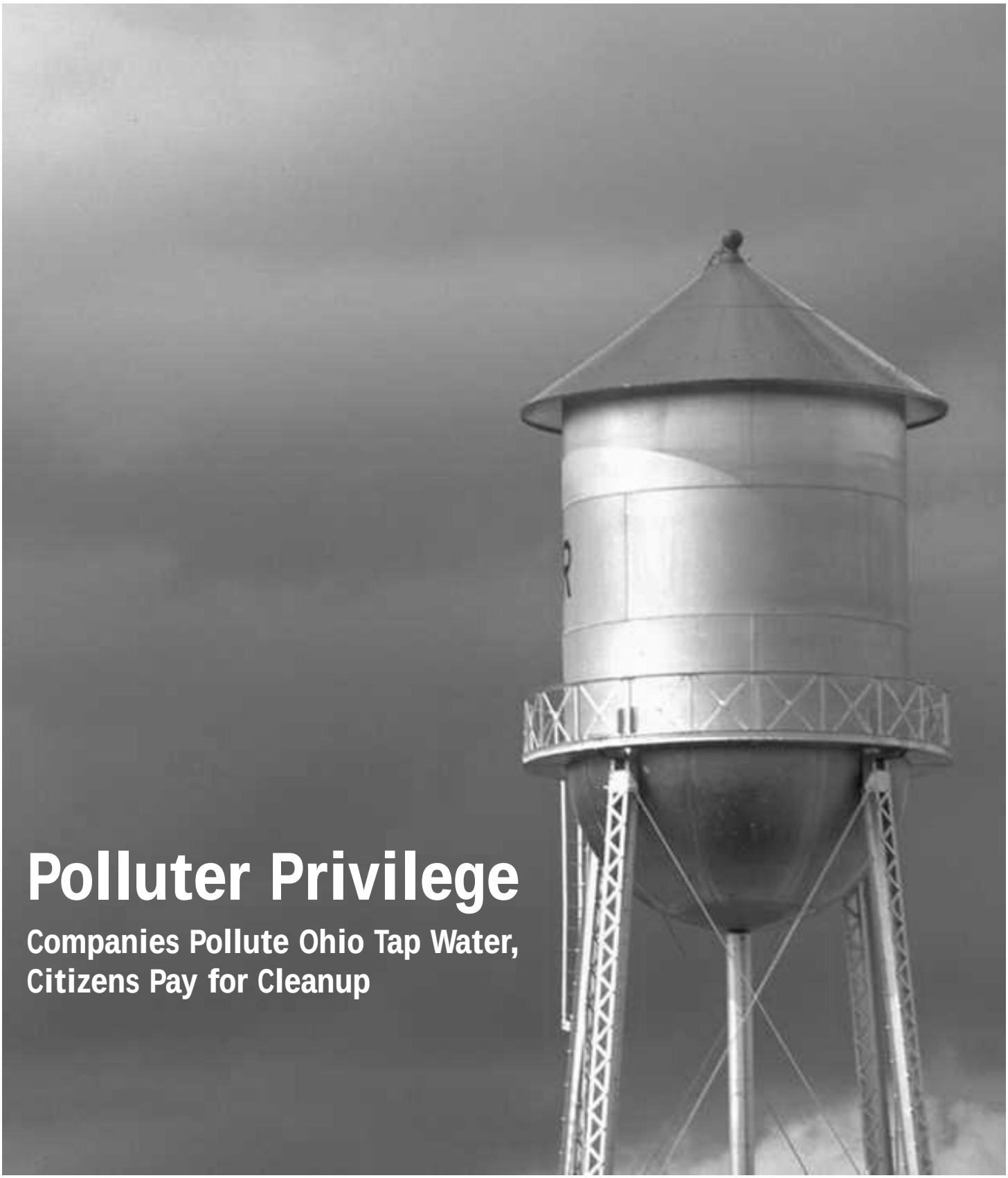

Polluter Privilege

Companies Pollute Ohio Tap Water, Citizens Pay for Cleanup

Ohio Citizen Action

Environmental Working Group

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Acknowledgments

We would like to thank Sandy Buchanan, Jane Forrest, and Noreen Warnock of Ohio Citizen Action for their insight and assistance in improving the report. This release of this report would not have been possible without the efforts of Mike Casey and Melissa Haynes of EWG. Additional thanks go to the conscientious staff at Ohio Environmental Protection Agency, for their help in clarifying the data in this report and providing perspective on state enforcement. Special thanks to Molly Evans, who designed and produced the report. We are grateful to Ken Cook for his editing and insight.

Polluter Privilege was made possible by a grant from The George Gund Foundation and support from The Joyce Foundation. The opinions expressed in this report are those of the authors and do not necessarily reflect the views of the funders listed. Environmental Working Group is responsible for any errors of fact or interpretation in this report.

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Ohio Citizen Action campaigns on issues from public health and the environment to utility and insurance rates. A non-profit, non-partisan group with 150,000 members, it was founded in 1975. Ohio Citizen Action's address is 614 W. Superior Ave., #1200, Cleveland, OH 44113. 216-861-5200 (phone) 218-694-6904 (fax).

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Contents

Executive Summary

Across Ohio, small and large businesses have polluted public drinking water supplies with impunity. An Environmental Working Group analysis of Ohio EPA data and an internal, unpublished report from the Ohio Environmental Protection Agency (Ohio EPA) shows that industries have contaminated at least 54 public water supplies, but have been held responsible for contributing toward cleanup in only three cases.

Industries have contaminated at least 54 public water supplies, and have been held responsible for contributing toward cleanup in only three cases.

The 54 water systems are priority cases under the state's hazardous waste remediation program. More than 280 Ohio communities have detected industrial contaminants in their tap water since 1994, according to monitoring data from the state (Appendix A). For most of these drinking water systems, there is no information available to the public on what, if anything, OEPA has done to identify polluters, or clean up the water.

The cost of cleaning up tapwater polluted with industrial chemicals can be substantial. The City of Dayton has spent millions of dollars to treat its tap water supply, stripping industrial contaminants from as many as five industries in 13 treatment units called air stripping towers. Middletown in Butler County has spent over $1 million to clean up tap water contaminated by a facility that manufactures printing equipment. The City of Wooster in Wayne County has spent $1.3 million to test and treat its water supply, with the polluters contributing nothing.

Compared with their negligence in cleaning up community water supplies, many Ohio companies are much more willing to clean up tap water when their employees and management have to drink it. Businesses have taken action on their private water supplies in 85 percent of the cases for which we have information. In contrast, companies are monitoring or working to clean up their contamination of public water supplies, just six percent of the time.

This situation has been forced upon community water suppliers by Ohio EPA's failure to enforce the law.

Failure to Enforce the Law

Communities are subsidizing cleanups for such multi-billion-dollar corporations as Georgia-Pacific, Buick-GMC, Pennzoil,

Some childhood diseases are linked to specific contaminants found in Ohio public water supplies. For instance, trichloroethylene, or TCE, an industrial solvent believed to cause leukemia, has been found in at least 21 of the 46 contaminated community water supplies.

British Petroleum, Grimes Aerospace, Siemens Energy and Automation, Kimberly Clarke, General Electric, Unical Corporation, and Ashland Chemical.

This situation has been forced upon community water suppliers by Ohio EPA's failure to enforce the law. Although Ohio's water pollution and hazardous waste laws give Ohio EPA clear and ample authority to prosecute anyone who contaminates drinking water, agency leadership has consistently failed to exercise it. Instead, agency leaders appointed by former Governor Voinovich and current Governor Taft have adopted a formal policy of inviting polluters to negotiate cleanup terms with the agency. If polluters decline, which is increasingly the case, the agency almost never pursues litigation or tougher measures to get responsible businesses to clean up public drinking water supplies.

This policy has effectively shifted the power to control cleanups from the agency to the polluters, while at the same time crippling the ability of Ohio EPA staff to help communities struggling to provide safe water for their residents.

In a document prepared for former Ohio legislator Joy Padgett on contaminated public water supplies, the agency complains no less than five times that it lacks the authority to either investigate or enforce cleanups of public water supplies (OEPA, 1998). The fact is, the law gives them ample authority. Ohio EPA leadership has just chosen not to use it.

Utilities Strive to Deliver Clean Tap Water

In every case that EWG investigated, water suppliers are taking the necessary steps to ensure their tap water meets legal standards for the protection of human health. Sometimes this involves monitoring the pollutants to ensure that their concentrations in water supply wells are not increasing. In other cases, water suppliers operate groundwater pump-and-treat systems, at a cost they are forced to pass on to their customers. Through their efforts, residents are ensured that the water they drink meets state and federal contaminant standards.

Unfortunately, it is nearly impossible to remove all of the contamination from a polluted water supply. EWG found 26 communities that continue to drink water with low levels of industrial pollutants, despite the desire and best efforts of water suppliers to provide perfectly clean water (Table 1).

It is not illegal to serve water containing industrial contaminants. A certain amount of contamination is allowed under the law, and these 26 communities all meet the legal limits.

Legal, however, does not necessarily mean safe. Legal levels

Table 1. Despite the best efforts of water suppliers, citizens continue to drink low levels of industrial contaminants in tap water. In most cases, polluters do nothing to help clean it up.

Location	Contaminants found in tap water	Potential or known polluter
Northwest Ohio		
Fayette, Fulton Co., pop. 1,150	vinyl chloride	Fayette Tubular Products
Bradner, Wood Co., pop. 1,093	PCE	unknown; inadequate Ohio EPA investigation
Northeast Ohio		
North Canton, Stark Co., pop. 17.000	cis-1,2-DCE and DCA	unknown
Southwest Ohio		
Ripley, Brown Co., pop. 2,200	TCE and 1,2-dichloropropane	former U.S. Shoe factory, former waste ponds
Urbana (Urbana Mad River wellfield), Champaign Co., pop. 11.353	PCE, TCE	Grimes Aerospace Russell Street facility and Siemens Energy and Automation
Enon, Clark Co., pop. 2,603	PCE, TCE, cis- and trans-1,2-DCE	Muncy Corporation
Milford, Clermont Co., pop. 5,830	PCE, TCE, cis-1,2-DCE, 1,1,1-TCA, 1,1-DCE, 1,1-DCA	unknown
Spring Valley, Greene County, pop. 569	1,1,1-TCA	unknown
Bellefontaine, Logan Co., pop. 12.142	TCE, 1,1,1-TCA, cis-1,2-DCE. 1.1-DCA	abandoned drum dump
Troy, Miami Co., pop. 20,500	PCE	former auto dealership (Wampler Buick-GMC Inc.)* and Kimberly Clarke paper mill*
Dayton (Miami and Ottowa wellfields), Montgomery Co., pop. 420,000	TCE and other industrial solvents	DAP*, Gayston Corporation*, Gem City Chemicals*, Valleycrest Landfill (North San Landfill Inc)*, Van Dyne-Crotty Inc.*, and U.S. Air Force Wright-Patterson AFB
Miamisburg, Montgomery Co., pop. 17.900	PCE, cis-1,2-DCE	unknown
Huber Heights, Montgomery Co., pop. 39.400	cis-1,2-DCE	not addressed in Ohio EPA report
Southeast Ohio		
Bridgeport, Belmont Co., pop. 3.570	PCE, TCE, cis-1,2-DCE	dry cleaner, not named in Ohio EPA report
Belmont County (Sanitary Sewer District #3), pop. 25,890	cis-1,2-DCE	Unical Corporation, Ashland Chemical, and 3 individuals (current owners)
West Lafayette, Coshocton Co., pop. 3.200	vinyl chloride	Penn-Michigan Manufacturing
Laurelville, Hocking Co., pop. 858	nitrates	Ohio EPA has identified at least one potential source, not named in Ohio EPA report
Yorkville, Jefferson Co., pop. 1,248	PCE, TCE	unknown
Coal Grove, Lawrence Co., pop. 4.719	TCE, cis-1,2-DCE	Tri-State Tank (formerly Ford Brothers)
Middleport, Meigs Co., pop. 2,570	TCE, cis-1,2-DCE	unknown, not investigated
McConnelsville, Morgan Co., pop. 1,804	PCE, TCE, cis-1,2-DCE	Pennzoil and British Petroleum, property now owned by Century Bank
Waverly, Pike Co., pop. 5,000	cis-1,2-DCE	historic dumping on city property
New Philadelphia, Tuscarawas Co., pop. 16.000	TCE	Joy Technologies
Newport, Washington Co., pop. 894	TCE, cis-1,2-DCE, vinyl chloride	Union Carbide and Shell
Marietta, Washington Co., pop. 20.300	1,1,1-TCA	unknown
Beverly, Washington Co., pop. 1.550	PCE	Laugherty Cleaners, Makris Cleaners*

It is not illegal to serve water containing industrial contaminants. Legal, however, does not necessarily mean safe.

Note: Potential polluters as described in OEPA 1998 and 1997, are designated with an asterisk (*).
Source: OEPA 1998, personal communications with Ohio EPA and town water superintendents, and Ohio public water supply compliance testing database supplied to EWG by Ohio EPA.

The Ohio Legislature should create a state superfund-style trust fund to pay for cleanup of drinking water supplies.

fail to account for the potential additive health effects of multiple chemicals and the vulnerability of children. Moreover, legal levels are in many cases a compromise between public health and treatment costs. For communities with "legal" levels of pollution in their tap water, health effects are still a concern.

Children are among the most vulnerable to the health consequences of this failed system. Of the 54 contaminated public water supplies, 46 are town water supplies (Tables 2 and 3), with schools and daycare facilities being served the same quality of water as the rest of the town. Five schools and two daycare centers using private wells have also had their tap water polluted with industrial contaminants (Table 5). Some childhood diseases are linked to specific contaminants found in Ohio public water supplies. For instance, trichloroethylene, or TCE, an industrial solvent believed to cause leukemia, has been found in at least 21 of the 46 contaminated community water supplies (Tables 2 and 3).

The contaminants found in Ohio's public water supplies are almost always industrial solvents known or suspected to cause cancer, birth defects, nervous system disorders and a host of other health problems. TCE was found in 21 public water supplies, followed by tetrachloroethylene (PCE) in 19, and two forms of dichloroethylene (cis-1,2-DCE and trans-1,2-DCE) in 17. Vinyl chloride, the most potent carcinogen of all the chemicals in these water supplies, was found in the tap water supply in at least six towns.

New federal right-to-know rules would give citizens in these communities critical information for protecting the health of their families in the form of an annual tap water quality report mailed to their homes each year. U.S. EPA has offered state governors the chance to waive the mailing requirement for towns of under 10,000 people. So far Governor Taft has not signed the waiver. It is critical that he remain firm on this issue, since over half of the Ohio towns with polluted tap water supplies have fewer than 10,000 people. These reports will be vital in a state where polluting industries go largely unpunished and polluted drinking water sources remain contaminated.

Recommendations

The first priority must be for the polluters to provide uncontaminated drinking water to the affected communities. It is not enough for people to be provided with tap water contaminated with supposedly "safe" levels of industrial contaminants. In all cases where the polluter has been identified, they must pay to provide clean tap water to all towns whose water supplies they have contaminated. Payment should begin immedi-

OHIO EPA HAS BROAD AUTHORITY TO FORCE CLEANUPS OF POLLUTED TAP WATER SUPPLIES

Ohio's water pollution control law states: "No person shall cause pollution or place or cause to be placed any sewage, industrial waste, or other wastes in a location where they shall cause pollution of any waters of the state," and then goes on to give the Director of Ohio EPA broad authority to investigate contaminated waters and to prosecute polluters (Chapter 6111 of Ohio's Revised Code). The state's hazardous waste law gives Ohio EPA the authority to investigate any location where hazardous waste is "Threatening to cause or contribute to … water pollution," further directing the Attorney General, upon written request of Ohio EPA's Director, to institute a civil action to recover cleanup costs from the polluting industry (Chapter 3734 of Ohio's Revised Code).

The politically-appointed leadership at Ohio EPA have chosen to ignore this authority. Their stance has resulted in their staff being unable to pursue cleanups of contaminated public water supplies. It is not surprising that given this lack of support, Ohio EPA district offices are often even unable to require that businesses simply investigate a contamination problem. The agency has gone as far as suggesting to the small town of Malta, population 804, that the town itself enter into negotiations with the polluter, Tomkins Industries, in lieu of the agency using its own statutory authority.

ately and be retroactive to cover all costs incurred in dealing with the problem.

In many cases, however, the responsible party cannot be identified, or when identified, cannot afford the cleanup costs. To protect the public in these situations, the Ohio Legislature should create a state superfund-style trust fund supported by a surtax on big business, similar to the federal model, which can be used to pay for cleanup of drinking water supplies and for providing communities with clean water in the interim.

The public has a right to know the names of the polluters in cases of contaminated tap water supplies. Where the polluter is known, water suppliers should identify the polluter by name in their annual water quality reports required under the Safe Drinking Water Act, the first of which is due to customers of public water suppliers by October 1999.

Chapter 1

Industrial Pollutants in Public Water Supplies

In 46 towns across Ohio the town tap water supply is contaminated with industrial chemicals found in the groundwater (OEPA 1998). In 25 of these cases, Ohio EPA or the city itself has found the business potentially or certainly responsible for the contamination (Tables 2 and 3).

In only three cases has the responsible industry contributed financially toward monitoring or cleanup of the town's water supply (Table 2). In 43 other towns, the residents or in rare cases Ohio EPA has borne the costs of investigations, monitoring, and cleanup (Table 3).

And this is not even the full scope of the problem. At least 50 different industrial pollutants have been found in Ohio's public drinking water over the past five years, in 283 communities (Appendices A and B). EWG's analysis focuses on the fewer than 20 percent of these communities Ohio EPA is addressing under its hazardous waste remediation program.

The cost of industrial contamination to these towns varies greatly. The City of Wooster in Wayne County has spent $1.3 million to test and treat a water supply thought to be contaminated by a company called Regal Ware and a number of other industries in the area. The city raised water rates for their 25,000 customers to pay for a groundwater interception system and new air stripping towers to deal with an industrial solvent called cis-1,2-dichloroethylene in their water supply. Regal Ware and other possible polluters paid nothing.

A rare case of a more responsible polluter is in the town of Fayette in Fulton County, where the water supplier found low levels of vinyl chloride in the town well in 1990. There, the industry responsible for the contamination, Fayette Tubular Products, has paid for testing and reporting to ensure that the town's water supply satisfies the state drinking water law.

Small towns dominate the list of water supplies contaminated by industry. Reading (population 12,800) spent $640,000 to connect to Cincinnati water after their water supply was contaminated by the GE Evendale plant and the Pristine Inc. Superfund

The 25,000 tap water customers in Wooster paid $1.3 million to deal with 1,2-dichloroethylene in their tap water. Regal Ware and other possible polluters paid nothing.

Table 2. Ohio industry is helping to clean up just 3 of 46 community water supplies it has contaminated.

Location	Contaminants found	Polluters	Details
Fayette, Fulton Co., pop. 1,150	vinyl chloride	Fayette Tubular Products	Ohio EPA is unable to negotiate a binding consent order due to lack of statutory authority (OEPA, 1998). Fayette Tubular has paid for all monitoring and reporting costs associated with the contaminated water supply.
New Philadelphia, Tuscarawas Co., pop. 16,000	TCE	Joy Technologies	Joy Industries signed Consent Order in 1990. The industry pays all costs associated with water treatment for the town. The town pays for enhanced monitoring program.
Newport, Washington Co., pop. 894	TCE, cis-1,2-DCE, vinyl chloride	Union Carbide and Shell	Union Carbide and Shell signed a Consent Order prior to 1996 to investigate and remediate contamination. The companies pay to monitor the town water supply.

Source: OEPA 1998, OEPA 1997, and personal communications with town water superintendents.

site. The water superintendent in Middletown, Butler County (population 55,000), estimates his small community has spent over $1 million to provide safe drinking water after their groundwater source was contaminated by a printing facility called AEP FLEXO. "People want to know why their water rates are going up," he says, as he describes a community-financed cleanup that is in essence a subsidy for a Kentucky-based company no longer operating in Middletown.

But big cities are not immune to these problems. The City of Dayton continually operates at least 13 air stripping towers to reduce levels of TCE, vinyl chloride, and other industrial solvents from their water before it is served to 420,000 of Dayton's residents. The city and Ohio EPA have identified a number of industries as potentially responsible for contaminating groundwater in Montgomery County, including DAP, Gayston Corporation, Gem City Chemicals, Valleycrest Landfill (North San Landfill Inc.), and Van Dyne-Crotty Inc. According to Ohio EPA (OEPA 1998) "many" of these industries are cleaning up their own properties under binding consent orders with the agency, but none of the industries is contributing toward Dayton's efforts to provide safe drinking water for the city. The city has not tallied all it has spent in these ongoing efforts, but one group of seven air stripping towers cost the city $4 million in capital costs alone.

About the pollutants

In almost all cases, the contaminants in these town water supplies include common industrial solvents and their degradation products (Table 4). These

Table 3. In almost all cases where Ohio businesses have contaminated public drinking water they have done nothing to clean it up.

Location	Contaminants found	Potential or known polluter	Polluter paying for action taken	Action taken
Northwest Ohio				
Mansfield (Lincoln wellfield), Richland Co., pop. 51,000	tetrachloroethylene (PCE)	defunct dry cleaning business	no	Responsible industry is no longer in business.
Bradner, Wood Co., pop. 1,093	trichloroethylene (TCE) and PCE	unknown; inadequate Ohio EPA investigation	no	Village operates a groundwater pump-and-treat system; community still drinks water from contaminated well during periods of peak demand.
Northeast Ohio				
Millersburg, Holmes Co., pop. 3,051	TCE and dichloroethylene (DCE)	unknown	no	Community took 2 wells out of service; is planning for new well installation.
Masillon, Stark Co., pop. 67,000	vinyl chloride, cis-1,2-DCE and 1,1,-dichloroethane (DCA)	unknown	no	Community rotates well use to minimize contaminant levels in wells.
North Canton, Stark Co., pop. 17,000	cis-1,2-DCE and DCA	unknown	no	Community installed air stripper to remove solvents from drinking water and pumps two wells for interception.
Wooster (south wellfield), Wayne Co., pop. 24,730	cis-1,2-DCE	Regal Ware*, community landfill*, Sandy Supply*, Wooster Iron and Metal*, Morris Petroleum*, Kick service station*	no	Regal Ware signed Findings and Orders with Ohio EPA to conduct full investigation, but City of Wooster has not been reimbursed for $1,300,000 spent to provide safe water.
Southwest Ohio				
Brown County Rural Water Association (BCRWA), pop. 20,174	carbon tetrachloride, chloroform, toluene	unknown	no	Water supplier plans to operate extraction system, and currently draws water from cleaner wells only.
Ripley, Brown Co., pop. 2,200	TCE and 1,2-dichloropropane	former U.S. Shoe factory, former waste ponds	no	Responsible industries are no longer in business. Ohio EPA has installed an extraction system.
Seven Mile, Butler Co., pop. 841	TCE	gravel pit used for open dumping	no	Village purchases water from another public water system.
Middletown, Butler Co., pop. 54,660	PCE, TCE, 1,1,1-trichloroethane (1,1,1-TCA), cis-1,2-DCE	AEP FLEXO printing facility	no	AEP FLEXO signed a consent order in 1993 and has begun remediation of their property, but has taken no action to clean up the community wellfield. Town has spent over $1 million for cleanup.
Urbana (Urbana Mad River wellfield), Champaign Co., pop. 11,353	PCE, TCE	Grimes Aerospace Russell Street facility and Siemens Energy and Automation	no	Both polluters are performing cleanups on their own properties. Urbana is paying for monitoring costs to track movement of the contaminants.
Enon, Clark Co., pop. 2,603	PCE, TCE, cis- and trans-1,2-DCE, vinyl chloride	Muncy Corporation	no	Muncy Corp signed administrative consent order in 1994 and is remediating their property but not the contaminated wellfield. Enon pays to monitor pollution in their wellfield.
New Carlisle, Clark Co., pop. 6,049	1,1,1-TCA	unknown	no	Ohio's safe drinking water law does not require action -- drinking water standards have not been violated.
Milford, Clermont Co., pop. 5,830	PCE, TCE, cis-1,2-DCE, 1,1,1-TCA, 1,1-DCE, 1,1-DCA	unknown	no	City has constructed water treatment facilities to remove contaminants.
Union City, Darke Co., pop. 1,984	PCE	unknown, not investigated	no	Ohio's safe drinking water law does not require action -- drinking water standards have not been violated.
Fairborn, Greene Co., pop. 32,000	PCE, 1,1,1-TCA	unknown, not investigated	no	Ohio's safe drinking water law does not require action -- drinking water standards have not been violated.
Spring Valley, Greene County, pop. 569	1,1,1-TCA, 1,1-DCE	unknown	no	Levels are currently below legal limits, but village indicates that it plans to shut down the well field and connect to the county water system.
Yellow Springs, Greene Co, pop. 3,973	1,1-DCA	Morris Bean, Inc. and Vernay Laboratories*	unknown	Morris Bean, Inc. signed Consent Decree in 1994 and is installing groundwater extraction wells for remediation.
Reading, Hamilton Co., pop. 12800	1,1-DCE, TCE, 1,1,1-TCA	General Electric Evendale plant and Pristine, Inc superfund site	no	General Electric remediation is proceeding under RCRA program. Pristine, Inc. remediation is proceeding under Superfund program. Community spent $640,000 to connect to Cincinnati water.
Hillsboro, Highland Co., pop. 6,400	PCE	unknown, not investigated	no	Community discontinued use of well and now draws water from surface water reservoir.
Bellefontaine, Logan Co., pop. 12,142	TCE, 1,1,1-TCA, cis-1,2-DCE, 1,1-DCA, 1,1-DCE	abandoned drum dump	no	Community built treatment plant which lowers levels of contaminants.
Troy, Miami Co., pop. 20,500	PCE, cis-1,2-DCE	former auto dealership (Wampler Buick-GMC Inc.)* and Kimberly Clarke paper mill*	no	Community pays for extensive monitoring program to track pollutants. In one year alone the town spent $34,000 for laboratory analysis only.

Note: Potential polluters as described in OEPA 1998 and 1997, are designated with an asterisk (*). *(continued on page 6)*

Table 3 continued.

Location	Contaminants found	Potential or known polluter	Polluter paying for action taken	Action taken
Dayton (Miami and Ottowa wellfields), Montgomery Co., pop. 420,000	TCE, vinyl chloride, and other industrial solvents	DAP*, Gayston Corporation*, Gem City Chemicals*, Valleycrest Landfill (North San Landfill Inc)*, Van Dyne-Crotty Inc.*, and U.S. Air Force Wright-Patterson AFB	no	"Many" responsible parties have signed orders with Ohio EPA to investigate and remediate contamination on their properties, but Dayton has spent million of dollars to date for water treatment.
Miamisburg, Montgomery Co., pop. 17,900	PCE, TCE, 1,1,1-TCA, cis-1,2-DCE, 1,1-DCA	unknown	no	Ohio's safe drinking water law does not require action -- drinking water standards have not been violated.
Huber Heights, Montgomery Co., pop. 39,400	industrial solvents	not addressed in Ohio EPA report	unknown	Community uses air strippers to remove solvents.
Franklin, Warren Co., pop. 10,500	TCE	Atlas Felt Mill (formerly Georgia-Pacific Corporation)	no costs have been incurred	Town discontinued use of contaminated well.
Southeast Ohio				
Athens (W. State Street wellfield), Athens Co., pop. 22,335	industrial solvents, including PCE and toluene	Athens City Garage	no	Athens has borne the cost for increased sampling frequency.
Bridgeport, Belmont Co., pop. 3,570	PCE, TCE, DCE	dry cleaner, not named in Ohio EPA report	no	Small family-owned dry cleaning business is responsible party and has not contributed to cleanup. Village rotates well use to minimize contaminant levels in wells.
Bellaire, Belmont Co., pop. 6,025	PCE	unknown as of date of Ohio EPA report, current investigation is anticipated to find the source	no	Ohio's safe drinking water law does not require action -- drinking water standards have not been violated.
Belmont County (Sanitary Sewer District #3), pop. 25,890	cis-1,2-DCE	Unical Corporation, Ashland Chemical, and 3 individuals (current owners)	no	Community pays for enhanced monitoring program.
West Lafayette, Coshocton Co., pop. 3,200	vinyl chloride, TCE	Penn-Michigan Manufacturing	no	Town paid $1.6 million for air strippers to treat water. Responsible industry is no longer in business.
Gallia County Rural Water Association, pop. 21,060	1,1,1-TCA	unknown, not investigated	no	Ohio's safe drinking water law does not require action -- drinking water standards have not been violated.
Gallipolis, Gallia Co., pop. 9,000	PCE, DCE	unknown, not investigated	no	Ohio's safe drinking water law does not require action -- drinking water standards have not been violated.
Laurelville, Hocking Co., pop. 858	nitrates	Ohio EPA has identified at least one potential source, not named in Ohio EPA report	no	Town is operating an extraction well to pull contamination away from the water supply well.
Yorkville, Jefferson Co., pop. 1,248	PCE	unknown	no	Ohio's safe drinking water law does not require action -- drinking water standards have not been violated.
Coal Grove, Lawrence Co., pop. 4,719	TCE, cis-1,2-DCE	Tri-State Tank (formerly Ford Brothers)	no	Jenny and Robert Ford, the responsible parties, have not responded to formal actions by Ohio EPA. Coal Grove has spent on the order of $50,000 to protect their water supply.
Middleport, Meigs Co., pop. 2,570	TCE	unknown, not investigated	no	Community has abandoned two of their four water supply wells.
Malta, Morgan Co., pop. 804	VOCs	Tomkins Industries (Philips-Malta)	unknown	Tomkins Industries signed a Consent Order in 1991, but has not contributed financially toward providing safe water for the village. Malta operates extraction system and has relocated wellfield.
McConnelsville, Morgan Co., pop. 1,804	PCE, TCE	Pennzoil and British Petroleum, property now owned by Century Bank	no	Town has spent $70,000 excluding labor to run a continuous interceptor system. Ohio EPA has invited polluters to negotiate cleanup terms.
Zanesville, Muskingum Co., pop. 35,600	TCE, DCE	United Tech. Auto (former Essex Plant, sole responsible party for UTA/Zanesville Wellfield Superfund site)	no	Source area is being remediated under federal Superfund program by United Technologies Automotive. Town pays an estimated $50,000 per year to operate groundwater remediation system.
Waverly, Pike Co., pop. 5,000	VOCs	historic dumping on city property	no	Ohio's safe drinking water law does not require action -- drinking water standards have not been violated.
Marietta, Washington Co., pop. 20,300	PCE, 1,1,1-TCA	unknown	no	City operates a groundwater extraction system to contain contamination and an aerator to treat water.
Beverly, Washington Co., pop. 1,550	PCE	Laugherty Cleaners, Makris Cleaners*	no	Ohio EPA has determined Laughery and Makris Cleaners do not have the resources to address the contamination

Note: Potential polluters as described in OEPA 1998 and 1997, are designated with an asterisk (*).
Source: OEPA 1998, OEPA 1997, and personal communications with town water superintendents.

popular chemicals have a broad range of uses from metal degreasing to dry cleaning and plastics manufacturing. They find their way into groundwater supplies typically through a company's negligence in handling wastes, or through leaking pipes and tanks. The result can be a large area of contaminated groundwater that could take decades and even lifetimes to clean up.

The most common solvents and their degradation products found in town water supplies include tetrachloroethylene (PCE), trichloroethylene (TCE), trichloroethane (TCA), dichloroethylene (DCE), dichloroethane (DCA), and vinyl chloride (Table 4). Four of these six compounds are known to cause cancer. Scientists have also linked them to a host of other health effects, including disruption of normal childhood development, and toxicity to the reproductive and nervous systems. Two other compounds found in town water supplies, nitrate and chloroform, have been linked to birth defects.

Because of big money spent on cleanup and treatment, or the good fortune of having water supply wells that are at the leading edge of pollution plumes, contaminants in drinking water in most towns are at legal levels by the time the water reaches the tap. But legal levels are not always safe. Federal drinking water standards fail to account for the potential additive health effects of multiple chemicals, the vulnerability of children, and certainly the consumer's desire for contaminant-free water. Legal levels are also not based solely

Federal drinking water standards fail to account for the potential additive health effects of multiple chemicals and the vulnerability of children.

Table 4. At least eleven different industrial toxic chemicals are found in public drinking water wells in Ohio.

Contaminant	Number of water supplies contaminated	Known or suspected effect on human health, partial list			
		Causes cancer	Affects human development (includes birth defects)	Toxic to reproductive system	Toxic to nervous system
trichloroethylene (TCE)	21	X	X	X	X
tetrachloroethylene (PCE)	19	X	X	X	X
dichloroethylene (DCE)	17				X
1,1,1-trichloroethane (TCA)	10		X		X
vinyl chloride	6	X	X	X	X
1,1-dichloroethane (DCA)	5	X			X
toluene	2		X	X	X
carbon tetrachloride	1	X	X		X
chloroform	1	X	X	X	X
nitrate	1	X	X		
1,2-dichloropropane	1	X			X

Source for contaminants in public water supplies: OEPA 1998 and personal communications with town water superintendents. Source for health effects information: EDF 1999.

Table 5. Schools and daycare centers are not immune from industrial contaminants in their drinking water.

School	County	Contaminants	Action taken*
Central Ohio			
Toboso Elementary School in Toboso	Licking	trichloroethylene (TCE)	new well drilled
Mt Vernon Academy in Mt Vernon	Knox	tetrachloroethylene (PCE)	no action taken
Northeast Ohio			
Miss Pat's Daycare II in Chesterland	Geauga	chlorinated organics and gasoline components	Victory School
ABC Daycare Center	Geauga	carbon tetrachloride	onsite filtration system
Victory School	Trumbull	dichlorobenzene, possibly dichloromethane	no action taken
Southwest Ohio			
Donnelsville Elementary School Well in Donnelsville	Clark	PCE, 1,1,1-TCA	no action taken
Lawrence Elementary in Marietta	Washington	1,2-DCA and isopropyltoluene	no action taken

*Source: OEPA 1998. *Action taken is as of November 1998, according to OEPA 1998.*

on protecting human health: regulators must consider the cost and feasibility of removing the contaminant as well. The final legal limit is, in many cases, a compromise between public health and the cost of treating the pollution.

Industrial pollutants in school water supplies

In the 46 communities with contaminated water supplies, schools and daycare facilities typically receive the same quality of water as the rest of the town. Ohio EPA has also identified at least seven more schools that rely or at one time relied on private well water contaminated with industrial pollutants (Table 5). For almost all of these schools, the responsible industry is either unknown, or the contamination has not been investigated.

According to Ohio EPA (1998), the schools' responses to the contamination has varied. Toboso Elementary in Licking County drilled a new, deeper well, which provides clean water to the school. The ABC Daycare Center in Geauga County filters the water to remove the carbon tetrachloride. Three of the schools find legal levels of contaminants in their water, and so have not been required by Ohio EPA to treat the water or find an alternate source for the children (Mt. Vernon Academy in Knox County, Donnelsville Elementary School in Clark County, and Lawrence Elementary in Washington County). For the two remaining schools in Table 4, Victory School in Trumbull County and Miss Pat's Daycare II in Geauga County, Ohio EPA had

not verified or followed the situation as of November 1998.

Schools are not required to notify parents of contamination in the school water until levels exceed the legal limits. But legal does not necessarily mean safe, especially for small children, whose special vulnerability to contaminants has not normally been considered in the standard-setting process. It is likely that most parents whose children attend these schools and daycares are not aware of the pollution in the water supply.

Industrial pollutants in drinking water at Ohio businesses

Ohio EPA data show that drinking water sources for private wells at over 24 industrial facilities and other companies in Ohio have been contaminated, primarily with organic solvents and petroleum compounds (Table 6). This water either is or was in the past provided to employees as drinking water.

Most of these facilities now provide their employees with an alternate, clean source of drinking wa-

It is likely that most parents whose children attend schools and daycares with contaminated drinking water are not aware of the pollution.

Table 6. Businesses clean up their own water supplies at 14 times the rate they clean up community water supplies.

Contaminated Water Supply	City	County	Contaminants	Does the company treat the water or provide an alternate source?
Northeast Ohio				
Public water supplies at numerous industrial facilities in Bainbridge Township and McFarlands Corners, including wells at industrial facilities.	Bainbridge Twp	Geauga	chlorinated organics and gasoline components	unknown
Public water supplies at numerous industries in Chesterland.	Chesterland	Geauga	chlorinated organics and gasoline components	unknown
BP Oil	Parkman	Geauga	various organic compounds, including benzene, ethylbenzene, naphthalene, toluene, 1,2,4-trimethylbenzene, xylene	unknown
Ullman Oil		Geauga	chlorinated solvents	yes
Crandell Ford		Geauga	benzene	yes
Lake County Convenience Store		Lake	UST-related contamination	yes
Monarch Industrial Tire		Portage	cis-1,2-DCE, 1,1-DCA	yes
Republic Engineered Steel		Stark	TCE, carbon tetrachloride	yes
Lucern Products		Summit	volatile organic compounds (VOCs)	yes
Speedway Gas Station #3692	Akron	Summit	chlorinated solvents	yes
Akron Public Lining		Summit	VOCs	yes
Bramble Equipment Services		Summit	PCE	yes
Wills Trucking		Summit	carbon tetrachloride	yes
Astro Metallurgical (formerly Astro Harsco Corp)		Wayne	chlorinated solvents	yes
Montana Products		Wayne	TCE	yes
Southwest Ohio				
Scarff's Nursery, Inc.	New Carlisle	Clark	vinyl chloride	no
Captor Corporation Wellfield	Tipp City	Miami	TCE, cis-1,2-DCE	yes
Wiley Industrial Park Wellfield	Tipp City	Miami	PCE, TCE, cis-1,2-DCE	yes
US DOE Mound Plant	Miamisburg	Montgomery	PCE, TCE, cis 1,2-DCE, vinyl chloride	yes
Southeast Ohio				
Dayton Power and Light Stuart Station	Aberdeen	Adams	1,1,1-TCA and 1,1-DCA	yes
South Point Wellfield	South Point	Lawrence	nitrates	unknown
Consolidated Aluminum	Hannibal	Monroe	1,1,1-TCE, cis-1,2-DCE, 1,1-DCE	no
Gould, Inc.	McConnelsville	Morgan	PCE, TCE, DCE	yes
Ohio Power Muskingum River Plant	Beverly	Washington	1,1,1-TCA	no

Source: OEPA 1998 and OEPA 1997. Information for treatment of water or provision of alternate source is as of November 1998, according to OEPA 1998.

ter. In some cases, they have drilled new wells, in other cases they have added treatment steps to remove the contaminants from the water. In a few cases clean water is hauled in from other sources.

Compared with their negligence in cleaning up community water supplies, Ohio companies are much more willing to clean up tap water they have polluted when their employees and management have to drink it. Business have taken action on their private water supplies in 85 percent of the cases for which we have information. In contrast, businesses have contributed toward cleanup of only about 6 percent of the community water supplies they have contaminated, leaving the community to bear the cleanup costs.

A few companies, however, have failed to clean up even their own water, and workers may be receiving water that contains contaminants at levels above the drinking water standards, including Annie's Restaurant in Chesterland (Geauga County), and Scarff's Nursery in Clark County (OEPA 1998). In other cases, contaminant levels are legal, so Ohio EPA has not required a clean water supply to be provided (Ohio Power Muskingum River Plant in Washington County and Consolidated Aluminum in Monroe County).

Inconsistent Enforcement

The Environmental Working Group's analysis of Ohio EPA data (OEPA 1998 and OEPA 1997) shows that the system for cleaning up industrial contamination is failing on many levels.

In describing their difficulties in regulating contaminated sites, Ohio EPA argues that state cleanup laws are ambiguous, and that their authority is questionable for regulating contaminants that do not fit the narrow definition of "hazardous waste," or in cases where there are multiple polluters.

A close look at the law shows that the agency has broad authority to force industries to clean up contaminated public water supplies. The problem is that political appointees throughout the Voinovich and Taft administrations have failed to use this power to protect citizens of the state. Instead, through their inaction they have effectively shifted power from the agency to the polluters and crippled the ability of their staff to help what are primarily small towns struggling to provide safe water for their residents.

Ohio EPA leadership has adopted a procedure of courting industrial polluters, issuing formal invitations for polluters to engage in negotiations with the agency. If polluters decline, Ohio EPA has traditionally backed away from litigation, complaining in broad terms about their lack of statutory authority to force polluters to the table.

Notably, in many cases where polluters have been identified, they have entered into binding agreements with the agency to clean up their own property. In nearly every case, however, polluters do not extend their cleanup to the contaminated groundwater outside the property boundaries, and they do not reimburse the water suppliers for treating and monitoring the drinking water supply. In a document prepared for the Ohio legislature on contaminated public water supplies, the agency complains no less than five times lacks the authority to either investigate or enforce cleanups of public water supplies (OEPA, 1998). The fact is, the law gives them ample authority. Ohio EPA leadership has just chosen not to exercise it.

Ohio's water pollution control law states "No person shall cause pollution or place or cause to be

Ohio EPA has broad authority to investigate and enforce cleanups of contaminated public water supplies; they have simply failed to use it.

Not only does Ohio EPA almost never pursue industry cleanup, they often fail to require simple investigations of the problem.

Typically polluters are responsible for cleanup of their own property only, and are not required to contribute toward cleanup of the town's wellfield.

placed any sewage, industrial waste, or other wastes in a location where they shall cause pollution of any waters of the state," and then goes on to give the Director of Ohio EPA broad authority to investigate contaminated waters and to prosecute polluters (Chapter 6111 of Ohio's Revised Code). The state's hazardous waste law gives Ohio EPA the authority to investigate any location where hazardous waste is "Threatening to cause or contribute to … water pollution," further directing the Attorney General, upon written request of Ohio EPA's Director, to institute a civil action to recover cleanup costs from the polluting industry (Chapter 3734 of Ohio's Revised Code).

The politically-appointed leadership at Ohio EPA have chosen to ignore this authority. As a result, their staff has been unable to pursue cleanups of contaminated public water supplies. It is not surprising that given this lack of support, Ohio EPA district offices are often even unable to require that businesses simply investigate a contamination problem. The agency has gone as far as suggesting to the small town of Malta, population 804, that the town itself enter into negotiations with the polluter, Tomkins Industries, in lieu of the agency using its own statutory authority.

In a case in Laurelville (Hocking County), the agency claims to lack the authority to conduct a complete source investigation for nitrate contamination (OEPA 1998), despite the fact that the state's water pollution control law requires the Director to investigate, if a resident of Laurelville files a written complaint.

Numerous small public water supplies in Bainbridge Township and McFarlands Corners, Geauga County, are contaminated with chlorinated organics and petroleum compounds. In these cases, Ohio EPA failed to proceed with an enforcement referral against the polluters, because of a "lack of legal and technical resources" (OEPA 1998).

In Chesterland, also in Geauga County, Ohio EPA issued an Interim Action order in 1993 to five polluters responsible for organics and petroleum compounds in public water supplies. Five years later, Ohio EPA has not yet forced the polluters to comply with the order.

The contamination in Union City, Darke County, illustrate the extreme of Ohio EPA's inability to enforce state laws. The city found tetrachlorethene (PCE) in their water supply well in 1986. They continue to test the water to ensure that drinking water standards are met in their treated water. Meanwhile, in the 13 years since the contamination was discovered, Ohio EPA has not investigated to find the magnitude or extent of contamination in the groundwater. Ohio EPA

writes, "Ohio EPA believes that further action is needed to ensure a long term safe water supply at the Union City Wellfield. Ohio EPA... lacks the clearly established authority to remedy the contamination." (OEPA 1998)

Even when Ohio EPA does respond to a community's contamination problem, the response is often too little and perhaps too late. According to data presented in OEPA (1998), Ohio EPA investigations to define pollution sources begin an average of over four years after the contamination in the water supply is detected. The agency has begun investigations as late as 10 years after the problem is found.

In other cases, however, Ohio EPA has exercised its authority to force industry to clean up at least some of the problems that it caused. But even in these cases, industry responsibility is limited to cleanup of its own property, the polluter is not required to contribute toward cleanup of the town's wellfield. Ohio EPA has signed consent orders requiring investigation or cleanup with a number of polluters who have contaminated public water supplies: Regal Ware in Wooster (Wayne County), AEP FLEXO in Middletown (Butler County), Muncy Corporation in Enon (Clark County), Morris Bean, Inc. in Yellow Springs (Greene County), Tomkins Industries in Malta (Morgan County), Joy In-

COAL GROVE PAYS FOR INDUSTRIAL CLEANUP OF THEIR WATER SUPPLY

Kenny Jones runs the water treatment plant in Coal Grove, where he delivers safe tap water to the village's 4000 residents. While he's busy with maintenance and collecting samples for routine testing, he's also tweaking the village's own hazardous waste cleanup project, as he makes sure Coal Grove's extraction well number 2 is drawing a TCE plume away from the village's water supply wells.

With no formal training in hazardous waste remediation, Mr. Jones has figured out that by cycling the extraction well to run about four months out of the year, he can keep TCE in the village wells down at levels below Ohio's drinking water standard.

This seat-of-the-pants operation gives village residents tap water with less than one part per billion (ppb) of the potentially carcinogenic TCE, well below the drinking water standard of five ppb. Meanwhile, extraction well number 2 pumps away at about 160,000 gallons each day, discharging water with about 20 ppb of TCE into the Ohio River, TCE which would otherwise have ended up at kitchen faucets across Coal Grove.

In Coal Grove the problems began in the 1980s when the Ford brothers began operating their truck degreasing operation up the hill from the village well field. Through their sloppy waste handling practices, the degreaser TCE found its way into the groundwater beneath the site. The TCE plume migrated toward the Ohio River. Coal Grove's water supply wells, situated between the Ford brother's operation and the Ohio River, were directly in its path.

The Fords have "skipped town," according to Mr. Jones, and Ohio EPA has begun investigating their old truck site to find the extent of TCE contamination. Meanwhile, the Village of Coal Grove has spent upwards of $50,000 in the past 10 years, cleaning up somebody else's mistakes, to make sure their kids have water that is safe to drink.

There is no evidence that the state aims its limited resources at the most important problems.

dustries in New Philadelphia (Tuscarawas County), and Union Carbide and Shell in Newport (Washington County).

In other situations, Ohio EPA claims to lack the resources even to begin an investigation of the source of contamination (OEPA, 1998), as is the case for the wellfields in Union City (Darke County), Fairborn (Greene County), and Hillsboro (Highland County), all of which are contaminated with industrial solvents.

For well over half of the public water supplies contaminated by industrial pollution, Ohio EPA has not been able to conduct a source investigation of any type.

Worse, there is no evidence that the state aims its limited resources at the most important problems. Their decision to conduct a source investigation bears little relationship to the level of contamination in the public water supply. Ohio EPA has conducted source investigations at slightly over half of the more seriously contaminated sites, where concentrations of contaminants at the water supply wells exceed drinking water standards. But they have also conducted investigations at nearly as high a fraction of the less contaminated sites (40 percent), leaving a large number of more seriously contaminated sites completely uninvestigated.

McConnellsville in Morgan County is just one town paying the price for agency and industry inaction. If this town's single water supply well becomes inoperable, the town will have water for only five or six days before their storage tanks are depleted. According to the water superintendent, Ohio EPA is not allowing them to drill new wells because of contamination in the aquifer. They found out only last March that the low capacity of their emergency water supply line from the town of Malta would fall far short of the town's needs in an emergency. "They have totally destroyed our wellfield," says the water superintendent of the gas stations responsible for the pollution, adding, "If our well goes down, we're in a critical situation."

The Cost to Public Health

In every case that EWG investigated, water suppliers are taking the necessary steps to ensure their tap water meets legal standards for the protection of human health. Sometimes this involves monitoring the pollutants to ensure that their concentrations in water supply wells are not increasing. In other cases, water suppliers operate groundwater pump-and-treat systems, at a cost they are forced to pass on to their customers. Through their efforts, their customers are ensured that the water they drink meets legal standards.

Unfortunately, it is nearly impossible to remove all of the contamination from a polluted water supply. For the 26 communities shown in Table 7, data from Ohio EPA shows that contaminants are consistently found in what is called the finished water, the water that leaves the treatment plant and enters the distribution pipes. EWG also found 257 other communities that have found industrial pollutants in their tap water over the past five years (Appendix A), which are not currently being addressed in any way under Ohio EPA's hazardous waste remediation program.

It is not illegal under the federal Safe Drinking Water Act to serve water containing industrial contaminants. A certain amount of contamination is allowed under the law, and these 26 communities all satisfy the law. It is a different question altogether, though, whether the residents would prefer to drink water free of industrial contaminants, or whether drinking these contaminants can be considered "safe." For a number of chemicals, the allowable level of the contaminant in drinking water is higher than the federal government would prefer.

The U.S. Environmental Protection Agency (EPA) sets limits called "Maximum Contaminant Level Goals," or MCLGs, that represent their ultimate health-based goals for levels of contaminants they would prefer to see in drinking water. Then they set an alternate group of standards called "Maximum Contaminant Levels," or MCLs, which are the actual amounts of contamination legally allowed in drinking water. In many cases the allowable limit, or the MCL, is higher than EPA's goal, the MCLG. This is because the MCL takes into account the cost and feasibility of

In many communities residents continue to drink tap water that contains industrial contaminants.

Table 7. Despite the best efforts of water suppliers, citizens continue to drink low levels of industrial contaminants in tap water. In most cases, polluters do nothing to help clean it up.

Location	Contaminants found in tap water	Potential or known polluter
Northwest Ohio		
Fayette, Fulton Co., pop. 1,150	vinyl chloride	Fayette Tubular Products
Bradner, Wood Co., pop. 1,093	PCE	unknown; inadequate Ohio EPA investigation
Northeast Ohio		
North Canton, Stark Co., pop. 17.000	cis-1,2-DCE and DCA	unknown
Southwest Ohio		
Ripley, Brown Co., pop. 2,200	TCE and 1,2-dichloropropane	former U.S. Shoe factory, former waste ponds
Urbana (Urbana Mad River wellfield), Champaign Co., pop. 11.353	PCE, TCE	Grimes Aerospace Russell Street facility and Siemens Energy and Automation
Enon, Clark Co., pop. 2,603	PCE, TCE, cis- and trans-1,2-DCE	Muncy Corporation
Milford, Clermont Co., pop. 5,830	PCE, TCE, cis-1,2-DCE, 1,1,1-TCA, 1,1-DCE, 1,1-DCA	unknown
Spring Valley, Greene County, pop. 569	1,1,1-TCA	unknown
Bellefontaine, Logan Co., pop. 12.142	TCE, 1,1,1-TCA, cis-1,2-DCE, 1.1-DCA	abandoned drum dump
Troy, Miami Co., pop. 20,500	PCE	former auto dealership (Wampler Buick-GMC Inc.)* and Kimberly Clarke paper mill*
Dayton (Miami and Ottowa wellfields), Montgomery Co., pop. 420,000	TCE and other industrial solvents	DAP*, Gayston Corporation*, Gem City Chemicals*, Valleycrest Landfill (North San Landfill Inc)*, Van Dyne-Crotty Inc.*, and U.S. Air Force Wright-Patterson AFB
Miamisburg, Montgomery Co., pop. 17,900	PCE, cis-1,2-DCE	unknown
Huber Heights, Montgomery Co., pop. 39.400	cis-1,2-DCE	not addressed in Ohio EPA report
Southeast Ohio		
Bridgeport, Belmont Co., pop. 3.570	PCE, TCE, cis-1,2-DCE	dry cleaner, not named in Ohio EPA report
Belmont County (Sanitary Sewer District #3), pop. 25,890	cis-1,2-DCE	Unical Corporation, Ashland Chemical, and 3 individuals (current owners)
West Lafayette, Coshocton Co., pop. 3.200	vinyl chloride	Penn-Michigan Manufacturing
Laurelville, Hocking Co., pop. 858	nitrates	Ohio EPA has identified at least one potential source, not named in Ohio EPA report
Yorkville, Jefferson Co., pop. 1,248	PCE, TCE	unknown
Coal Grove, Lawrence Co., pop. 4.719	TCE, cis-1,2-DCE	Tri-State Tank (formerly Ford Brothers)
Middleport, Meigs Co., pop. 2,570	TCE, cis-1,2-DCE	unknown, not investigated
McConnelsville, Morgan Co., pop. 1,804	PCE, TCE, cis-1,2-DCE	Pennzoil and British Petroleum, property now owned by Century Bank
Waverly, Pike Co., pop. 5,000	cis-1,2-DCE	historic dumping on city property
New Philadelphia, Tuscarawas Co., pop. 16.000	TCE	Joy Technologies
Newport, Washington Co., pop. 894	TCE, cis-1,2-DCE, vinyl chloride	Union Carbide and Shell
Marietta, Washington Co., pop. 20.300	1,1,1-TCA	unknown
Beverly, Washington Co., pop. 1.550	PCE	Laugherty Cleaners, Makris Cleaners*

Note: Potential polluters as described in OEPA 1998 and 1997, are designated with an asterisk (*).
Source: OEPA 1998, personal communications with Ohio EPA and town water superintendents, and Ohio public water supply compliance testing database supplied to EWG by Ohio EPA..

removing the contaminant from the water. When treatment for a particular contaminant is expensive or not completely effective, the MCL can be higher than the MCLG.

For instance, while EPA would prefer to have no PCE or TCE present in drinking water supplies (both chemicals have MCLGs of zero), the drinking water standards for both are set at five parts per billion (ppb). So it is legal for water companies to serve water that contains some amount of known or potential cancer-causing compounds like PCE and TCE. At the low levels allowed in drinking water, the risk of contracting cancer becomes very low. But for most of these chemicals, there is no known absolute "safe" level that will not cause cancer.

Certainly for children, who are more susceptible to the effects of some chemicals than adults, these low levels become more of a concern. Some childhood diseases are linked to specific contaminants found in Ohio public water supplies. For instance, TCE, an industrial solvent believed to cause leukemia, has been found in at least 21 of the 46 contaminated community water supplies (Tables 1 and 2).

The Public's Right to Know

Beginning in 1999, federal regulations require public water suppliers to mail an annual summary of drinking water quality to each of their customers. The summary will list the contaminants found in the water supply throughout the year, the levels at which they were found, and potential health effects. These reports will be vital in a state where polluting industries go largely unpunished and polluted drinking water sources remain contaminated. And for the 26 towns in Ohio that find contaminants in their finished water, these right-to-know reports will be critical for residents interested in protecting their health and the health of their children.

Recommendations

The problem of water contamination in Ohio is multifaceted, and the solution must be as well. Public water supplies in at least 43 Ohio counties have been contaminated with industrial pollutants. The leadership of Ohio EPA has failed to use its clear legal authority to force polluters to clean up public water supplies they have contaminated. Instead, the agency is relying largely on the good will of industries to clean up their pollution. Industries, seeing Ohio EPA take an increasingly weaker stance in enforcing the law, are in some cases refusing to cooperate or outright defying legally binding consent orders. And, in almost all cases, they do not help communities clean up their drinking water.

The first priority should be to provide uncontaminated drinking water to the affected communities. It is not enough for people to be provided with tap water contaminated with supposedly "safe" levels of industrial contaminants. The polluters must pay to provide uncontaminated tap water to all the residents currently being provided polluted tap water. In all cases where the polluter has been identified, payment should begin immediately.

For cases where polluters are insolvent or can't be identified, a state "Superfund" law could be used to pay for cleanup. The fund could be provided through a surtax on big business, similar to the federal model. Ohio EPA has been talking about a law that would create such a fund for years now. The 43 towns in Table 3 are casualties of agency and legislature inaction on this issue.

For cases where polluters are insolvent or can't be identified, a state "Superfund" law could be used to pay for cleanup.

The legislature is not taking the lead on creating a state superfund. In a 1998 Ohio EPA report on contaminated public water supplies prepared for an Ohio legislator (OEPA, 1998), the agency made the case that it needs authority, money, and staff to protect Ohio citizens from industrial pollutants. Describing the contaminated water supply in Middleport, Meigs County, the agency said "Ohio EPA believes that the TCE contamination could easily exceed the MCL at any time," adding that if they were delegated funding and authority, they could solve the problem. These claims have not been enough to move the legislature to action.

The public has a right to know the names of the polluters in cases of contaminated tap water supplies. Where the polluter is known, water suppliers should identify the polluter by name in their annual water quality reports required under the Safe Drinking Water Act, the first of which is due to customers of public water suppliers by October 1999.

Appendix A

At least 283 communities have found industrial pollutants in their tap water since 1994.

City	Water Supplier	Population	Number of VOC Detections Since 1994	Number of Chemicals Detected
WRIGHT-PATTERSON AFB	WRIGHT-PATTERSON AFB,'A/	15160	33	17
COLUMBUS	PLEASANT ACRES MHP	270	11	11
HOLGATE	HOLGATE, VILLAGE OF	1300	11	8
CHESTERLAND	MANCHESTER FARMS WATER	94	12	8
DAYTON	DAYTON, CITY OF-MIAMI PL	184000	125	7
MCCONNELSVILLE	MCCONNELSVILLE, VILLAGE	1804	34	7
SOUTH VIENNA	SUNSHINE MOBILE HOME PAR	146	12	7
WRIGHT-PATTERSON AFB	WRIGHT-PATTERSON AFB,'B'	12045	8	7
ADA	ADA, VILLAGE OF	5600	6	6
SPRINGFIELD	CLEARVIEW MOBILE HOME PK	127	21	6
SOUTH VIENNA	COUNTRY HAVEN MOBILE HOM	247	6	6
BAINBRIDGE	HIGHLAND COUNTY WATER CO	27104	6	6
MILFORD	MILFORD, CITY OF	5830	24	6
BOLIVAR	TCMSD-RIDGEWOOD	390	7	6
AKRON	WILLOW REST TRAILER PARK	196	18	6
VIENNA	BIRCHWOOD MANOR-OLD.PARK	870	5	5
BRIDGEPORT	BRIDGEPORT, VILLAGE OF	3570	61	5
SARAHSVILLE	CLEAR WATER CORPORATION	2025	5	5
PORT CLINTON	OHIO ADJGN CAMP PERRY	2500	13	5
RICHWOOD	RICHWOOD, VILLAGE OF	2186	5	5
CLEVELAND	AUBURN WATER SERVICE CO	290	4	4
BELLEFONTAINE	BELLEFONTAINE, CITY OF	12142	16	4
BLUFFTON	BLUFFTON, VILLAGE OF	3367	4	4
SIDNEY	CHRISTOPHERS N'BROOK MHP	180	4	4
KENT	CITIZENS UTILITIES-AUROR	950	4	4
COAL GROVE	COAL GROVE, VILLAGE OF	4719	14	4
SALEM	COLONIAL VILLA ESTATES	395	6	4
DAYTON	DAYTON, CITY OF-OTTAWA P	236000	12	4
WARSAW	ECHOING HILLS VILLAGE, I	86	7	4
ENON	ENON,VILLAGE OF	2603	25	4
NEWARK	LICKING CO,JARDIN MANOR	430	4	4
MARIETTA	MARIETTA, CITY OF	20300	20	4
MANSFIELD	OAK GROVE MANOR	171	13	4
PROCTORVILLE	PROCTORVILLE, VILLAGE OF	700	5	4
SALEM	SALEM, CITY OF	19000	4	4
MASON	SHADOW LAKE VILLAGE MHP	857	4	4
GOSHEN	WESTERN WATER COMPANY	31150	4	4
DOYLESTOWN	WESTVIEW MHP & SALES	400	4	4
KIRTLAND	WHISPERING WILLOW MHP	300	7	4
SHELBY	ABRAXAS FOUNDATION OF OH	108	10	3
DELPHOS	DELPHOS, CITY OF	7093	4	3
ENON	DWIGHT ROAD MOBILE HOME	38	9	3
FRANKLIN	FRANKLIN, CITY OF	10500	3	3
MILLERSBURG	HILLTOP BOARDING HOME	48	4	3
JAMESTOWN	JAMESTOWN, VILLAGE OF	1850	3	3
LUDLOW FALLS	LE-O-NA FALLS MHP	31	3	3
RUTLAND	LEADING CREEK CONS. DIST	4767	3	3
NEWARK	LICKING CO,HARBOR HILLS	728	3	3
MCCLURE	MCCLURE, VILLAGE OF	850	3	3
NEW PHILADELPHIA	NEW PHILADELPHIA,CITY OF	16000	20	3
NEW WATERFORD	NEW WATERFORD, VLG. OF	1360	4	3
NEWCOMERSTOWN	NEWCOMERSTOWN, VLG. OF	4000	3	3
NEWPORT	NEWPORT WTR. & SWR. DIST	894	39	3
LOUDONVILLE	ODYS-MOHICAN YOUTH CTR	325	4	3
PAULDING	PAULDING, VILLAGE OF	3338	3	3
AKRON	RIDGEWOOD PLACE	155	10	3
RIPLEY	RIPLEY, VILLAGE OF	2200	16	3
URBANA	URBANA, CITY OF	11353	6	3

City	Water Supplier	Population	Number of VOC Detections Since 1994	Number of Chemicals Detected
WEST MILTON	WEST MILTON, VILLAGE OF	4628	3	3
YORKVILLE	YORKVILLE, VILLAGE OF	1248	7	3
ABERDEEN	ABERDEEN, VILLAGE OF	2000	2	2
TIPP CITY	AL BALLINGER MOBILE HOME	75	4	2
WOOSTER	AUSTIN-TERRACE II	70	2	2
BAINBRIDGE	BAINBRIDGE, VILLAGE OF	1050	3	2
NORTH LIMA	BEECHWOOD MOBILE ESTATES	90	4	2
ST. CLAIRSVILLE	BELMONT CO. SAN. DIST. 3	25890	5	2
BRADNER	BRADNER, VILLAGE OF	1093	13	2
CECIL	BRENTWOOD COURT MHP	95	2	2
CORTLAND	BRIARFIELD OF CORTLAND N	50	5	2
DAYTON	CAINS MOBILE HOME COURT	70	17	2
CALDWELL	CALDWELL, VILLAGE OF	7500	2	2
CAMPBELL	CAMPBELL, CITY OF	9650	2	2
	CARROLL WATER & SEWER	0	2	2
WILBERFORCE	CENTRAL STATE UNIVERSITY	4100	3	2
CLINTON	COMET MOBILE HOME PARK	30	3	2
HAMILTON	EDGEWOOD MOBILE HOME PAR	60	2	2
BEDFORD HEIGHTS	EVERGREEN VILLAGE	100	2	2
FAIRFIELD	FAIRFIELD, CITY OF	41200	2	2
DELTA	FORREST MHP	82	7	2
WINDSOR	GRAND VALLEY COUNTRY MAN	215	3	2
BEAVERCREEK	GREENE CO.-SOUTHWEST REG	288	2	2
BEAVERCREEK	GREENE COUNTY-CEDARVILLE	3210	2	2
LISBON	GUILFORD LAKE ESTATES	210	2	2
BELOIT	ISLAND CREEK HOMEOWNERS	52	11	2
LOCKLAND	LOCKLAND, VILLAGE OF	4356	2	2
YOUNGSTOWN	MAHONING CO.-CRAIG BEACH	1975	2	2
FOWLER	MEADOWBROOK MANOR NURSIN	54	2	2
MIAMISBURG	MIAMISBURG,CITY OF	17900	5	2
MIDDLE POINT	MIDDLE POINT, VILLAGE OF	639	2	2
MIDDLEPORT	MIDDLEPORT, VILLAGE OF	2570	13	2
NEW PHILADELPHIA	MWCD - SITES LAKE	360	2	2
NEW LONDON	NEW LONDON, VLG OF-PLT 1	3050	2	2
	NEW LONDON, VLG OF-PLT 2	0	2	2
NORTH BENTON	NORTH BENTON SHORES,ASSN	40	2	2
NORTH CANTON	NORTH CANTON, CITY OF	17000	10	2
OTTAWA	OTTAWA, VILLAGE OF	4199	2	2
PAYNE	PAYNE, VILLAGE OF	1350	3	2
DELTA	PEACEFUL ACRES MHP	180	10	2
JASPER	PIKE WATER, INC.-PLANT	8303	2	2
PLYMOUTH	PINE GROVE MOBILE ESTATE	60	5	2
	PINEBROOK ESTATES	0	2	2
LONDON	SPRING VALLEY MHP	126	2	2
WOOSTER	SPRUCE TREE VILLAGE MHP	200	2	2
LOWELLVILLE	STATE LINE MHP #1	30	3	2
STRYKER	STRYKER, VILLAGE OF	1500	8	2
SUGARCREEK	SUGARCREEK, VILLAGE OF	2200	2	2
AKRON	SUMMIT CO-COUNTRY CLUB Y	3265	2	2
SYLVANIA	SWANTON MEADOWS	275	4	2
HIRAM	TROY OAKS HOMES	250	3	2
TROY	TROY, CITY OF	20500	5	2
WASHINGTONVILLE	WASHINGTONVILLE, VLG. OF	890	3	2
WAVERLY	WAVERLY, CITY OF	5000	13	2
AKRON	WESTERN RESERVE VILLAGE	150	4	2
WOODVILLE	WOODVILLE, VILLAGE OF	2060	2	2
XENIA	XENIA, CITY OF	25770	2	2
CURTICE	ALLEN PARK MOBILE COURT	80	1	1

City	Water Supplier	Population	Number of VOC Detections Since 1994	Number of Chemicals Detected
ANTWERP	ANTWERP, VILLAGE OF	2000	1	1
SYLVANIA	ARROWHEAD MHP	320	1	1
ATHENS	ATHENS, CITY OF	22335	1	1
WOOSTER	AUSTIN - COUNTRY MANOR	50	1	1
WOOSTER	AUSTIN-TERRACE I	70	1	1
GARRETTSVILLE	BAINBROOK WATER COMPANY	720	1	1
BELLAIRE	BELLAIRE, CITY OF	6025	1	1
BERLIN	BERLIN WATER COMPANY	1780	2	1
BETHEL	BETHEL, VILLAGE OF	3000	1	1
BEVERLY	BEVERLY, VILLAGE OF	1550	3	1
BLANCHESTER	BLANCHESTER, VILLAGE OF	4450	1	1
HUNTSBURG	BLOSSOM HILL CARE CENTER	131	1	1
NEWARK	BLUE HERON MANOR	50	1	1
FREMONT	BOWER, RICHARD MHP	45	1	1
SMITHVILLE	BOY'S VILLAGE, INC.	100	1	1
KINSMAN	BOYD'S KINSMAN HOME	65	1	1
LEETONIA	BREEZEWAY MOBILE MANOR	60	1	1
BREWSTER	BREWSTER, VILLAGE OF	2300	1	1
RIPLEY	BROWN COUNTY RURAL WATER	20174	1	1
THORNVILLE	BUCKEYE BEACH MARINA MHP	140	1	1
BUCYRUS	BUCYRUS, CITY OF	13500	1	1
EAST LIVERPOOL	CALCUTTA ACRES ASSOC.	143	1	1
CINCINNATI	CANDLE LIGHT MHP	56	1	1
CAREY	CAREY, VILLAGE OF	3700	1	1
CHILLICOTHE	CAROUSEL COURT MHP	300	1	1
CORTLAND	CASS LAKE MOBILE HOME PA	75	1	1
CELINA	CELINA, CITY OF	10889	1	1
ZANESVILLE	CHATEAU ESTATES MOBILE H	240	1	1
BATAVIA	CLERMONT CO WATER, BMWTP	63191	1	1
COLDWATER	COLDWATER, VILLAGE OF	4335	1	1
MT. VERNON	COLONIAL HILLS MHP	146	1	1
MOUNT VERNON	COLONIAL TERRACE MHP	90	2	1
COLUMBUS GROVE	COLUMBUS GROVE, VLG. OF	2231	1	1
OAK HARBOR	COME SAIL AWAY CONDOS	400	1	1
MIDDLE POINT	CONRAD MOBILE HOMES	213	1	1
BELLVILLE	COUNTRY MEADOW CARE CENT	86	1	1
MEDWAY	COUNTRYSIDE APARTMENTS	90	1	1
COVINGTON	COVINGTON, VILLAGE OF	2603	1	1
CUMBERLAND	CUMBERLAND, VILLAGE OF	470	1	1
GALLOWAY	DARBY CREST CIVIC ASSOC	136	1	1
CIRCLEVILLE	DARBYVILLE, VILLAGE OF	225	2	1
DILLONVALE	DILLONVALE, VILLAGE OF	900	2	1
CANTON	DLH PROPERTIES	35	1	1
DOVER	DOVER, CITY OF	11536	4	1
DRESDEN	DRESDEN, VILLAGE OF	2000	3	1
SPRINGFIELD	EDGEWOOD MOBILE HOME PK.	94	1	1
EDON	EDON, VILLAGE OF	880	1	1
MANSFIELD	EXPRESSVIEW COMM WTR ASS	300	2	1
FAIRBORN	FAIRBORN, CITY OF	32000	1	1
MINSTER	FAIRHAVEN-SHELBY CO HOME	291	1	1
STOW	FAIRLANE WATER CO.	400	1	1
FARMERSVILLE	FARMERSVILLE,VILLAGE OF	932	2	1
WELLSVILLE	FARR HILL TRAILER PARK	117	1	1
FAYETTE	FAYETTE, VILLAGE OF	1150	9	1
FLUSHING	FLUSHING, VILLAGE OF	1926	1	1
FORT RECOVERY	FORT RECOVERY, VILLAGE O	1386	4	1
FOWLER	FOWLER MOBILE HOME COURT	40	1	1
ORIENT	FOXLAIR FARMS MHP INC.	490	1	1

City	Water Supplier	Population	Number of VOC Detections Since 1994	Number of Chemicals Detected
FRAZEYSBURG	FRAZEYSBURG, VILLAGE OF	1100	1	1
GALLIPOLIS	GALLIPOLIS, CITY OF	9000	1	1
ASHLAND	GREEN ACRES MHP	97	1	1
ADA	GREEN MEADOW MOBILE HOME	30	1	1
ELMORE	GREEN VALLEY MHP	38	1	1
CHAGRIN FALLS	GREENTREE WATER COMPANY	70	1	1
AKRON	HIGHPOINT VILLA APTS.	28	1	1
HILLSBORO	HILLSBORO, CITY OF	6400	1	1
WOOSTER	HILLTOP VILLA	36	1	1
LAKEVIEW	HOLIDAY SHORES MHP	100	1	1
HOLLOWAY	HOLLOWAY, VILLAGE OF	350	1	1
HEBRON	HOLLY PARK MOBILE ESTATE	75	1	1
MILLERSBURG	HOLMES COUNTY JAIL	120	1	1
HOPEDALE	HOPEDALE, VILLAGE OF	925	1	1
WARREN	HORVATHS MOBILE HOME PAR	140	1	1
HUBER HEIGHTS	HUBER HEIGHTS-PLANT #1	29250	3	1
WASHINGTON CH	I-71 & SR-35 WATER SYSTE	35	2	1
PIQUA	INDIAN HILL MOBILE HOME	80	1	1
MARION	INDIAN TRAILS VILLAGE	230	1	1
LIMA	INDIAN VILLAGE MHP	325	1	1
IRONTON	IRONTON, CITY OF	12643	1	1
ALLIANCE	IVYSTONE WATER SYSTEM	44	3	1
JOHNSTOWN	JOHNSTOWN, VILLAGE OF	3400	1	1
JUNCTION CITY	JUNCTION CITY, VLG. OF	900	1	1
LARUE	LA RUE, VILLAGE OF	805	2	1
CHAGRIN FALLS	LAKE LUCERNE CLUB CO.	975	5	1
LAKE MILTON	LAKE MILTON M.H.P.	167	1	1
LOVELAND	LAKE REMINGTON MOBLE HOM	190	5	1
KENT	LAKE VIEW MOBILE HOME PK	220	1	1
CHAGRIN FALLS	LAUREL SPRINGS WATER CO.	448	3	1
CHESTERLAND	LEADER'S MHP	741	1	1
ZANESVILLE	LEWIS MOBILE HOME PARK	40	1	1
LOWELL	LOWELL, VILLAGE OF	603	1	1
NEWTON FALLS	M & C MOBILE HOME PARK	98	1	1
UNIONTOWN	MACE'S MOBILE ESTATES	92	1	1
BELLVILLE	MADISON CITY MHP	700	1	1
ASHVILLE	MANN'S MOBILE HOME PARK	581	1	1
MARBLEHEAD	MARBLEHEAD, VILLAGE OF	1600	1	1
ZANESVILLE	MAYSVILLE REGIONAL WATER	4800	2	1
CHESTERLAND	METZENBAUM RESIDENCE	58	1	1
MIDDLEFIELD	MIDDLEFIELD MOBILE HOME	188	1	1
COLUMBUS	MILFORD CENTER, VILLAGE	668	1	1
ORRVILLE	MILLBORNE MANOR	26	1	1
CARROLLTON	MINOR MOBILE HOME PARK	34	1	1
NORTH CANTON	MT. PLEASANT MANOR	25	1	1
NAPOLEON	NAPOLEON, CITY OF	8884	1	1
NASHVILLE	NASHVILLE, VILLAGE OF	210	1	1
NELSONVILLE	NELSONVILLE, CITY OF	10000	1	1
NEW CARLISLE	NEW CARLISLE, CITY OF	6049	1	1
MARYSVILLE	NEW DOVER ESTATES	206	1	1
NEW HOLLAND	NEW HOLLAND, VILLAGE OF	870	1	1
NEW VIENNA	NEW VIENNA, VILLAGE OF	1200	1	1
NEY	NEY, VILLAGE OF	331	2	1
NORTH BALTIMORE	NORTH BALTIMORE, VLG OF	3229	1	1
NORTH LEWISBURG	NORTH LEWISBURG,VLG.OF	1450	1	1
BRYAN	OAKWOOD MHP	200	1	1
OAKWOOD	OAKWOOD, VILLAGE OF	780	1	1
LANCASTER	ODRC-SOUTHEASTERN CORR.	1829	1	1

City	Water Supplier	Population	Number of VOC Detections Since 1994	Number of Chemicals Detected
MARION	OH/AM MANSFIELD SYSTEM 1	1150	7	1
OREGON	OREGON, CITY OF	18334	1	1
LEBANON	OTTERBEIN-LEBANON RET CE	1259	1	1
CLOVERDALE	PARADISE OAKS CENTER	196	1	1
CANTON	PARKSIDE APARTMENTS	156	1	1
WOOSTER	PEACH GROVE M.H.PARK	50	3	1
RICHFIELD	PENINSULA WATER AND SEWE	160	1	1
PICKERINGTON	PICKERINGTON,CITY OF	6483	1	1
PIKETON	PIKETON, VILLAGE OF	1700	1	1
STOW	PINE MILL RIDGE #515	21	1	1
NEW CARLISLE	PLEASANT VALLEY EST. MHP	600	4	1
PORT CLINTON	PORT CLINTON, CITY OF	7100	1	1
PUT-IN-BAY	PUT-IN-BAY, VILLAGE OF	5000	1	1
RAVENNA	RAVENNA, CITY OF	15000	1	1
READING	READING,CITY OF	12800	1	1
DUBLIN	RIVERVIEW MANOR APTS.	60	1	1
ZANESVILLE	RIVERVIEW MANOR MHP &APT	39	1	1
SARDINIA	SARDINIA, VILLAGE OF	940	1	1
SCIO	SCIO, VILLAGE OF	856	1	1
LUCASVILLE	SCIOTO WATER, INC.-ROSE	9186	1	1
SIDNEY	SIDNEY, CITY OF	18710	1	1
MINERVA	SKYLAND HILLS MHP	300	1	1
SMITHFIELD	SMITHFIELD, VILLAGE OF	1100	1	1
COLUMBUS	SOUTH BLOOMFIELD, VLG OF	400	1	1
SPENCERVILLE	SPENCERVILLE, VILLAGE OF	2300	1	1
AKRON	SPINNAKER BAY APARTMENTS	25	1	1
WAYNESVILLE	SPRING VALLEY,VILLAGE OF	569	5	1
SPRINGFIELD	SPRINGFIELD MEADOWS MHP	235	1	1
KENTON	TAYLOR CREEK APARTMENTS	21	1	1
NEW KNOXVILLE	THE WAY INTERNATIONAL	500	1	1
THORNVILLE	THORNVILLE, VILLAGE OF	960	1	1
TILTONSVILLE	TILTONSVILLE, VILLAGE OF	1517	1	1
NEWARK	VALLEY MOBILE HOME PARK	88	1	1
LANCASTER	VALLEY VIEW NURSING HOME	38	1	1
VERMILION	VERMILION, CITY OF	11000	1	1
PERRYSBURG	VILLAGE GREEN MHP	394	1	1
WALNUT CREEK	WALNUT CREEK WATER CO.	880	1	1
MANSFIELD	WALNUT HILLS WATER #2	290	1	1
LEBANON	WARREN CO.-FRANKLIN/LEB	5031	1	1
WARREN	WARREN, CITY OF	70000	5	1
WOOSTER	WAYNE COUNTY CARE CENTER	140	1	1
WAYNESFIELD	WAYNESFIELD, VILLAGE OF	850	1	1
SARDINIA	WAYNOKA REGIONAL WTR & S	975	1	1
PENINSULA	WAYSIDE FARM NURSING HOM	174	2	1
WEST FARMINGTON	WEST FARMINGTON, VLG. OF	1100	1	1
WEST LAFAYETTE	WEST LAFAYETTE, VILLAGE	3200	18	1
SYLVANIA	WEST UNITY ESTATES	83	1	1
CLYDE	WINDING LAKE MHP	60	3	1
BRYAN	WMS CO/HILLSIDE COUNTRY	191	1	1
YELLOW SPRINGS	YELLOW SPRINGS, VLG. OF	3973	1	1
ZALESKI	ZALESKI, VILLAGE OF	450	1	1

Source: Ohio public water supply compliance testing database supplied to EWG by Ohio EPA.

Appendix B

At least 50 industrial pollutants have been found in Ohio's community tap water since 1994.

Pollutant	Number of communities with pollutant in their tap water, 1994 to present
TOTAL XYLENES	59
METHYLCHLORIDE (CHLOROMETHANE)	54
DICHLOROMETHANE	51
TOLUENE	39
NAPHTHALENE	26
P-XYLENE	23
M-XYLENE	23
BROMOMETHANE	20
1,1,1-TRICHLOROETHANE	20
CHLOROETHANE	19
P-DICHLOROBENZENE	19
O-XYLENE	19
ETHYLBENZENE	18
CIS-1,2-DICHLOROETHYLENE	17
TRICHLOROETHYLENE	17
TETRACHLOROETHYLENE	15
CARBON TETRACHLORIDE	13
BROMOCHLOROMETHANE	12
1,1-DICHLOROETHANE	8
1,2-DICHLOROETHANE	7
TRICHLOROFLUOROMETHANE	6
BROMOBENZENE	6
DICHLORODIFLUOROMETHANE	5
DIBROMOMETHANE	5
1,2,4-TRIMETHYLBENZENE	5
2,2-DICHLOROPROPANE	4
M-DICHLOROBENZENE	4
VINYL CHLORIDE	4
1,1-DICHLOROETHYLENE	4
1,2-DICHLOROPROPANE	3
BENZENE	3
STYRENE	3
P-ISOPROPYLTOLUENE (P-CYMENE)	2
1,2,4-TRICHLOROBENZENE	2
1,3-DICHLOROPROPANE	2
1,3-DICHLOROPROPENE	2
1,3,5-TRIMETHYLBENZENE	2
O-CHLOROTOLUENE	2
N-PROPYLBENZENE	2
HEXACHLOROBUTADIENE	1
1,1-DICHLOROPROPENE	1
1,2,3-TRICHLOROBENZENE	1
N-BUTYLBENZENE	1
TERT-BUTYLBENZENE	1
P-CHLOROTOLUENE	1
O-DICHLOROBENZENE	1
1,1,2-TRICHLOROETHANE	1
1,1,1,2-TETRACHLOROETHANE	1
1,1,2,2-TETRACHLOROETHANE	1
MONOCHLOROBENZENE	1

Source: Ohio public water supply compliance testing database supplied to EWG by Ohio EPA.

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