

**DRINKING WATER SOURCE  
PROTECTION PLAN**

**FOR THE**

**GEAUGA COUNTY SERVICES CENTER**

**PWS ID #2868112**

**June, 2007**

**Prepared by: Geauga County Department of Water Resources**

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## **Drinking Water Source Protection Plan Benefits**

- ✓ *It helps the Geauga County Department of Water Resources 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 wellfield.*

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

Drinking Water Source Protection involves two efforts:

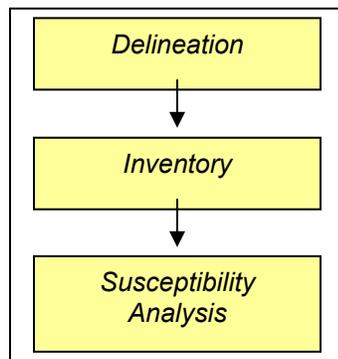
**The Assessment.** The Geauga County Services Center Water System's assessment was completed by the Geauga County Department of Water Resources and Kathy Metropulos of the NEDO of the Ohio EPA over a period of six months and is attached to the Appendix. It includes:

- 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.

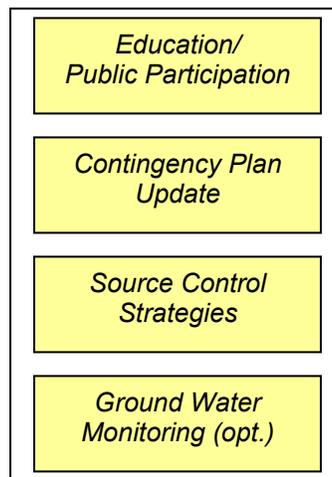
**The Protection Plan.** The Geauga County Services Center Water System's protection plan was developed by the protection team. It includes:

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

## Assessment (Technical Information)



## Protection Plan



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**Protected  
source of  
drinking  
water**

## Protection Team

*To effectively develop and implement a protection plan, the public water system's decision makers need to be informed about drinking water source protection and acknowledge the importance of developing a protection plan. The protection team met over a period of six months to present and discuss drinking water source protection for the Geauga County Services Center water system.*

*All members of the protection team were familiar with the Geauga County Services Center's Drinking Water Source Assessment Report. Local emergency responders will be provided with a copy of the plan.*

**The members of the Geauga County Services Center's Protection Team below:**

### **DATE PROTECTION TEAM FORMED:**

<b>Name</b>	<b>Organization</b>	<b>Title</b>	<b>Phone Number</b>
Douglas L. Bowen	GCDWR	Sanitary Engineer	440-279-1972
Gerry Morgan	GCDWR	Design Engineer	440-279-1981
Jim Reider	GCDWR	Operations Manager	440-285-1783
Terry Zion	GCDWR	Water Supervisor	440-285-2640
Kathy Metropulos	Ohio EPA	Drinking Water	330-963-1200

## Potential Contaminant Source Control Strategies

Protective strategies for the potential contaminant sources in Geauga County Services Center's protection area were determined.

### **The Protection Teams' Procedure:**

First, from the Assessment Report and from our own knowledge of the area, the team listed the potential contaminant sources in the protection area. Each source was then assigned a priority / threat level of low, medium or high. The level of concern was based on distance to wells, amount of chemicals used, toxicity, etc.

Secondly, the team identified the protective strategies that could be employed to protect the drinking water from the types of potential contaminant sources identified (Appendix A has a table with some possible strategies).

Third, the team indicated the timeline for implementing this strategy.

Lastly, the team listed the name and/or title of the person responsible for implementing—or tracking the implementation of—the strategy.

Potential Contaminant Source	Priority/ Level of Threat	Protective Strategies	Timeline for Implementation	Who Will Implement? [Name/Title]
Unprotected Above Ground Storage Tanks (Hospital/Golf)	High	Education and Annual Inspections.	Within 2 months of plan implementation	Doug Bowen Gerry Morgan Bob Januska
Diesel Fuel Above Ground Storage Tanks	High	Education and Inspection All new ones must meet regs.	Within 2 months of plan implementation	Doug Bowen Gerry Morgan Bob Januska
Salt Ponds	High	Check current conditions. Take samples	Within 1 month of plan implementation	Terry Zion
Sheds	High	Education and Inspection	Within 2 months of plan implementation	Doug Bowen Gerry Morgan Bob Januska
Crops	High	IF Commissioners leasing land then make sures its Best Management Technology	Within 2 months of plan implementation	Doug Bowen Gerry Morgan Bob Januska

Golf Course	High	Educational Stragedies	Within 2 months of plan implementation	Doug Bowen Gerry Morgan Bob Januska
Roads	High	Department of Emergency Services. Education and Phone numbers	Within 2 months of plan implementation	Doug Bowen Gerry Morgan Jim Reider
Gas lines	Low	Education and phone numbers	Within 2 months of plan implementation	Doug Bowen Gerry Morgan
Parking Lots Dumpsters Dog Walks	Medium	Education. Best Management Practice	Within 2 months of plan implementation	Doug Bowen Gerry Morgan Jim Reider
Floor Drains	Medium	Educate Property Owners. Proper disposal of oil/grease	Within 2 months of plan implementation	Doug Bowen Gerry Morgan Jim Reider
Fleet Garages	Medium	Educate Employees	Within 2 months of plan implementation	Doug Bowen Gerry Morgan Jim Reider
Hospital	Medium	Education. Complete survey data sheet and inspection.	Within 2 months of plan implementation	Doug Bowen Gerry Morgan Bob Januska
Chemical Storage	Medium	Educate Employees	Within 2 months of plan implementation	Doug Bowen Gerry Morgan Jim Reider
Septage Tanks	Low	Education, Storm Water Phase 2	Within 2 months plan implement	Doug Bowen Gerry Morgan
Pump Station	Low	Alarms, Facility Inspections	On-going	GCDWR
Sewer Lines	Low	5-year cleaning/visual inspection	On-going	GCDWR
WWTP	Low	Sludge Haul offsite, Daily Route	On-going	GCDWR

Cemetery	Low	Educate Owner	Within 2 months plan implement	Doug Bowen Gerry Morgan
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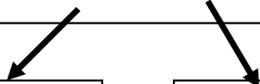
## Education and Outreach

*The overall goal of this section is to describe how the Protection Team will use education and outreach strategies to make people who live and work in the protection area aware of how their activities can impact the source of drinking water, and what they can do to help prevent contamination. The Protection Team is educating the community by using a phased approach as shown below.*

**Educating the Public Officials** – Public officials are probably the first group of people who should understand and support protection planning efforts, because many of them could be key figures in promoting, developing and implementing a protection plan. Some of these officials could be a part of the Protection Team.

**Who?** - Police and fire departments, EMS, Township Trustees, County Commissioners

**How?** - Setting up meetings to present and discuss protection planning with public officials; review the drinking water source assessment report.



### **Educating the General Community**

*Educating the general community helps to obtain the acceptance and support that will enable community leaders to proceed.*

**Who?** - The community in and around the PWSYSTEM

**How?**

- Updating the Potential Contaminant Source Inventory
- Postings in areas of community activities
- Brochures about SWAP
- Presentations at public events
- Display on County Website

### **Educating People who live and work in the protection area**

*People who live and work in the protection area should be aware of how their activities can impact ground water and what they can do to prevent contamination.*

**Who?**- People who live, work, own property or operate businesses in the protection area

**How?**

- Enclosures with the water bill or CCR
- Posters in the workplace
- Employee awareness training
- Letters to businesses/residents in the area

<b>Education and Outreach Strategies</b>	<b>Target Audience</b>	<b>Time line for Implementation</b>	<b>Who (name and title) will implement this strategy?</b>
Brochure	Water Customers, County Employees, Businesses, Adults, Children	Within 1 month of plan implementation	Committee
Fact Sheets	Water Customers, County Employees, Businesses, Adults, Children	Within 1 month of plan implementation	Committee
Enclosure in Water Bills Consumer Confidence Reports	Water Customers	Within 2 months of plan implementation	Billing and Water Supervisor
Letters to Businesses	Businesses	Within 6 months of plan implementation	Committee
Web Site	Water Customers, County Employees, Businesses, Adults, Children	Within 6 months of plan implementation	Committee
Tour of Plants	Water Customers, County Employees, Businesses, Adults, Children	Within 6 months of plan implementation	Operations Manager and Water Supervisor
Employee Training	County Employees	Wellness Commit. Newsletter Within 6 months of plan	Committee
Public Events (County Fair)	Water Customers, County Employees, Businesses, Adults, Children	Within 6 months of plan implementation	Committee / ODNR

# Drinking Water Shortage/Emergency Response

*The goal of this section is to identify how the Geauga County Department of Water Resources will prepare for and respond to any drinking water shortages or emergencies that may occur. This information is included in Geauga County Services Center's Contingency Plan, which addresses every kind of emergency, including loss of power, weather emergencies, etc. (see appendix C for copy of contingency plan)*

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## Drinking Water Shortage - Short Term Loss of Source

*Information can be found in the section titled "Potential Emergency Conditions" on Page 1 and "Alternative Supply of Drinking Water" on Page 4 of the Contingency Plan.*

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## Drinking Water Shortage - Long Term Water Supply Planning

*Future water supply needs may involve expanding the current wellfield or developing a new one. A community needs to plan for such major expenditures, and may need to acquire options on or secure relatively undeveloped land many years in advance.*

*The Geauga County Services Center Water System currently provides water at 10% of pumping capacity and 14% of plant capacity.*

*The following information is needed to calculate the above percentages:*

- A. Average production = 20,000 gallons per day.*
- B. Pumping capacity = 288,000 gallons per day (% of pumping capacity is A/B)*
- C. Plant capacity = 150,000 gallons per day. (% of plant capacity is A/C)*
- D. Elevated Storage Tower Capacity = 200,000 gallons.*

*Given current conditions and projections of growth, the Geauga County Department of Water Resources anticipates the need to develop additional wells or wellfields within 20 years. A recent study for expansion for the wastewater plant shows an increase in flows at the plant in the next 20 years going from 70,000 gpd to 150,000 gpd. The existing plant should be able to handle this. The County owns property on the east side of Aquilla Road (County Home property) where previous studies showed good well field potential. Also an additional well could be drilled in the same wellfield where the existing two wells now are.*

## **Emergency Response to Spills in the Protection Area**

*Ohio EPA's Division of Emergency and Remedial Response is capable of providing expertise and assistance related to prevention, containment and clean-up of spills Ohio EPA's 24-hour emergency response phone number is 1-800-282-9378.*

*The Department of Emergency Services should be contacted and will provide first response. The contact person is Dale Wedge and can be reached at (440) 279-2172. The Chardon Fire Department, (440) 285-4665, and the Munson Fire Department, (440) 286-6797 can also be reached.*

*Additional information can be found on page 3 of the Geauga County Services Center's contingency plan.*

## Ground Water Monitoring

*The need for ground water monitoring depends on: 1) the susceptibility of the aquifer, 2) the presence of contaminant plumes and point sources, and 3) the protective strategies selected to protect the aquifer.*

*It was determined that ground water monitoring is NOT needed for the Geauga County Services Center water supply. There are only minor contaminant sources in and around the protection area. and no areas of major concern.*

*If ground water monitoring is deemed necessary in the future, the Ohio EPA Drinking Water Source Protection staff will be notified to assist you with filling out the Ground Water Monitoring Plan portion of this Protection Plan.*

# Protection Plan Updates

The Geauga County Department of Water Resources commits to reviewing the Drinking Water Source Protection Plan every 5 years, beginning from January, 2008. 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 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

## Suggested Protective Strategies

**AGRICULTURAL POTENTIAL CONTAMINANT SOURCES**  
*The following activities apply to most agricultural potential contaminant sources in the protection area.*

- Work with County Extension Service, the Soil and Water Conservation District, and/or the Natural Resource Conservation Service to provide copies of fact sheets covering best management practices for: nutrient management; pesticide use; pest management; waste oil disposal; safe chemical handling; and/or safe chemical storage.*
- Work with the local fuel and heating oil supplier to promote spill prevention and cleanup promote awareness.*
- Work with the local farm chemical supplier to promote safe chemical storage and handling.*
- Work with the local Future Farmers of America members to distribute educational materials or best management practices information.*
- Purchase the property within the protection area if it becomes available.*
- Other source control strategies may be available*

**The following activities apply to specific agricultural potential contaminant sources in the protection area.**

Potential Contaminant Source	Potential Strategies
<i>Crops</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Work with the property owner on enrolling in the Conservation Reserve Program.</i></li> <li><input type="checkbox"/> <i>OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</i></li> </ul>
<i>Livestock</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Monitor a concentrated animal feeding operations compliance with Ohio Department of Agriculture rules.</i></li> <li><input type="checkbox"/> <i>Work with local livestock owners to determine the placement of animal waste disposal areas or areas for burying dead livestock.</i></li> <li><input type="checkbox"/> <i>OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</i></li> </ul>
<i>Farm Chemical Distributor</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Work with the local farm chemical supplier to promote safe chemical storage, handling and disposal.</i></li> <li><input type="checkbox"/> <i>OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</i></li> </ul>
<i>Greenhouses / Nurseries</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <i>OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</i></li> </ul>
<i>Logging (Silviculture)</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Work with the logging company and property owners to plan/design/implement methods to control impacts to surface and ground water.</i></li> <li><input type="checkbox"/> <i>OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</i></li> </ul>

**MUNICIPAL POTENTIAL CONTAMINANT SOURCES**

**The following activities apply to most municipal potential contaminant sources in the protection area.**

- Install secondary containment around above ground storage tanks and/or chemical storage areas.
- Obtain hazardous materials handling training for staff.
- Evaluate and update materials handling procedures.
- Implement “just-in-time” ordering for chemicals.
- Maintain compliance with Bureau of Underground Storage Tank Regulations rules.
- Maintain compliance with hazardous waste storage and disposal rules.
- Provide fact sheets covering best management practices for handling waste liquids.
- Implement best management practices at municipal facilities.
- Work with Ohio EPA to identify and implement pollution prevention strategies.
- Evaluate and close fire cisterns or other municipally owned wells.
- Conduct routine sewer inspections, maintenance & upgrades.
- Work to ensure salt and other material stockpiles are kept covered and on an impervious surface.
- OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.

*The following activities apply to specific municipal potential contaminant sources in the protection area.*

<b>Potential Contaminant Source</b>	<b>Potential Strategies</b>
<i>Artificial Ground Water Recharge Areas</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Develop and implement a plan to ensure recharge does not contaminate ground water.</li> <li><input type="checkbox"/> OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</li> </ul>
<i>Composting / Yard Waste Facilities</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Install containment to minimize impacts to surface and ground water.</li> <li><input type="checkbox"/> OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</li> </ul>
<i>Recycling Facilities</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Install containment to minimize impacts to surface and ground water.</li> <li><input type="checkbox"/> OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</li> </ul>
<i>Storm Water Basins</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Develop and implement a plan to ensure infiltration from storm water basins does not contaminate ground water.</li> <li><input type="checkbox"/> OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</li> </ul>
<i>Wastewater Application Sites</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Monitor compliance with existing regulations through inspections and/or contact with regulatory agencies (Ohio EPA).</li> <li><input type="checkbox"/> OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</li> </ul>
<i>Junk Yards: Auto and Scrap</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Consider an ordinance requiring auto salvage and scrap yards to install containment to minimize impacts to surface and ground water.</li> <li><input type="checkbox"/> Work with the owner or operator to plan/design/implement methods to control impacts to surface and ground water.</li> <li><input type="checkbox"/> OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</li> </ul>
<i>Landscaping Firms</i>	<ul style="list-style-type: none"> <li>&lt; Work with the owner to promote proper yard chemical use awareness among the customers.</li> <li>&lt; OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</li> </ul>

**COMMERCIAL and INDUSTRIAL POTENTIAL CONTAMINANT SOURCES**

**The following activities apply to most commercial/industrial potential contaminant sources in the protection area.**

- 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).
- Consider an ordinance requiring facilities storing or using chemicals within the protection area to register with the municipality.
- Consider an ordinance requiring new underground storage tanks, above ground storage tanks or chemical storage areas installed in the protection area to meet higher spill prevention standards.
- Provide owners or operators with copies of fact sheets covering best management practices for handling waste liquids.
- Provide owners or operators with copies of material on underground storage tank maintenance.
- Encourage local businesses to investigate and implement pollution prevention strategies.
- Consider developing or changing zoning to control future growth within the protection area.
- Provide owners or operators with copies of fact sheets covering best management practices for handling waste liquids; spill prevention; pollution prevention; or applicable rules.
- Provide owners or operators with copies of material on equipment maintenance.
- Provide owners or operators with copies of material on underground storage tank maintenance.
- Provide educational material during routine inspections.
- Work with business owners or operators to implement a "just-in-time" ordering system for chemicals.
- OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.

**The following activities apply to specific commercial potential contaminant sources in the protection area.**

Potential Contaminant Source	Potential Strategies
Car Washes	<ul style="list-style-type: none"> <li><input type="checkbox"/> Work with the owner or operator to plan/design/implement methods to control impacts to surface and ground water.</li> <li><input type="checkbox"/> OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</li> </ul>
Gas Stations	<ul style="list-style-type: none"> <li><input type="checkbox"/> Monitor compliance with Bureau of Underground Storage Tank Regulations rules.</li> <li><input type="checkbox"/> OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</li> </ul>
Fleet / Truck / Bus Terminals	<ul style="list-style-type: none"> <li><input type="checkbox"/> Monitor compliance with Bureau of Underground Storage Tank Regulations rules.</li> <li><input type="checkbox"/> OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</li> </ul>
Golf Courses	<ul style="list-style-type: none"> <li><input type="checkbox"/> Work with the owner or operator to implement an Integrated Pest Management System.</li> <li><input type="checkbox"/> OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</li> </ul>
Gravel Pits & Quarries; Other Surface Mines	<ul style="list-style-type: none"> <li><input type="checkbox"/> Purchase closed gravel pits or quarries within the protection area for development as parks.</li> <li><input type="checkbox"/> OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</li> </ul>
Heating Oil Companies	<ul style="list-style-type: none"> <li><input type="checkbox"/> Monitor compliance with Bureau of Underground Storage Tank Regulations rules.</li> <li><input type="checkbox"/> Work with the supplier to promote spill prevention and cleanup promote awareness among it's customers.</li> <li><input type="checkbox"/> OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</li> </ul>
Junk Yards: Auto and Scrap	<ul style="list-style-type: none"> <li><input type="checkbox"/> Consider an ordinance requiring auto salvage and scrap yards to install containment to minimize impacts to surface and ground water.</li> <li><input type="checkbox"/> Work with the owner or operator to plan/design/implement methods to control impacts to surface and ground water.</li> <li><input type="checkbox"/> OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</li> </ul>
Landscaping Firms	<ul style="list-style-type: none"> <li><input type="checkbox"/> Work with the owner to promote proper yard chemical use awareness among the customers.</li> <li><input type="checkbox"/> OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</li> </ul>

**WASTE DISPOSAL RELATED POTENTIAL CONTAMINANT SOURCES**

**The following activities apply to various types of waste disposal related potential contaminant sources in the protection area.**

<b>Potential Contaminant Source</b>	<b>Potential Strategies</b>
<i>Inactive / Closed Landfills</i>	<ul style="list-style-type: none"><li><input type="checkbox"/> <i>Monitor compliance with state environmental regulations.</i></li><li><input type="checkbox"/> <i>Work with the owner or operator to plan/design/implement methods to control impacts to surface and ground water.</i></li><li><input type="checkbox"/> <i>Work with the owner or operator to develop a strategy for beneficial future use of the property, such as a links style golf course.</i></li><li><input type="checkbox"/> <i>OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</i></li></ul>
<i>Active Landfills</i>	<ul style="list-style-type: none"><li><input type="checkbox"/> <i>Monitor compliance with state environmental regulations.</i></li><li><input type="checkbox"/> <i>Work to ensue local officials are aware that new or expanded Construction and Demolition Debris, Industrial, Municipal, and Residential Landfills are prohibited within the protection area.</i></li><li><input type="checkbox"/> <i>Work with the owner or operator to plan/design/implement methods to control impacts to surface and ground water.</i></li><li><input type="checkbox"/> <i>Work with the owner or operator to develop a strategy for beneficial future use of the property, such as a links style golf course.</i></li><li><input type="checkbox"/> <i>OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</i></li></ul>
<i>Unknown Status Landfills</i>	<ul style="list-style-type: none"><li><input type="checkbox"/> <i>Work with Ohio EPA to determine the status of the landfill and if it poses a threat to surface and ground water.</i></li><li><input type="checkbox"/> <i>Identify and work with property owners to limit or eliminate access to properties used for illegal dumping.</i></li><li><input type="checkbox"/> <i>Provide local residents with information on illegal dumping and how to prevent or report it.</i></li><li><input type="checkbox"/> <i>OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</i></li></ul>
<i>Cemeteries</i>	<ul style="list-style-type: none"><li><input type="checkbox"/> <i>Work with the manager to implement an Integrated Pest Management System.</i></li><li><input type="checkbox"/> <i>OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</i></li></ul>
<i>Unused Wells</i>	<ul style="list-style-type: none"><li><input type="checkbox"/> <i>Work with property owners to properly seal unused wells.</i></li><li><input type="checkbox"/> <i>Contact the local health department about unused wells in the surrounding area.</i></li><li><input type="checkbox"/> <i>OTHER SOURCE CONTROL STRATEGIES MAY BE AVAILABLE.</i></li></ul>

## Appendix B

### Spill Response

*Procedures should be in place for the kinds of catastrophic spills that can reasonably be expected in the wellfield. The chain-of-command, notification procedures and response actions should be known by all water system employees.*

*The fire departments and/or hazardous materials response teams to be notified in case of a spill in the wellfield are:*

*Chardon Fire Department and Munson Fire Department*

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

<i>Emergency Phone #</i>	<i>Alternate Day-Time Phone #</i>	<i>Alternate After Hours Phone #</i>
<i>(440) 285-4665</i>	<i>(440) 286-6797</i>	<i>(440) 279-2170</i>

*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*

<i>Ohio EPA District Office contact:</i>		
<i>Day-Time Phone #</i>	<i>Alternate Day-Time Phone #</i>	<i>After Hours Phone #</i>
<i>1-330-963-1260</i>	<i>1-800-686-6330</i>	<i>1-800-282-9378</i>

*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.*

	<i>Name</i>	<i>Day-Time Phone #</i>	<i>After Hours Phone #</i>
<i>Primary Contact</i>	<i>Doug Bowen</i>	<i>(440) 279-1971</i>	<i>(866) 286-7292</i>
<i>Backup Contacts</i>	<i>Jim Reider</i>	<i>(440) 346-4883</i>	

*Response Procedure:*


## **APPENDIX C**

# **Geauga County Services Center Contingency Plan**

## **APPENDIX D**

### **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 ground water contamination.
- The following chemicals are common ground water 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

### 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](http://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

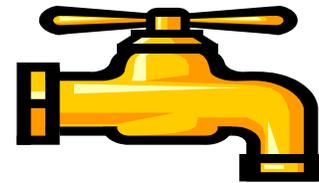
### Contacts In Geauga County

For questions concerning the Geauga  
County Department of Water Resources  
Water Supply, contact:

**Main Office**  
Phone: (440) 279-1971

For questions concerning the Geauga  
County Services Center's Drinking Water  
Source Protection Area, contact:

## City of Somewhere's Drinking Water Source Protection Area



A Clean Drinking  
Water Supply



Means A Healthy  
Community!

**A Community  
Awareness  
Announcement  
From the Geauga County  
Department of Water  
Sources**

**Where does the Geauga  
County Services Center's  
drinking water come from?**

*The Geauga County Services Center's drinking water is pumped out of the ground by wells located within the vacant parcel of land adjacent to the Department of Aging. This ground water 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 the Geauga County Services Center 's businesses and County offices.*

**Where does the ground water come from?** *All ground water 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*

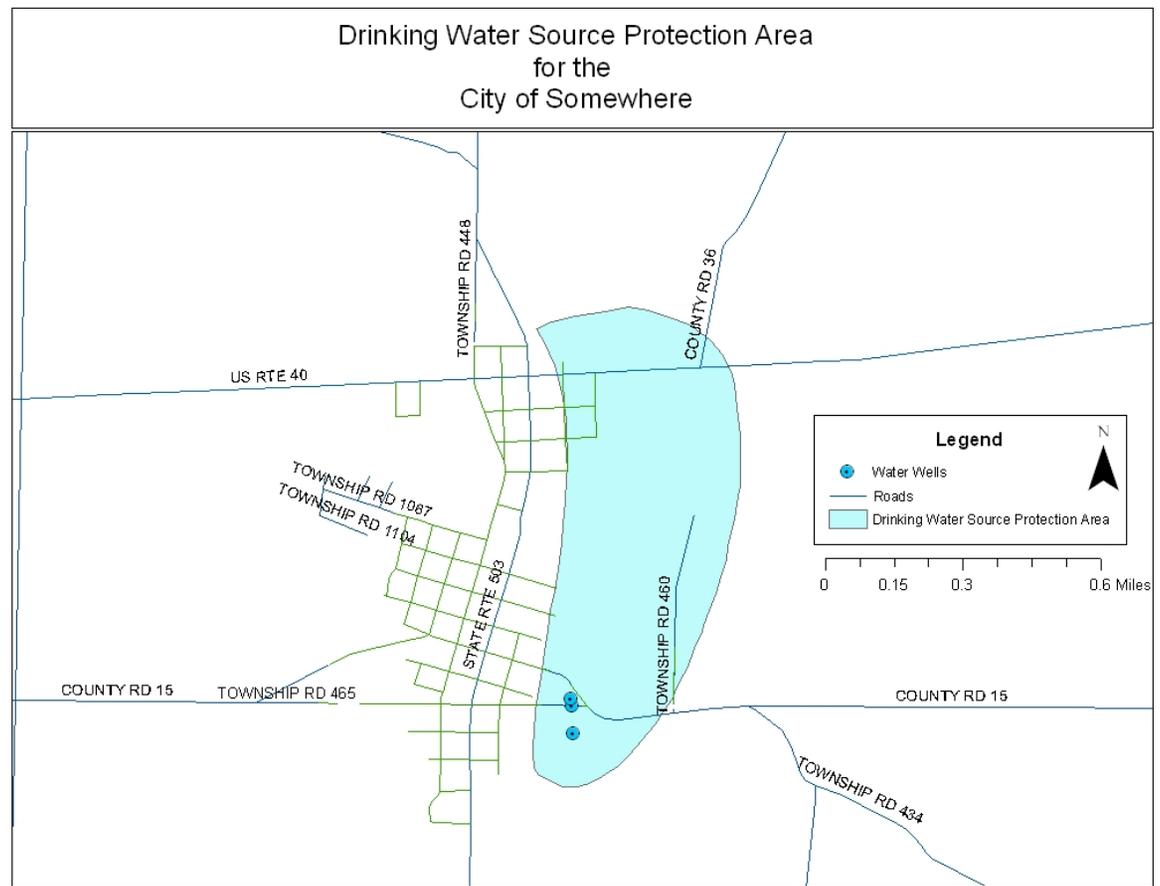
*aquifer. Geauga County Services Center's drinking water supply comes from a sandstone aquifer.*

*Ground water does not stay in one place. The ground water supplying the Geauga County Services Center 's wells seeps very slowly mostly from the west to east. This means that if pollutants are spilled on the ground anywhere near the wells or west of the wells they may eventually enter the ground water 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 Geauga County*

**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 Geauga County Department of Water Resources with our drinking water source protection efforts, Ohio EPA provided the department with a Drinking Water Source Assessment report. This 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 Geauga County Department of Water Resources has used the provided assessment to develop a drinking water source protection plan. If you would like to be more involved with the department's drinking water protection efforts or if you would like to see a copy of the city's drinking water source protection plan, please contact the Geauga County Department of Water Resources Water Department at (440) 279-1971.*

*Most importantly, if you live or work within the Geauga County Services Center's drinking water protection area please pay attention to the "Did You Know..." portion of this brochure.*

**A Community Awareness Announcement**  
*for Somewhere, Ohio*

*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 Geauga County Services Center's Drinking Water Source Protection Area. This protection area was developed for the Geauga County Department of Water Resources 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 ground water 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 ground water contaminants. These substances can enter the ground water 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 Geauga County Services Center's ground water 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 Geauga County Department of Water Resources 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 Geauga County Services Center's ground water resources.*

*The Geauga County Department of Water Resources thanks you for your cooperation and assistance. Attached is a figure that shows the location of the Geauga County Services Center's protection area. If you have any questions or would like to review the Geauga County Services Center's drinking water source assessment report please contact Doug Bowen or Gerry Morgan at (440) 279-1971*

*Sincerely,*

*Douglas L. Bowen, P.E.  
Sanitary Engineer*

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 Geauga County Services Center's Drinking Water Source Protection Area. This protection area was developed for the Geauga County Department of Water Resources 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 ground water 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 ground water contaminants. These substances can enter the ground water 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 Geauga County Services Center's ground water 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 Geauga County Department of Water Resources 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 Geauga County Services Center's ground water resources.*

*The Geauga County Department of Water Resources 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 Geauga County Services Center's drinking water source assessment report please contact Doug Bowen or Gerry Morgan at (440) 279-1971*

Sincerely,

Douglas L. Bowen, P.E.  
Sanitary Engineer