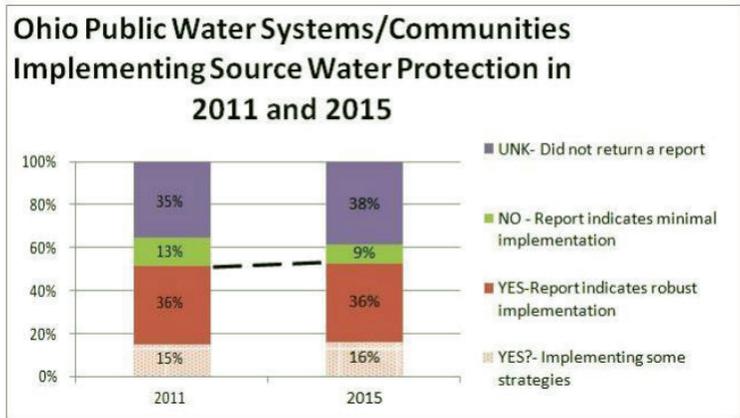


Drinking Water Source Protection Update December 2015

2015 SWAP Survey Indicates Steady Implementation of Local Source Water Protection Strategies in Ohio

In mid-January 2015, Ohio's Source Water Protection (SWAP) program sent letters to 736 public water systems, requesting they fill out an online report (SWAP survey) identifying the source water protection strategies being implemented in their communities (for municipal systems) or on their properties (for nonmunicipal systems). By March 4, more than 470 systems had responded (64 percent).

As indicated in the chart on the right, the 2011 response rate was slightly higher than this year's, but the 2011 response period was 12 weeks; this year it was only six weeks. Overall, the number of systems reporting that they were implementing protection strategies—or purchasing from such systems—increased slightly, rising from 51 to 53 percent. The types of strategies reported in 2015 varied less than one percent from those reported in 2011, except for coordination with other local agencies, which increased in 2015. As in 2011, oil and gas drilling topped the list of local concerns for protection of drinking water sources.



SWAP Implementation Reporting and Awards



Scott Halasz | Greene County

Starting this year, Ohio EPA is reporting the level of local substantial implementation to U.S. EPA in terms of the SWAP survey results. A survey will be issued every three years, so the next one will be in January 2018. District staff will visit systems during the intervening years to verify the reported results and make corrections to the latest survey if necessary. Systems that do not respond are reported to U.S. EPA as not substantially implementing. Systems that are verifiably implementing a first-rate SWAP program are eligible to receive a certificate of recognition for exceptional implementation.

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- SWAP Program Technical Assistance and Outreach
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SWAP Success Stories in 2015

Some notable efforts over the last year to address local source water protection concerns and community-wide coordination are described below:

City of Dayton: Storm Drain Artscapes

To remind citizens and visitors to keep trash and other pollutants out of the streets and rivers, Dayton created a Storm Drain Scavenger Hunt. After local artists created murals on nine storm drains throughout the City, scavenger hunt participants were invited to find and take a picture of each painted storm drain. Prizes were given to each participant based on how many painted storm drain photos they uploaded to Instagram with #DaytonWater. Dayton reported that the project was a huge success.



City of Xenia: Green Space Creation

With partial grant funding through the FEMA Pre-Disaster Mitigation Grant, the City of Xenia purchased seven parcels of land immediately next to one of its wellfields. The structures on each parcel were removed and the septic systems were properly abandoned to create green space that was deemed to be maintained in perpetuity as open space for the conservation of natural floodplain functions.

Hamilton to New Baltimore Groundwater Consortium: Emergency Response



After lightning struck in the vicinity of a Fairfield gas station in August 2015, a gasoline UST exploded and caused the collapse of two other USTs within the Hamilton to New Baltimore's Groundwater Consortium's 10-year TOT and near two public water supply wells. The emergency responders were aware of the sensitive nature of the source water protection area because of the education and outreach that the Groundwater Consortium had conducted over the years. There was excellent cooperation and communication between the Ground Water Consortium partners, local emergency responders, BUSTR and Ohio EPA. This

helped the initial stages of the emergency response go smoothly, as well as the longer term efforts toward cleanup and future ground water monitoring.

Village of Indian Hill, City of Milford and City of Loveland: Source Water Protection Meeting

The Village of Indian Hill organized the first joint Source Water Protection Meeting between the Village of Indian Hill, the City of Milford and the City of Loveland. In addition to the public water system personnel, the Village invited local emergency responders and local government representatives to discuss the importance of the buried valley aquifer and the Little Miami River, the hydraulic connection between the wellfields, local emergency planning and the importance of protecting the source of their drinking water.

Cities of Springboro and Troy: Public Service Announcements

In conjunction with The Clean Water Business, the Cities of Springboro and Troy disseminate public service announcements (PSAs) in their respective communities through the use of radio, cinema, TV and the Internet. The PSAs include both ground water and storm water pollution prevention.

City of Hamilton: Best Tap Water in the World 2015

The City of Hamilton's public water system won the gold medal for the Best Municipal Water at the Berkeley Springs International Water Tasting in West Virginia in February 2015. Hamilton previously won gold medals in 2009 and 2010.

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SWAP Success Stories

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Etna Township (in Licking County)

Adopted local wellfield protection regulations, effective June, 2015, requiring users of regulated substances located within a Wellfield Protection Area to complete an environmental audit for review by the Township Administrator. The Administrator is authorized to require pollution control or abatement for activities or regulated substances that pose a risk to the public water supply or wellfields.

Ohio's Response to Harmful Algal Blooms – What's New in 2015

2015 brought major developments in Ohio EPA's response to harmful algal blooms (HABs) in water bodies used as sources of drinking water. The number of Ohio EPA staff trained for sampling and outreach was increased, the HABs Strategy for Public Water Systems (Strategy) was substantially revised and new rules were drafted for reporting and sampling HABs at public water systems, as detailed below.

Program Expansion

In May, Source Water Protection Program staff at all five district offices began intensive training as district HABs coordinators. Together with inspectors from the Drinking Water Program, they visited public water systems using surface water to discuss the threat of HABs and how to detect and treat them. Lines of communication and response procedures were established within Ohio EPA, with the public water systems and with other agencies such as the Ohio Department of Health and the Ohio Emergency Management Agency.

HAB Strategy Revision

In 2015 the Strategy was revised to incorporate U.S. EPA's Health Advisory Levels for microcystin and cylindrospermopsin, which were published in July. A flow chart was developed describing the process for dealing with a bloom, from discovery to public messaging (when necessary). The Strategy can be viewed online at (epa.ohio.gov/Portals/28/documents/HABs/PWS_HAB_Response_Strategy.pdf)

Funding

Over the last year, 56 Ohio public water systems have purchased equipment, supplies and training for analysis of cyanotoxins via a \$1 million grant fund (now closed). Through Ohio's Drinking Water Assistance Fund, \$50 million in zero-percent interest rate loans is available from July 2015 through June 2016. For details refer to: epa.ohio.gov/Portals/28/documents/dwaf/DWAF_HABNominationForm_Instructions.pdf

HAB Rules in 2016

To ensure that all Ohio public water systems are prepared to identify and treat HABs in their source waters, Ohio EPA drafted rules for monitoring and reporting HABs in public water systems. These draft rules were distributed for interested party review on Sept. 22, 2015, and may be viewed at epa.ohio.gov/ddagw/rules.aspx#habs.



HAB in the Ohio River at Ironton (photo by NASA, 2015)

Harmful algal blooms (HABs) continue to be a significant contaminant source in Ohio's rivers, lakes and reservoirs. The 2015 late summer Microcystis bloom on Lake Erie was more severe than originally predicted, due to heavy rains in June, but was carefully monitored and public water systems increased treatment as needed. As a result, no drinking water advisories had to be issued this summer for cyanotoxins.

Low levels of saxitoxin—a potent but less commonly seen cyanotoxin—were found in some reservoirs in eastern Ohio, and were sampled on a daily basis throughout September. Also, for the first time on record, the Ohio River developed a 650-mile long bloom of Microcystis that formed intense scums from Huntington, West Virginia to Cincinnati throughout September.

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Ohio's Response to Harmful Algal Blooms

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Website

Ohio EPA developed a comprehensive HAB database and populated it this summer with recreational and PWS-related HABs data from 2010 to the present. The database links to a website that displays a map of Ohio showing the locations of HABs sampling and the results, within a user-specified timeframe. The website can be viewed at http://wwwapp.epa.ohio.gov/gis/mapportal/HAB_Monitoring.html

SWAP Program Technical Assistance and Outreach in 2015

District source water protection (SWAP) staff continue to assist with assessing new public water systems as they come online and revising assessments to address significant changes in pumping or well configuration. From July 2014 to June 2015, staff completed and issued 55 source water assessment reports and 75 revised reports, for a total of 130. Other technical assistance and outreach efforts provided during this period include:

New Well Site Preliminary Assessments

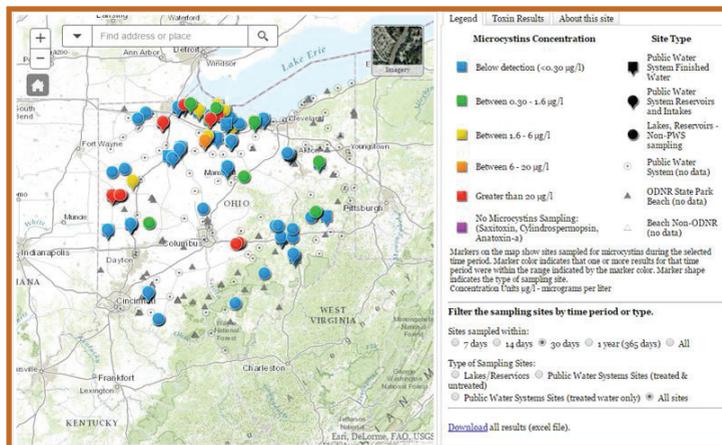
District staff completed preliminary assessments for 58 public water systems seeking a permit to install a new well.

Technical Assistance Maps and Permit Reviews

Staff responded to 274 requests for site-specific maps showing locations of SWAP areas and nearby regulated facilities. Staff also reviewed the following for proximity to SWAP areas: 42 applications for mining permits (coal or aggregate) and 55 applications for CWA Section 401 water quality certifications for filling or dredging streams.

SWAP Web Page

The program granted access to 146 new registrants for the SWAP Program's secure web page, bringing the total to 1,149 users.



Ohio EPA's web map shows where HABs are being monitored, and the results. Hovering over a point brings up the name of the site, and clicking brings up sampling results within a specified time frame.

Communities Complete Source Water Protection Plans

During state fiscal year 2015, Ohio EPA endorsed 12 municipal source water protection plans. Ohio now has 205 municipal systems with endorsed protection plans. The systems added this year include:

- City of Akron
- City of Cuyahoga Falls
- Village of Lakemore
- City of Newton Falls
- City of Norwalk
- City of Willard
- Village of Bowerston
- Village of Frazeyburg
- Village of Jewett
- Village of Scio
- City of Zanesville
- City of Oakwood

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