

# Utilizing Source Water Protection Implementation Survey Data to Target Outreach and Develop Resources for Public Water Systems in the State of Ohio

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# Assessment Report

- Delineation
- Inventory of potential contaminants
- Susceptibility Analysis



## Protection Area Data

Number of Wells = 1  
Pumping Rate = 25000 gallons per day (average)  
Porosity = 15%  
Aquifer Thickness = 20 feet  
Hydrogeologic Setting = Delaware and Columbus Limestone  
Land Use = Agricultural/Commercial Residential

## Legend

- PWS Wells
- Source Water Protection Areas
- Inner Management Zone

## Potential Contaminant Source (Points)

- Above Ground Storage Tank
- ✳ Chemical Storage
- 🏠 Crops: Other
- 🏠 Drinking Water Treatment Plant
- 🧴 Fertilizer Application
- 🚌 Garage: School Bus
- ⛽ Gas Station: Active
- Storm Drain
- 🔧 Utility Shed/Maintenance Building
- 🚰 Wastewater/Biosolids Application



# Protection Plan

- Action Plan: Source Water Protection Strategies
- Updated periodically
- Required to create with new well installation



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# Substantial Implementation

- Surveys are Voluntary
- Tracked in the Safe Drinking Water Information System (SDWIS)
- Three-year cycle (2022-2024)
- Only sent to community systems
- Endorsed protection plans:  
unique survey



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
<b>General Strategies</b>		
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?		

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

# 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

# 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

# Combined 2022-2023 Survey Results

- 501 Surveys Sent
- 436 Responses Received
- 355 Systems to be Surveyed in 2024

Protection Plan Status	Percent Implementing
No Endorsed Protection Plan	56%
Endorsed Protection Plan	65%
<b>State Total</b>	<b>61%</b>

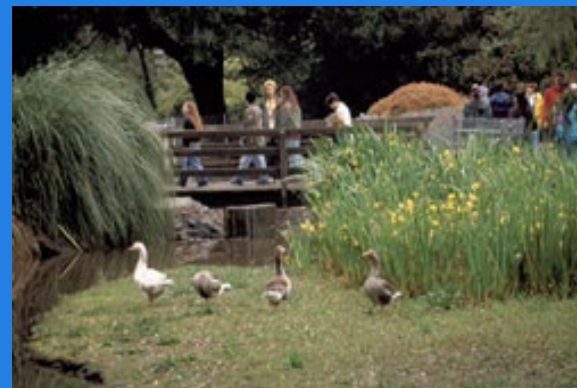


# Break Down by System Type

System Type	Surveys Sent	Response Rate	Percent Determined Implementing
Ground Water	382	87%	<b>57%</b>
Surface Water	96	94%	<b>70%</b>

# Takeaways

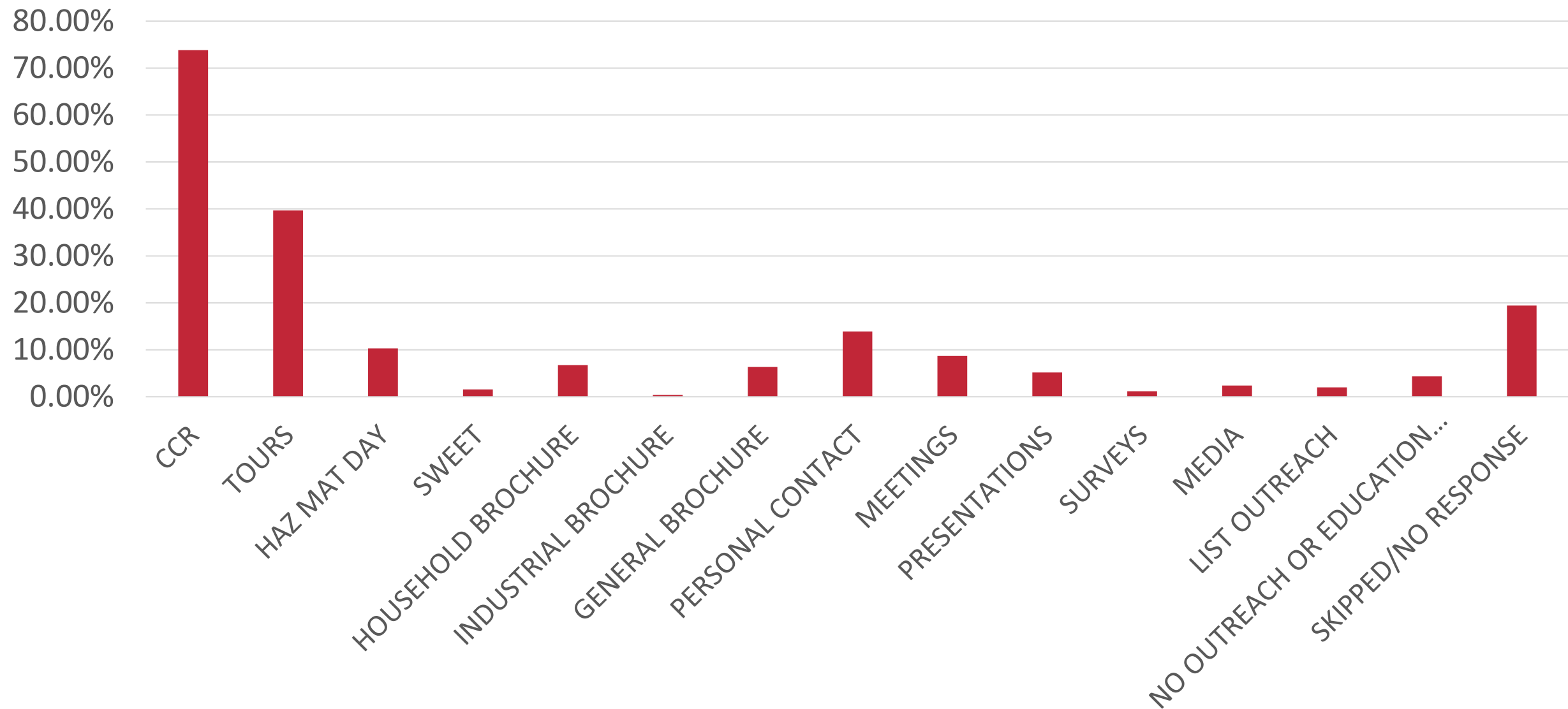
- Plans need to be revisited
- Plans must be attainable



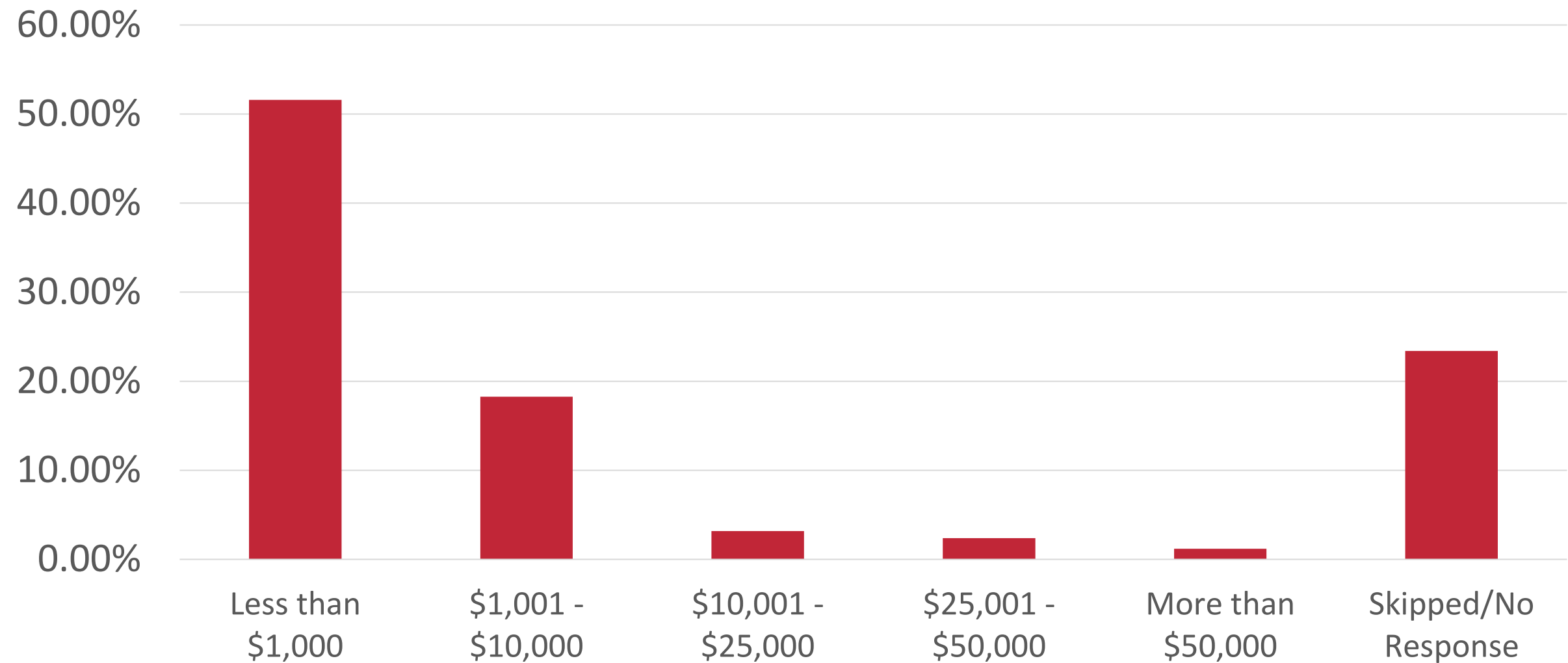
# Are your first responders aware of your public water system's source water protection area?



# Within the last three years our municipality has done which of the following? (Systems w/out Protection Plans)



# Approximately how much does it cost your municipality annually to implement source water protection? (Systems w/out Protection Plans)





# Grants

## Protective Strategy Grant

- Support the implementation of specific and measurable protective strategies to help protect source water
- Targets: Smaller Systems

## Well Abandonment Grant

- Provides resources for the planning and proper plugging of abandoned drinking water wells
- Targets: All Systems



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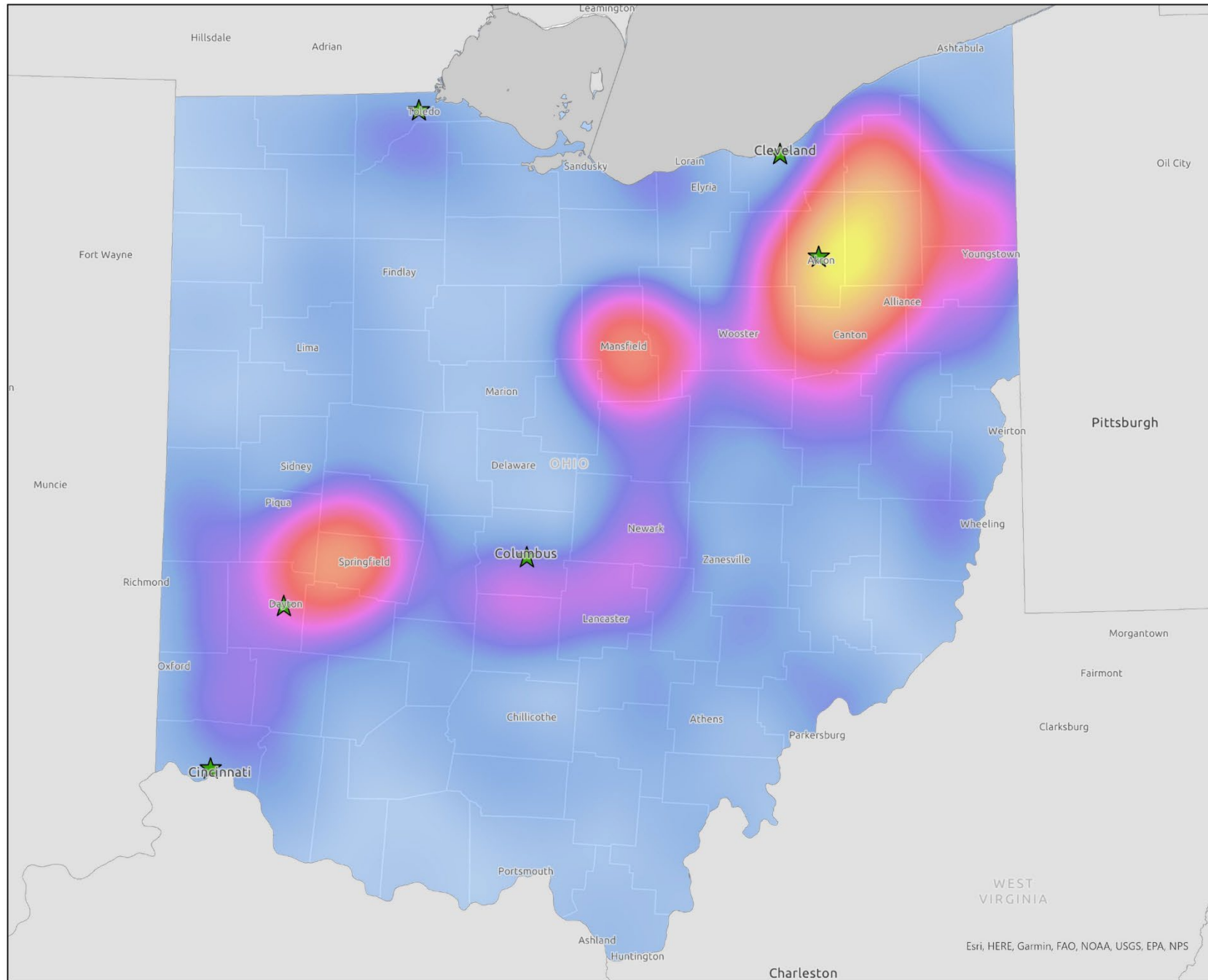
# Success of Communication (2022 Round)

- Initial response of 24%
- Follow-Up's
  - Email
  - Call
  - Final Email
- Connected with each system
- One Month Period
- Final Response Rate of 87%

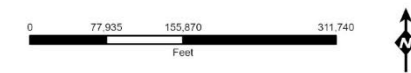
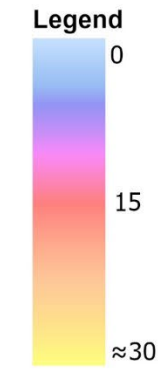


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**Concentration of Community,  
Public Water Systems  
considered "Not Implementing"  
Based on 2022-2023 Survey  
Data Results**



**Map of Source Water  
Protection Target  
Outreach in Ohio**



# Next Steps: Action

- 2024 surveys
- Prioritizing Outreach Areas
- Increased Statewide Outreach
  - GoTo Webinars
- Updating Assessment Reports



# Thank You

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## 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.).

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

### Section 3. PROTECTIVE STRATEGIES FOR SPECIFIC CONTAMINANT SOURCE TYPES

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

- ☐ **RISK POINT BUY-DOWN PROGRAMS:** Local businesses participated in a risk point buy-down program from the municipality. The City of Dayton's program is a premier example.
- ☐ **BUILDING PERMITS:** Provided information on the environmental requirements and source water protection to applicants for building permits within the protection area.
- ☐ **SPILL PREVENTION:** Worked with an industrial or commercial facility within/near the protection area to reduce the threat of chemical spills.
- ☐ **STORM WATER PLAN:** Worked with other facilities in the protection area on a storm water management plan.
- ☐ **REMOVAL ACTION:** Taken action to remove a potential contaminant source from the protection area, or provided public support for a removal action conducted by others.
- ☐ **SEPTIC SYSTEMS:** Worked with the local health department to address failing septic systems within the protection area or proper management of septic systems.

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

Section 4. CONTINGENCY PLAN

13. Our water system contingency plan has been updated within the last three years.

- ☐ Yes
- ☐ No
- ☐ Don't Know

14. Our contingency plan includes procedures for addressing a spill upstream from the drinking water intake (for example, determining whether the intakes should be closed off and for how long, a methodology for calculating the time-of-travel from the spill to the intake, how to provide an alternative source of water, if necessary).

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Set up on some of the water bodies but not all

15. If you answered "YES" to the question above, have you ever implemented these procedures?

- ☐ Yes
- ☐ No
- ☐ Don't know

16. We are part of a contaminant spill early-warning network that has been set up on the surface water body(ies) that provides our drinking water.

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Set up on some of the water bodies but not all

17. Our first responders know where the emergency management zone and corridor management zones are located, and know to contact us immediately about any significant spills or releases upriver from our intake.

- ☐ Yes
- ☐ No
- ☐ Don't know

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

### Section 6. COORDINATION WITH OTHER ENTITIES

19. Are you working with other organizations to protect your source water protection area?  
(check only those that apply):

- ☐ Local Watershed Group
- ☐ County/Local Health District
- ☐ County/Local EMA
- ☐ Agricultural Outreach Agency (such as Ohio Farm Bureau, Natural Resources Conservation Service, OSU Extension, Soil and Water Conservation District, etc.)
- ☐ Local/Regional Planning Office
- ☐ Hydrogeologic Consulting Firm to develop a protection plan
- ☐ University or local college
- ☐ Not-for-Profit Agency (for example, Rural Community Assistance Program [RCAP]) to develop a protection plan

20. If you checked any of the above, please specify the name of the organization(s) you worked with.