean, wheat
- Electrical Substation (Transformer)
- Floor Drain (to septic tank/well)
- Gas Station (Existing/Abandoned/Historical)
- Leaking Underground Tank
- Sewer Line

Protection Area Data

LOW	MODERATE	HIGH

SUSCEPTIBILITY

Number of Wells = 2
Well Pumping Rate = 720,000 GPD (Plant Capacity)
Porosity = 0.20
Aquifer Thickness = 70 feet
Hydrogeologic Setting = Buried Valley

Land Use = Agricultural/Residential

Sewage Treatment = Centralized Sewer System

Figure 1. Drinking Water Source Protection Area for the Village of Utica Public Water System Identification # 4503012

January 21, 2003

Table 3. Potential Contaminant Sources Located in the Village of Utica's Drinking Water Source Protection Area

Potential Contaminant Source	Number of Sources	Environmental Concerns	Protection Area
AGRICULTURAL SOURCES			
Crops: Corn, Soybean, Wheat	N/A	Potential contaminant sources that may be associated with pastures include sludge application, fertilizer, and pesticide use. Cropland may be associated with nitrates, ammonia, pesticides, and pathogens in drinking water sources.	Inner and Outer Protection Zone
COMMERCIAL SOURCES			
Barber and Beauty Shops	1	Although the majority of chemicals found at these facilities are safe for human use, they may also store cleaning solutions. Potential contaminants that may be associated with beauty shops include cleaning fluids and solutions used for some hair treatments, such as permanents.	Outer Protection Zone
Cemeteries	1	Cemeteries have been associated with arsenic and formaldehyde contamination in ground water.	Inner Protection Zone
Gas Stations	1	Among the potential contaminant sources related to these facilities are: underground storage tanks, automotive fluid storage, vehicle maintenance areas, and vehicle washing areas. These types of facilities may be associated with the potential for leaks and spills of oil, gasoline, other petroleum products, and automotive fluids. Historic gas station location have been associated soil and water contamination related to leaks and spills of gasoline and other petroleum products. Unused underground storage tanks may be used for the improper disposal of wastes.	Outer Protection Zone
WIDESPREAD SOURCES			
Highway / Transportation Route	1	Accidents on transportation routes pose the threat of leaks and spills of fuels and chemicals. Weed killers used to control vegetation can elevate levels of pesticides in drinking water sources. Runoff may contain oil, metals, and deicers.	Inner Protection Zone

Table 4. Protective Strategies for Consideration by the Village of Utica

Potential Contaminant Source	Protective Strategies To Consider
General	▸ Purchase additional property or development rights ▸ Provide educational material to members of the community on topics regarding the drinking water source protection area. ▸ Include drinking water source protection into the local school curriculum. ▸ Provide education (material/meetings) to local farmers, businesses, and industries on topics relating to drinking water source protection. ▸ Encourage 'ground water friendly' development. ▸ Develop/enact/enforce a local ordinance which may include any of the following: changing zoning; requiring registration of existing facilities; banning certain new types of activities; dictating chemical handling procedures; maintaining/filing a chemical inventory; facility spill/contingency planning; engineering controls for existing/new facilities; paralleling existing federal or state requirements. ▸ Post road signs indicating the extent of the protection area.
Agricultural Sources	▸ Assess the use of best management practices and recommend additional practices. ▸ Encourage road safety with agricultural chemicals. ▸ Plan/design/implement methods to control impacts to surface water.
Residential Sources	▸ Inventory/remove underground home heating oil tanks in the protection area. ▸ Identify areas used for illegal dumping. ▸ Provide education (material/meetings) to home owners on: drinking water protection; use/maintenance of septic systems; illegal dumping; proper well abandonment (both the reason and the process). ▸ Develop a centralized wastewater collection/treatment system. ▸ Encourage/require (and provide incentives) for sealing unused wells. ▸ Ensure enforcement of existing requirements for closing unused wells. ▸ Ensure the proper construction of new wells.
Municipal Sources	▸ Monitor compliance with existing regulations through inspections and/or contact with regulatory agencies (such as the local fire department, State Fire Marshal, or the Ohio EPA). ▸ Encourage/arrange hazardous materials training or waste and disposal assessments for employees. ▸ Develop an early release notification system for spills and emergency planning; educate emergency responders to be aware of drinking water protection areas; or coordinate facility spill/contingency planning. ▸ Encourage compliance with materials handling procedures/requirements. ▸ Install engineering controls at municipal facilities ▸ Implement pollution prevention strategies. ▸ Work with the street department and Ohio DOT to minimize use of road salt. ▸ Evaluate and close fire cisterns or other city owned wells. ▸ Conduct routine sewer inspections, maintenance & upgrades.
Commercial and Industrial Sources	▸ Monitor compliance with existing regulations through inspections and/or contact with regulatory agencies. ▸ Use routine inspections as an educational opportunity. ▸ Encourage compliance with materials handling procedures/requirements. ▸ Encourage/arrange hazardous materials training or waste and disposal assessments for local industries (and their employees). ▸ Request installation of engineering controls for existing facilities. ▸ Encourage facility spill/contingency planning in conjunction with the fire department. ▸ Encourage local businesses and industries to implement pollution prevention strategies. ▸ Encourage/arrange waste and disposal assessments for local businesses.
Oil & Gas Wells	▸ Ensure/monitor proper operation and maintenance. ▸ Develop an early release notification system for spills and an emergency response plan.
Spills	▸ Develop an early release notification system for spills and an emergency response plan. ▸ Include drinking water protection in response planning and training.
Transportation	▸ Create hazardous materials routes around the protection area and require/encourage transporters to use them. ▸ Work with local transporters on protection area awareness. ▸ Encourage road safety with chemicals.

Appendix B

Education and Outreach Materials

Source Water Protection Educational Brochure

This is a tri-folding brochure that Ohio EPA can personalize for any Public Water System.

Example Letters to Businesses and Residents located within the Protection Area

Example News Releases

Ohio EPA can assist with providing a map of any Public Water System's Protection Area.

Drinking Water Source Protection Area Road Signs

Did You Know…

- Only 3% of the water on earth is drinkable.
- Less than one gallon of gasoline can pollute one million gallons of water.
- **You** can **avoid** contaminating your source of drinking water by properly disposing of chemicals that have the potential to cause groundwater contamination.
- The following chemicals are common groundwater contaminants:
    - Cleaning Products
    - Automotive Products
    - Fuel Oil
    - Furniture Strippers
    - Lawn & Garden Products
    - Oil based paints
- Improper disposal methods include:
    - pouring chemicals on the ground,
    - pouring chemicals down a sink or toilet connected to a septic system,
    - pouring wastes down a storm drain because many storm drains lead directly into the ground or to a nearby stream

Contacts
At
The Ohio Environmental Protection Agency

Ohio Environmental Protection Agency
Lazarus Government Center
P.O. Box 1049
Columbus, Ohio 43215-1049
www.epa.state.oh.us

For questions concerning Drinking Water Protection, contact:

The Division of Drinking and Ground Waters
Phone: (614) 644-2752

The Office of Pollution Prevention
Phone: (614) 644-3469

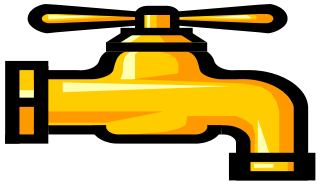
Contacts
In
Utica

For questions concerning Utica's Municipal Water Supply, contact:

Utica Water Department
Phone: (740) 892-2841

For questions concerning Utica's Drinking Water Source Protection Area, contact:

Utica Department of Planning
Phone: (740) 892-2696



A Community Awareness Announcement for Utica, Ohio

Where does Utica's drinking water come from?

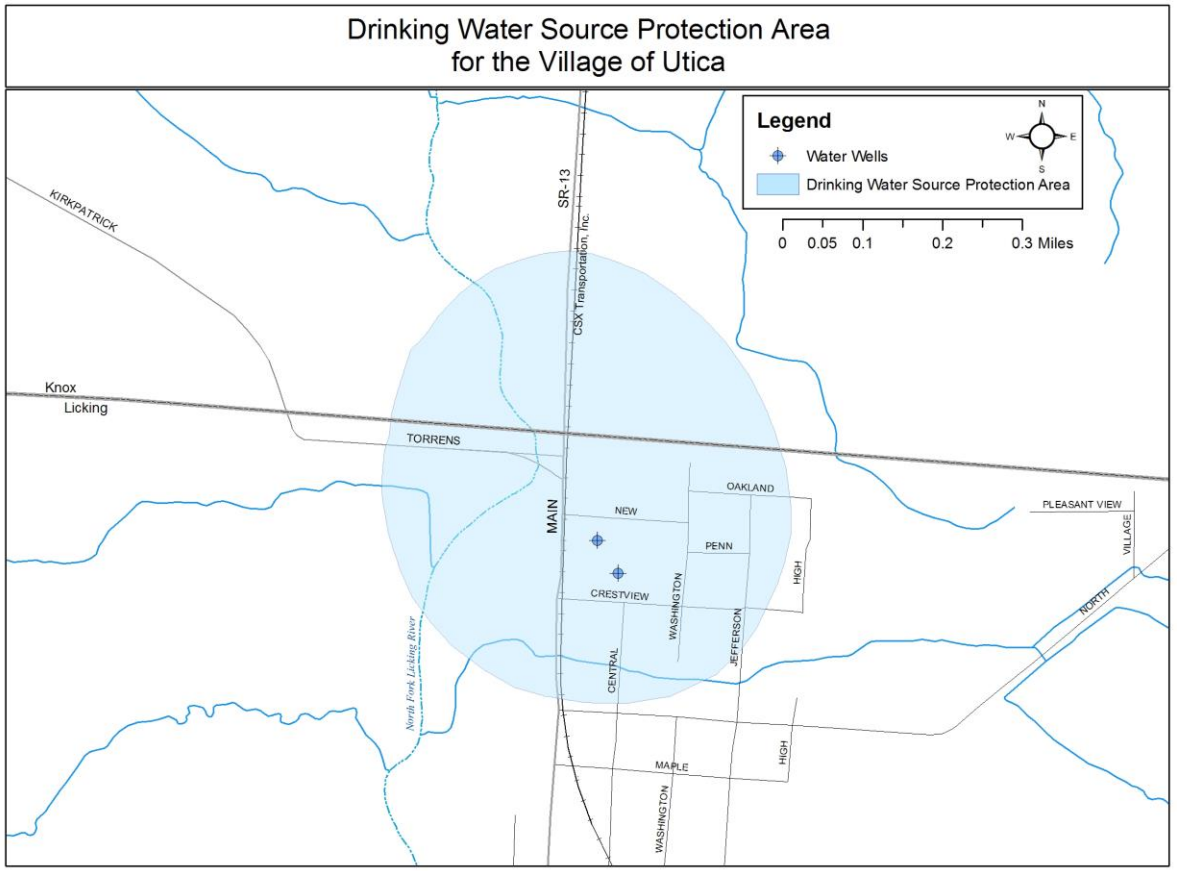
Utica's drinking water is pumped out of the ground by wells located in the ball field on the north side of town. This groundwater is pumped to the water treatment plant where chlorine is added to kill harmful bacteria in it. From there, it is pumped through an underground network of pipes to Utica's homes and businesses.

Where does the groundwater come from? All groundwater originally comes from rain or melted snow that has seeped into the ground. Water fills spaces between sand and gravel, as well as fractures in rocks. Where underground water is abundant enough to provide an adequate source of drinking water, the water-rich sediments or rocks are called an aquifer. Utica's drinking water supply comes from a portion of a sand and gravel aquifer.

Groundwater does not stay in one place. The groundwater supplying Utica's wells seeps very slowly from north to south. This means that if pollutants are spilled on the ground anywhere near the wells, or north of the wells, they may eventually enter the groundwater that you are drinking. And although the water treatment plant removes bacteria, it would be very expensive to purchase treatment systems for every type of possible pollutant. This is why everyone in the Village of Utica should know about **Drinking Water Source Protection**.

What is Drinking Water Source Protection? Drinking Water Source Protection is a plan of action for protecting the water you drink from contamination at the source.

To assist the Village of Utica with our drinking water source protection efforts, Ohio EPA provided the Village with a Drinking Water Source Assessment report. The report



included a map of the protection area (see above), based on calculations of how far water travels through the aquifer in five years. The report also includes information on land uses and facilities that may pose a contamination risk to the drinking water source. Potential risks are based on proximity to the drinking water source and the kinds/quantities of chemicals that are typically handled by these types of facilities.

The Village of Utica has used the provided assessment to develop a drinking water source protection plan. If you would like to be more involved with the Village's drinking water protection efforts or if you would like to see a copy of the Village's drinking water source protection plan, please contact the Village of Utica's Water Department at (740) 892-2841.

Most importantly, if you live or work within the Village of Utica's drinking water protection area please pay attention to the "Did You Know…" portion of this brochure.

Month/Day/Year

Local Business Owner
Main Street
City of Somewhere, Ohio xxxxx

Dear Local Business Owner,

This letter is to make you aware that your business, **Business Name**, is located within the **City of Somewhere's** Drinking Water Source Protection Area. This protection area was developed for the **City of Somewhere** by the Ohio Environmental Protection Agency and provided to the city in a drinking water source assessment report.

Our city's source of drinking water is supplied by groundwater that is pumped out of the ground by the city's municipal wells. Liquid substances such as automotive products, fuel oil, cleaning fluids, and oil-based paints are common groundwater contaminants. These substances can enter the groundwater through improper disposal methods. Improper disposal methods include pouring chemicals on the ground, down a sink or toilet connected to a septic system, or down a storm drain. Any contamination that enters the **City of Somewhere's** groundwater resources will force the city to implement additional costly measures in order to assure the water supplied to local customers is safe to drink.

The **City of Somewhere** is asking all businesses located within the protection area to follow all regulations as required by state and federal laws for their business, implement best management practices within business operations, report any spills to appropriate officials, and prevent the improper disposal of any liquids that could contaminate the **City of Somewhere's** groundwater resources.

The **City of Somewhere** thanks you for your cooperation and assistance. Attached is a figure that shows the location of the City of Somewhere's protection area. If you have any questions or would like to review the **City of Somewhere's** drinking water source assessment report please contact **Name, Title at (PHONE #)**.

Sincerely,

J Doe, City of Somewhere - Official

Month/Day/Year

Local Resident
Address:

Dear Local Resident,

This letter is to make you aware that your residence at **ADDRESS** is located within the **City of Somewhere's** Drinking Water Source Protection Area. This protection area was developed for the **City of Somewhere** by the Ohio Environmental Protection Agency and provided to the city in a drinking water source assessment report.

Our city's source of drinking water is supplied by groundwater that is pumped out of the ground by the city's municipal wells. Liquid substances such as automotive products, fuel oil, cleaning fluids, and oil-based paints are common groundwater contaminants. These substances can enter the groundwater through improper disposal methods. Improper disposal methods include pouring chemicals on the ground, down a sink or toilet connected to a septic system, or down storm drains. Any contamination that enters the **City of Somewhere's** groundwater resources will force the city to implement additional costly measures in order to assure the water supplied to local customers is safe to drink.

The **City of Somewhere** is asking all residents living within the protection area to report any spills to appropriate officials and prevent the improper disposal of any liquids that could contaminate the **City of Somewhere's** groundwater resources.

The **City of Somewhere** thanks you for your cooperation and assistance. Attached is a figure that shows the location of the City of Somewhere's protection area. If you have any questions or would like to review the **City of Somewhere's** drinking water source assessment report please contact **Name, Title at (PHONE #)**.

Sincerely,

J Doe, City of Somewhere-Official

City of _____

Contact Person:
Address:

Telephone: (___) ___-____ Fax: (___) ___-____
Email:

NEWS RELEASE

The City of _____ Board of Public Affairs is informing local consumers about the city's drinking water source protection area as well as its efforts to develop and implement a drinking water source protection plan.

The city relies on groundwater resources to provide drinking water to local businesses and residents. The city recognizes that it is important to protect groundwater resources in order to provide the safest and highest quality drinking water to its consumers at the lowest possible cost.

The size and shape of the city's protection area (see figure) was determined by Ohio EPA and provided to the city within a report titled the City of _____ Drinking Water Source Assessment. The city has used the provided assessment to develop a drinking water source protection plan.

Local residents and businesses need to be aware that the actions they take within or near the protection area can influence the quality of water the city provides to them. Groundwater contamination can occur through the improper disposal of chemicals such as cleaning, automotive and lawn/garden products, as well as fuel oil, furniture strippers, and oil-based paints. Improper disposal methods include pouring chemicals on the ground, down a sink or toilet that is connected to a septic system, or down storm drains that lead directly into the ground or to a nearby stream. Recycling is the best way to properly dispose of chemical products.

The City of _____ invites those who are interested in being involved with the city's drinking water protection efforts or those who would like to see a copy of the protection plan, to contact the city's water department at (____) ___-____ or by email at _____.

City of _____

Contact Person:
Address:

Telephone: (___) ___-____ Fax: (___) ___-_____
Email:

NEWS RELEASE

Volunteers are needed for the Drinking Water Source Protection Team in the City of _____ to learn more about the community's drinking water and where it comes from.
city

A protection team volunteer recruitment meeting will be held on _____ at _____.
Date
Location

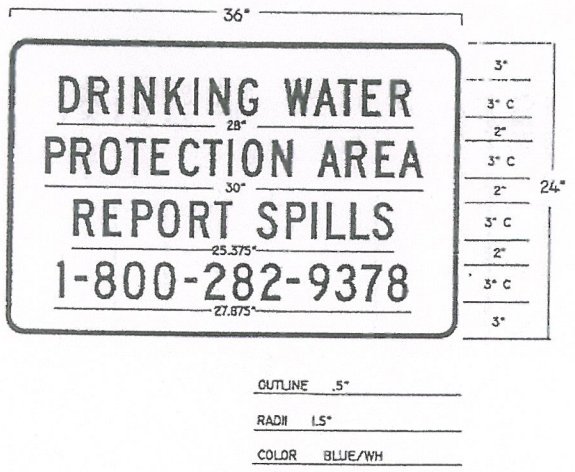
For more information, please call _____at the City of _____
Contact Person city
Water Department (___) ___-_____.

Anyone interested in protecting the drinking water while learning more about groundwater in Ohio is encouraged to attend this introductory meeting.

Drinking Water Protection Signs Now Available

The Ohio EPA has worked with the Ohio Department of Transportation (ODOT) to develop a standard drinking water protection area road sign. The purpose of these signs is to provide a general awareness of the protection area to people who live, work, or are passing through the area, and also to provide the Ohio EPA emergency response phone number (1-800-282-9378) so that spills can be quickly reported. The community may request that a local emergency response number be placed on the sign instead of Ohio EPA's number, such as 9-1-1. ODOT has agreed to erect and maintain these signs on state highways/roads that intersect the five year time of travel (protection area) for community public water systems serving populations greater than 500 at no cost to the system.

If a public water system wishes to place signs on roads other than state roads or highways, it is requested that they use the sign design specifications shown below. Additional signs may be placed on an access road to the well or wellfield, on county or township roads that intersect the wellhead protection area, or in parking lots or loading docks in the wellhead protection area. The signs may be smaller than the specified size, but the colors should be the same (blue lettering on a white background). ODOT feels very strongly that a consistent sign design would provide uniformity across the state and would not confuse motorists.



("highway" blue lettering on a white background)

Ohio Department of Transportation District Traffic Contact - April 3, 2007

District	District Phone	Counties	Major City
District 5 Jacksontown	(740) 323-4400	Coshocton, Fairfield, Guernsey, Knox, Licking, Muskingum, Perry	
District Contact: Troy Rodeniser Phone: (740) 323-4400 ext: 5285 e-mail: Troy.Rodeniser@dot.state.oh.us			

APPENDIX C

Emergency Response Plan Page 4

PROCEDURES TO BE FOLLOWED FOR EMERGENCIES AFFECTING THE VILLAGE WATER SYSTEM

A. **SHORT TERM POWER FAILURE – LESS THAN 2 HOURS**
CHECK LEVEL OF RESERVIOR AND PREPARE TO ACTIVATE EMERGENCY GENERATORS AT WELL #5.

B. **EXTENDED POWER FAILURE – MORE THAN 2 HOURS**
ACTIVATE EMERGENCY GENERATOR AT WELL #5.
MONITOR RESERVIOR LEVEL.

C. **PUMP OR MOTOR FAILURE**
CONTACT ELECTRICIAN LISTED UNDER PERSONS TO CALL.
IF THE PROBLEM IS NOT ELECRICAL, CONTACT PUMP REPAIR PERSONEL AND OR WELL DRILLING COMPANY AS LISTED.
ACTIVATE THE STANDBY WELL.

D. **LOSS OF WATER FROM WELL**
ACTIVATE THE STANDBY WELL.
CALL PUMP REPAIR PERSONEL AND OR WELL DRILLING COMPANY.

E. **MAJOR WATER LINE BREAK**
NOTIFY WATER SUPERINTENDENT.
FOLLOW INSTRUCTIONS PROVIDED IN THE CONTINGENCY PLAN ON PAGE 4.

F. **UNPLANNED ABSENCE OF PERSONEL**
AT LEAST ONE PERSON IS TO BE ON CALL AT ALL TIMES.
IF THE PERSON ON CALL IS UNABLE TO BE CONTACTED, CONTACT THE SUPERVISOR OR THE NEXT PERSON AVAILABLE

G. **ALTERNATE SOURCE OF WATER AND METHOD OF TRANSPORT**
WATER CAN BE PURCHASED FROM MT. VERNON WATER DEPARTMENT.
WATER CAN BE TRANSPORTED BY THE VILLAGE FIRE DEPARTMENT.

H. METHODS OF PUBLIC NOTIFCATION OF EMERGENCY EXISTS

CONTACT LOCAL RAIDO STATIONS LISTED IN CONTINGENCY PLAN ON PAGE 21

APPENDIX D

Ambient Groundwater Quality Monitoring Data

OhioEPA Division of Environmental Services

Laboratory Inorganic Analysis Data Report

Sample	110924				
Date Received	04/30/2009 2:09 PM	**Matrix**	GW	**Collected by**	JAMES, CAL
	Begin	**End**		**Sample Type**	AMBIENT
Date Collected			04/30/2009 9:25 AM	**Station ID**	39LIC00390
Program	CDO-DDAGW			**Customer ID**	5
Client	GROUND_WATER			**External ID**	
OEPA Division	DDAGW				
Location	Utica Well 5				

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
Solids_Diss	Total Dissolved Solids	P70300	342	10	mg/L	05/07/2009	
TOC	TOC	P680	<2.0	2	mg/L	05/11/2009	
ICPMS_(WAT)	Arsenic	P1002	7.6	2	ug/L	05/04/2009	
ICPMS_(WAT)	Cadmium	P1027	<0.20	0.2	ug/L	05/04/2009	
ICPMS_(WAT)	Chromium	P1034	<2.0	2	ug/L	05/04/2009	
ICPMS_(WAT)	Copper	P1042	<2.0	2	ug/L	05/04/2009	
ICPMS_(WAT)	Lead	P1051	<2.0	2	ug/L	05/04/2009	
ICPMS_(WAT)	Nickel	P1067	<2.0	2	ug/L	05/04/2009	
ICPMS_(WAT)	Selenium	P1147	<2.0	2	ug/L	05/04/2009	
ICP_(WAT)	Aluminum	P1105	<200	200	ug/L	05/04/2009	
ICP_(WAT)	Barium	P1007	151	15	ug/L	05/04/2009	
ICP_(WAT)	Calcium	P916	74	2	mg/L	05/04/2009	
ICP_(WAT)	Hardness, Total	P900	288	10	mg/L	05/04/2009	
ICP_(WAT)	Iron	P1045	563	50	ug/L	05/04/2009	
ICP_(WAT)	Magnesium	P927	25	1	mg/L	05/04/2009	
ICP_(WAT)	Manganese	P1055	220	10	ug/L	05/04/2009	
ICP_(WAT)	Potassium	P937	<2	2	mg/L	05/04/2009	
ICP_(WAT)	Sodium	P929	13	5	mg/L	05/04/2009	
ICP_(WAT)	Strontium	P1082	1350	30	ug/L	05/04/2009	
ICP_(WAT)	Zinc	P1092	<10	10	ug/L	05/04/2009	
Alkalinity	Alkalinity	P410	244	5	mg/L	05/08/2009	
Ammonia	Ammonia	P610	0.332	0.05	mg/L	05/07/2009	
Bromide	Bromide	P71870	28.2	20	ug/L	05/05/2009	
COD	COD	P340	<20	20	mg/L	05/06/2009	
Chloride	Chloride	P940	<5.0	5	mg/L	05/07/2009	
Fluoride	Fluoride	P951	0.32	0.2	mg/L	05/08/2009	
Nitrate	Nitrate+nitrite	P630	<0.10	0.1	mg/L	05/07/2009	
Sulfate	Sulfate	P945	29.5	10	mg/L	05/11/2009	
TKN	TKN	P625	0.54	0.2	mg/L	05/08/2009	
TP	Total Phosphorus	P665	<0.010	0.01	mg/L	05/08/2009	

Field Comments

Lab Comments

QC / Sample Comments

Approved By VDESHMUKH **On** 05/14/2009

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	110928				
Date Received	04/30/2009 2:09 PM	**Matrix**	GW	**Collected by**	JAMES, CAL
Begin		**End**		**Sample Type**	AMBIENT
Date Collected			04/30/2009 9:25 AM	**Station ID**	39LIC00390
Program	CDO-DDAGW			**Customer ID**	5
Client	GROUND_WATER			**External ID**	
OEPA Division	DDAGW				
Location	Utica Well 5				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 524.2	**ug/L**					
Benzene		000071-43-2	<0.50	0.5	05/05/2009	
Bromobenzene		000108-86-1	<0.50	0.5	05/05/2009	
Bromochloromethane		000074-97-5	<0.50	0.5	05/05/2009	
Bromodichloromethane		000075-27-4	<0.50	0.5	05/05/2009	
Bromoform		000075-25-2	<0.50	0.5	05/05/2009	
Bromomethane		000074-83-9	<0.50	0.5	05/05/2009	
n-Butylbenzene		000104-51-8	<0.50	0.5	05/05/2009	
sec-Butylbenzene		000135-98-8	<0.50	0.5	05/05/2009	
tert-Butylbenzene		000098-06-6	<0.50	0.5	05/05/2009	
Carbon tetrachloride		000056-23-5	<0.50	0.5	05/05/2009	
Chlorobenzene		000108-90-7	<0.50	0.5	05/05/2009	
Chloroethane		000075-00-3	<0.50	0.5	05/05/2009	
Chloroform		000067-66-3	<0.50	0.5	05/05/2009	
Chloromethane		000074-87-3	<0.50	0.5	05/05/2009	
2-Chlorotoluene		000095-49-8	<0.50	0.5	05/05/2009	
4-Chlorotoluene		000106-43-4	<0.50	0.5	05/05/2009	
Dibromochloromethane		000124-48-1	<0.50	0.5	05/05/2009	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.50	0.5	05/05/2009	
1,2-Dibromoethane		000106-93-4	<0.50	0.5	05/05/2009	
Dibromomethane		000074-95-3	<0.50	0.5	05/05/2009	
1,2-Dichlorobenzene		000095-50-1	<0.50	0.5	05/05/2009	
1,3-Dichlorobenzene		000541-73-1	<0.50	0.5	05/05/2009	
1,4-Dichlorobenzene		000106-46-7	<0.50	0.5	05/05/2009	
Dichlorodifluoromethane		000075-71-8	<0.50	0.5	05/05/2009	
1,1-Dichloroethane		000075-34-3	<0.50	0.5	05/05/2009	
1,2-Dichloroethane		000107-06-2	<0.50	0.5	05/05/2009	
1,1-Dichloroethene		000075-35-4	<0.50	0.5	05/05/2009	
cis-1,2-Dichloroethene		000156-59-2	<0.50	0.5	05/05/2009	
trans-1,2-Dichloroethene		000156-60-5	<0.50	0.5	05/05/2009	
1,2-Dichloropropane		000078-87-5	<0.50	0.5	05/05/2009	
1,3-Dichloropropane		000142-28-9	<0.50	0.5	05/05/2009	
2,2-Dichloropropane		000594-20-7	<0.50	0.5	05/05/2009	
1,1-Dichloropropene		000563-58-6	<0.50	0.5	05/05/2009	
cis-1,3-Dichloropropene		010061-01-5	<0.50	0.5	05/05/2009	
trans-1,3-Dichloropropene		010061-02-6	<0.50	0.5	05/05/2009	
Ethylbenzene		000100-41-4	<0.50	0.5	05/05/2009	
Hexachlorobutadiene		000087-68-3	<0.50	0.5	05/05/2009	
Isopropylbenzene		000098-82-8	<0.50	0.5	05/05/2009	
4-Isopropyltoluene		000099-87-6	<0.50	0.5	05/05/2009	
Methylene chloride		000075-09-2	<0.50	0.5	05/05/2009	
Methyl-tert-butyl ether		001634-04-4	<0.50	0.5	05/05/2009	
Naphthalene		000091-20-3	<0.50	0.5	05/05/2009	
n-Propylbenzene		000103-65-1	<0.50	0.5	05/05/2009	
Styrene		000100-42-5	<0.50	0.5	05/05/2009	
1,1,1,2-Tetrachloroethane		000630-20-6	<0.50	0.5	05/05/2009	
1,1,2,2-Tetrachloroethane		000079-34-5	<0.50	0.5	05/05/2009	
Tetrachloroethene		000127-18-4	<0.50	0.5	05/05/2009	
Toluene		000108-88-3	<0.50	0.5	05/05/2009	
1,2,3-Trichlorobenzene		000087-61-6	<0.50	0.5	05/05/2009	
1,2,4-Trichlorobenzene		000120-82-1	<0.50	0.5	05/05/2009	
1,1,1-Trichloroethane		000071-55-6	<0.50	0.5	05/05/2009	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	110928				
Date Received	04/30/2009 2:09 PM	**Matrix**	GW	**Collected by**	JAMES, CAL
Begin		**End**		**Sample Type**	AMBIENT
Date Collected			04/30/2009 9:25 AM	**Station ID**	39LIC00390
Program	CDO-DDAGW			**Customer ID**	5
Client	GROUND_WATER			**External ID**	
OEPA Division	DDAGW				
Location	Utica Well 5				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 524.2	ug/L					
1,1,2-Trichloroethane		000079-00-5	<0.50	0.5	05/05/2009	
Trichloroethene		000079-01-6	<0.50	0.5	05/05/2009	
Trichlorofluoromethane		000075-69-4	<0.50	0.5	05/05/2009	
1,2,3-Trichloropropane		000096-18-4	<0.50	0.5	05/05/2009	
1,2,4-Trimethylbenzene		000095-63-6	<0.50	0.5	05/05/2009	
1,3,5-Trimethylbenzene		000108-67-8	<0.50	0.5	05/05/2009	
Vinyl chloride		000075-01-4	<0.50	0.5	05/05/2009	
o-Xylene		000095-47-6	<0.50	0.5	05/05/2009	
Total m&p-xylenes		000108-38-3	<0.50	0.5	05/05/2009	
Trihalomethanes (THMs)		Unknown	<0.50	0.5	05/05/2009	

Field Comments

Lab Comments

QC / Sample Comments

Approved By SROBERTS **On** 05/21/2009