

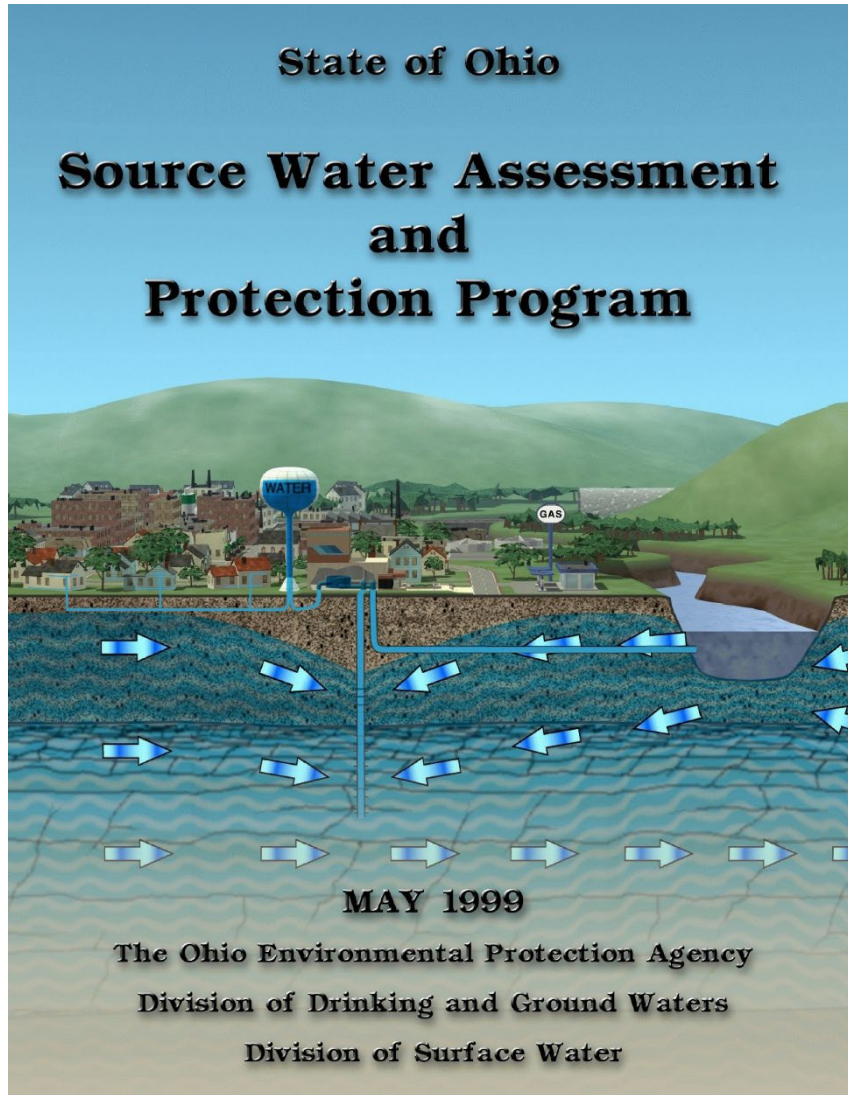


**Environmental
Protection
Agency**

OHIO EPA'S SOURCE WATER ASSESSMENT AND PROTECTION PROGRAM

Ruthy Rutherford

Environmental Specialist



WHAT IS THE SOURCE WATER ASSESSMENT AND PROTECTION PROGRAM (SWAP)?

1986 amendments to Safe Drinking Water Act (SDWA)

- Wellhead Protection Program for ground water
- Delineations and Inventories for all PWSs

1996 SDWA amendments

- Added surface water for "Source Water Assessment and Protection"
- Susceptibility for all PWSs

GOAL OF THE SWAP PROGRAM

- To protect the drinking water source from future contamination
- Ensure a Sustainable Source
- Prevention costs less than cleanup

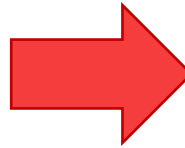


Decreased Pollution = Less Treatment = Lower Costs

ASSESSMENT REPORT VS. PROTECTION PLAN

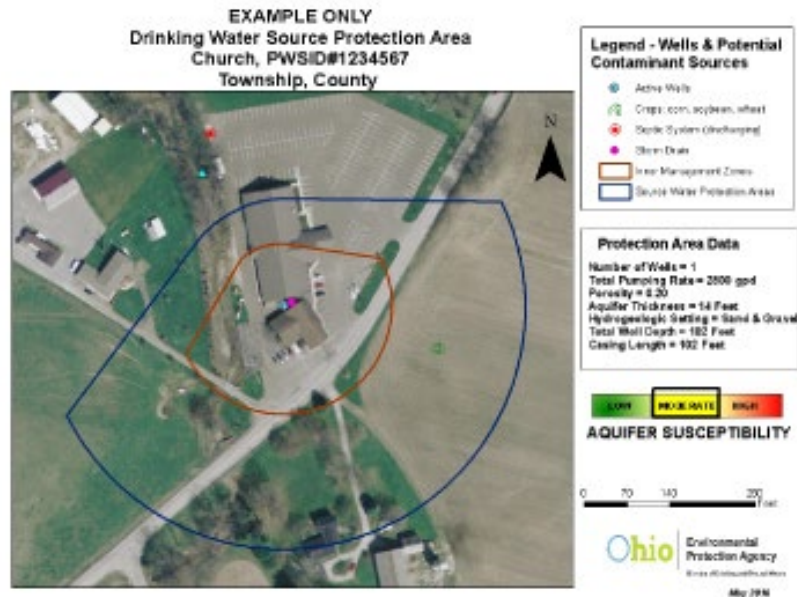
Assessment Report

- Susceptibility Analysis
- Delineation
- Potential Contaminant Source Inventory
- Prepared by Ohio EPA or System



Protection Plan

- Prepared after Assessment Report
- To do list / Protective Strategies
- Prepared by System



SWAP PROGRAM

Assessment Report Requirements

- [OAC 3745-87-03\(B\)\(6\) \(click here\)](#)
- Required to review annually
- Evaluate every 5 year for revisions

Protection Plan Requirements

- [OAC 3745-91-10 \(click here\)](#)
- Must have a protection plan within 2 years of approval of a new well/intake



THE NEW PROTECTION PLAN TEMPLATE

- Simplified, Emphasizes Implementation
- Reduces w/other requirements
- Set up a meeting with us!
- Quick Start Guide
- [Protection Plan Template.doc](#)

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Stay CompliantGet InvolvedMonitor PollutionGet Funding

Ohio EPA / Divisions & Offices / Drinking & Ground Waters / Source Water Protection and Underground Injection Control (UIC) / Source Water Assessment and Protection Program

Welcome

Announcements

Contacts

About DDAGW

Programs

Certified Operators

Guides & Manuals

Engineering and Plan Approval

Public Water Systems

Reports & Data

Regulations

Educational and How-to Resources

Source Water Assessment and Protection Program



Ohio's Source Water Assessment and Protection (SWAP) program assists communities with protecting their sources of drinking water (streams, lakes and aquifers) from contamination. Also known as "Drinking Water Source Protection" and "Wellhead Protection," the SWAP program addresses over 4,800 public water systems in Ohio and does not address private residential water systems.

Although Ohio's public water systems treat their drinking water to meet health-based standards, treatment is expensive and may not address every kind of contaminant. By taking steps to avoid chemical spills in the areas surrounding a well field or upstream from a surface water intake, a community can help reduce the costs of their water and better ensure a safe and high-quality supply of drinking water.

For any question or concerns regarding source water assessment and protection, contact our SWAP team at internet.whp@epa.ohio.gov.

Expand All Sections

Endorsed Drinking Water Source Protection Plans

Overview and Frequently Asked Questions

Developing a Drinking Water Source Protection Plan

Launch

Source Water Protection Areas Interactive Map

Share this

Current News

- [OAWWA Source Water Protection Committee](#)
- SWAP in Your Community:
 - Ohio State and county fairs
 - Science Alliance Day
 - University of Findlay career fair
 - [Butler County Children's Festival](#)

Grant Status: Closed

Grant - FAQ

Strategies Grant - FAQ

by Endorsed Protection Plans

esville City

ndon Village



PROTECTION PLAN COMPONENTS

1. Partnerships/Protection Team
2. Source Control Strategies
3. Education and Outreach
4. Future Planning and Source Water Sustainability
5. Source Water Monitoring
6. Periodic Review and Implementation



1. PROTECTION PLANNING TEAM & PARTNERS

- Do they play a role in implementing?
- Are they affected by decisions made?
- Resolution – Obtain local official buy-in



2. SOURCE CONTROL STRATEGY CREATION

**IDENTIFY and
PRIORITIZE**

Potential Contaminant Sources

CREATE

Protective Strategies

**DELEGATE and
SCHEDULE**

Who will be in charge and when
will they be implemented

IMPLEMENT

Protective Strategies



3. EDUCATION AND OUTREACH

- Different Audiences = Different Concerns
- Inform residents, business, industry, etc. to prevent impacts
- Connect w/partners
- Appendix C: Examples



4. FUTURE PLANNING AND SOURCE WATER SUSTAINABILITY

Future Water Supply Planning

- Source Water Demands
- Future needs Increase
- Capacity Considerations
- Potential Contamination

Source Water is your most important asset!



Appendix D: Examples



5. SOURCE WATER MONITORING

- Strongly Encouraged for High Susceptibility Monitoring
- Early Warning
- Water Quality Trends
- Evaluates effectiveness of Protective Strategies
- Appendix E: Examples



6. PERIODIC REVIEW AND IMPLEMENTATION

7.2 Signature and Date

PWS Name commits to reviewing the Drinking Water Source Protection Plan annually or as needed, but at a minimum of every three years, beginning with **MONTH DATE, 20XX**.

[SYSTEM] Representative:

SIGNATURE: _____ **Date:** _____

To document **FUTURE Reviews and Revisions**, the following log is provided:

Date:-_____ Reviewer Signature: _____

Notes: _____

Date:-_____ Reviewer Signature: _____

Notes: _____



Certificate of Recognition

awarded to

Your PWS's Name

**for efforts taken to protect the community's source of drinking water
through completion of a
Drinking Water Source Protection Plan.**

June 2023


Anne M. Vogel, Director
Ohio EPA


Amy J. Klei, Chief
Division of Drinking and Ground Waters



**How do we track the
success of our program?**



SUBSTANTIAL IMPLEMENTATION

- Tracked in the Safe Drinking Water Information System (SDWIS)
- Three-year cycle (2025-2027)
- Only sent to community systems
- Endorsed protection plans: unique survey



SCORING FOR SYSTEMS WITH ENDORSED PROTECTION PLANS

No matter the population served, they must be implementing 75% of strategies in their survey + the following:

Population Served	Protective Strategy Type Requirement		
	Partners	Spill Plan	Water Quality Monitoring
Medium (10,000-50,000)	1	One or other	
Large (>50,000)	2	Yes	Yes

Please indicate with a yes (Y) or no (N) whether you have implemented the following general protective strategies and specific strategies as listed in your endorsed drinking water source protection plan within the last three (3) years.

Protective Strategy	Yes / No	Reason strategy is not being implemented / Other Comments
General Strategies		
Do you have a protection team that meets regularly to discuss implementation of source water protection strategies/update your current plan?		
Have you worked with local partners to implement a specific source water protection strategy (<i>i.e.</i> , first responders, local health department, soil and water, farm bureau). If so, please list them in the comments.		
Have you developed and are you implementing a spill/release plan which addresses accidental chemical spills/releases in the protection area?		
Have you developed and are you implementing water (surface water or ground water) quality monitoring in the protection area?		
Do your first responders (usually the local fire department) know where the source water protection area is, and know how to avoid increasing the infiltration of contaminants during a fire, spill or flood?		

Source Control Strategies		
Education and Outreach Strategies		
Emergency Response/Contingency Plan		
Other Protection Strategies		



SCORING FOR SYSTEMS WITHOUT ENDORSED PROTECTION PLANS

Population Served	Protective Strategy Type Requirement			
	Outreach/ Education	Source Controls	Partners	Water Quality Monitoring/ Spill Plans
Small (<10,000)	2 (total of 5)	2 (total of 5)	N/A	N/A
Medium (10,000-50,000)	3	3	1	One or other
Large (>50,000)	4	3	2	Both

2023 Ohio EPA Source Water Protection Planning Survey for Municipal Systems with Surface Water Intakes

Section 2: OUTREACH/EDUCATIONAL STRATEGIES

10. Within the last three years our municipality has done (check only those that apply):

- ☐ CCR: Included discussion of our drinking water source and how to protect it in our CCR.
- ☐ TOURS: Conducted water plant tours.
- ☐ HAZ MAT DAY: Participated in, or helped promote a Household Hazardous Material or Pharmaceuticals Pickup Day.
- ☐ SOURCE WATER EDUCATION: Invited a speaker to give presentations on ground water and source water protection.
- ☐ HOUSEHOLD BROCHURE: Distributed source water protection materials to households explaining how to manage disposal of household hazardous materials or maintain septic systems.
- ☐ INDUSTRIAL BROCHURE: Distributed source water protection materials for education of commercial and industrial facilities within our protection area.
- ☐ GENERAL BROCHURE: Distributed source water protection materials at local venues (festivals, schools, public buildings, etc.).



COMBINED 2022-2024 RESULTS

838 Surveys Sent
629 Responses Received

Protection Plan Status	Percent Substantially Implementing
No Endorsed Protection Plan	40%
Endorsed Protection Plan	66%



BREAK DOWN BY SYSTEM TYPE

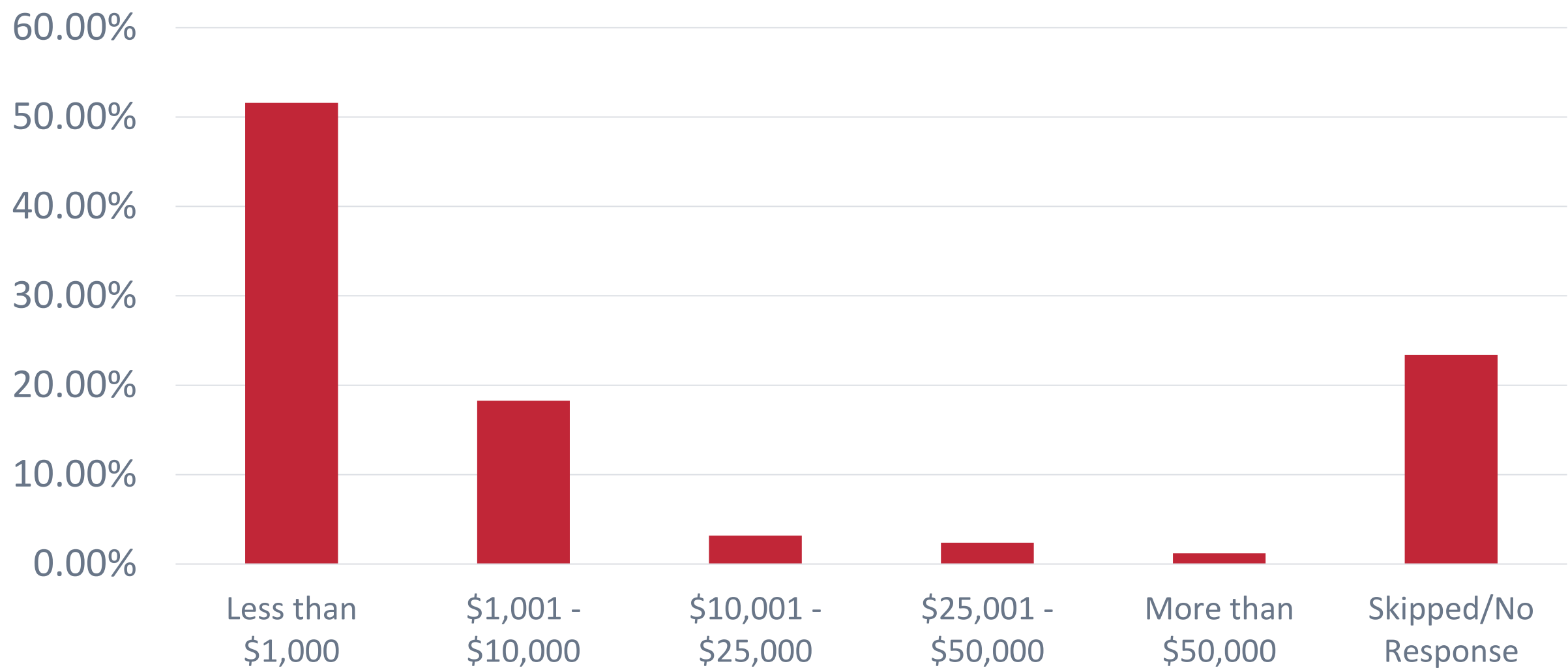
System Type	Surveys Sent	Response Rate	Percent Substantially Implementing
Ground Water	388	87%	57%
Surface Water	101	94%	70%
Nonmunicipal	351	62%	42%

TAKEAWAYS

- 51% of community systems are implementing, which represents 80% of the population
- Plans need to be updated and attainable



HOW MUCH DOES IT COST YOUR MUNICIPALITY ANNUALLY TO IMPLEMENT SOURCE WATER PROTECTION? (MUNICIPAL SYSTEMS W/OUT PROTECTION PLANS)



GRANTS – OPENING NOVEMBER

Protective Strategies Grant

- Support the implementation of specific and measurable protective strategies to help protect source water

Well Abandonment Grant

- Provides resources for the planning and proper plugging of abandoned drinking



PROTECTIVE STRATEGY GRANT

- Website creation/updates
- Educational materials
- Sand tank/watershed models
- Signage
- Spill kits/spill containment booms
- Early warning GW monitoring wells
- Semi-permanent SW quality monitoring
- Implementation of BMPs in the corridor management zone



ACTION PLAN

- Update protection plan template/review criteria
- Continually revising our substantial implementation survey process
- Increased statewide outreach
- Continued funding for SWAP



Thank You

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APPENDIX A: PARTNERSHIP EXAMPLES

- County/Township EMA
- Soil and Water Conservation District
- Health Department
- Schools
- Natural Resource Conservation Services
- Agricultural Community
- Local Business or Industries



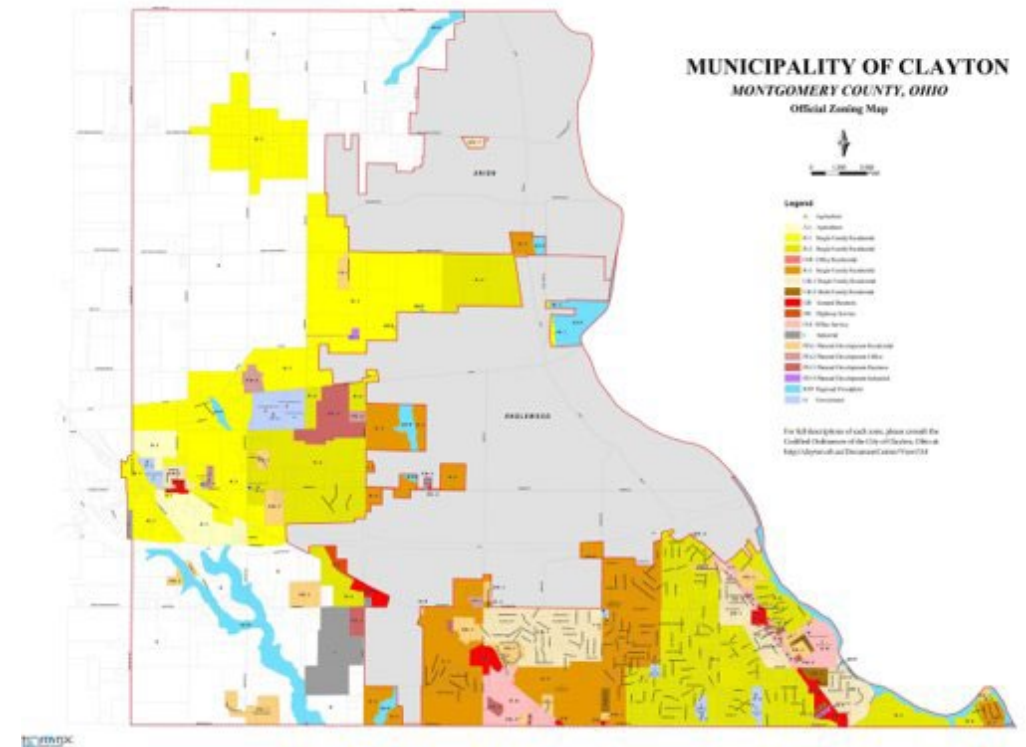
APPENDIX B: SOURCE CONTROL EXAMPLES

Regulatory:

- Zoning & Ordinances
- Best Management Practices
- Prohibitions and Restrictions
- Design and Operating standards
- Reporting Requirements

Non-Regulatory:

- Land Purchases
- Conservation Easements
- Pollution Prevention



Potential Contaminant Source	Priority/ Level of Threat	Protective Strategies/Proposed Actions	Organization (Position/Title)	Implementation Timeline
PFAS	High or Moderate or Low	Prohibit or Restrict the use of AFFF. Replace AFFF with more environmentally friendly foam. Close or Relocate fire training areas.	Position/Title - (Do not include Employee Name)	Month/Year, ongoing
Regulated Substances	High or Moderate or Low	Restrict Quantities that can be stored in DWSPA Establish local ordinance or inspection program	Position/Title - (Do not include Employee Name)	Month/Year, ongoing
High Priority Commercial and/or Industrial Source	High or Moderate or Low	Establish Communication, point of contact for the facility. Incorporate SWAP area and PWS communication into any emergency plans at the facility.	Position/Title - (Do not include Employee Name)	Month/Year, ongoing
Erosion, Urban sprawl	High or Moderate or Low	Buy land adjacent to and in the DWSPA to protect area from future industrial facility growth. Implement Design Standards to prevent erosion	Position/Title - (Do not include Employee Name)	Month/Year, ongoing

Potential Contaminant Source	Priority/ Level of Threat	Protective Strategies/Proposed Actions	Organization (Position/Title)	Implementation Timeline
All Sources	High or Moderate or Low	Include source water protection information in <u>Consumer Confidence Report (CCR)</u>	<i>Position/Title - (Do not include Employee Name)</i>	<i>Month/Year, ongoing</i>
All sources	High or Moderate or Low	Create Source Water Protection Website	<i>Position/Title - (Do not include Employee Name)</i>	<i>Month/Year, ongoing</i>
Transportation	High or Moderate or Low	Install Road Signs <i>SR 123 at Main Street</i> <i>SR 456 at Main Street</i> Install Spill Containment Basins/Berms <i>SR 123 at Main Street</i>	<i>Position/Title - (Do not include Employee Name)</i>	<i>Month/Year, ongoing</i>
Spills, Releases	High or Moderate or Low	Employee Training for preventing and responding to spills in Source Water Protection Area	<i>Position/Title - (Do not include Employee Name)</i>	<i>Month/Year, ongoing</i>

APPENDIX C: EDUCATION/OUTREACH EXAMPLES

Audiences:

Residents, Business, Government, EMA, Farmers, Septic Owners, Customers, etc.

Partnerships:

Watershed Group, Soil & Conservation, Local Parks, Local Health Department, OSU Extension, Ohio EPA



Education and Outreach Strategies	Target Audience	Organization (Position/Title)	Implementation Timeline
Consumer Confidence Report – include information about actions residents can take to protect source water quality	Water customers	PWS operator	Distribute annually, in March
Water Plant Tours – Open House or Scheduled Tours	Students, Community	PWS Operator	Open House - June 20XX and every year after
Host information booths at community events like county fairs and festivals	General Public	Soil and Water Conservation District	Annually in the summer
[SYSTEM] Social Media Page – (Please specify Facebook, Twitter, Instagram, etc.)	General Public	Please specify	Please specify
Local School District •Display sand tank and/or EnviroScape model(s)	Students	Local science teacher or Soil and Water Conservation District	Please specify
Distributing source water Brochures (during tours, with CCRs, during events etc.) created by Ohio EPA	Students, Consumers, General Public	Ohio EPA and PWS Operator	Please specify
Inform local emergency first responders on an annual basis of the location of the Source Water Protection Area	EMA, Fire Department	Fire Chief	Organized annually, in January
Conduct annual meetings with local council members to discuss any issues related to Source Water Protection	Village Council	Village Council and PWS Operator	Hosted annually in December

APPENDIX D: CONTINGENCY PLANNING EXAMPLES

Short-Term Source:

Bottled Water, Hauled, Connection w/another community (purchased), High Enough Storage Capacity, etc.

Long-Term Source:

Tying into a Community, New Well Field, Storage Capacity Increase, etc.

Future Water Supply Increases:

Expand Well Field, New Well Field, Re-locate an intake, New Well, Add a Reservoir, Secure Undeveloped Land, Increase Capacity, etc.



APPENDIX E: SOURCE WATER MONITORING EXAMPLES

Things to Monitor:

Nitrates, VOCs, Radiological, Bacteria, Pesticides/Herbicides, Turbidity, Dissolved Oxygen, Harmful Algal Blooms (HABs), PFAS, Other chemicals or Pathogens

Monitoring Equipment/Types:

Routine Sampling (GW – Ambient, Ohio EPA Requirements; SW- Secchi Disks, phyto nets, Microscope, etc.) Ground Water Monitoring Wells, Data Sonde, Acoustic Doppler Velocimeter, Water Level Sensors, Flurometers

Water Quality Monitoring Sources:

NPDES permits, 319 projects, USGS, Total Maximum Daily Load Reports (TMDL), Soil and Water Conservation Districts, Universities, Regulated Sites

