

Crossing Boundaries for Groundwater

The Hamilton to New Baltimore Groundwater Consortium

Groundwater Guardian Featured Result Oriented Activity

By Tim McLelland, Hamilton to New Baltimore Groundwater Guardians
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The Hamilton to New Baltimore Groundwater Consortium includes six public and industrial groundwater producers/users serving over 300,000 people in southwest Ohio. Members include the City of Hamilton, Greater Cincinnati Water Works, City of Fairfield, Southwest Regional Water District, Smart Papers LLC and Southwestern Ohio Water Company. The Consortium has been a Groundwater Guardian community since 1997 and is one of Ohio's first multi-jurisdictional Wellhead Protection (WHP) programs.

The Consortium's goals include tracking groundwater quantity and quality, educating local residents and businesses about the importance of source water, maintaining open communication between area water suppliers and users, and continued implementation of the WHP program. Some of the most important aspects of the program include potential contaminant source updates, overlay zoning development, public education and outreach, contingency planning, and well installation and monitoring.

Members of the Consortium derive their water from the Great Miami Buried Valley Aquifer, a Sole Source Aquifer. Cooperation in drinking water supply planning and protection has been an important issue for these water systems for over 30 years. After determining the one, five and ten year time-of-travel zones for area wells, the Consortium conducted a potential contaminant source inventory. The inventory identified over 700 potential pollution sources at 394 sites in the area. Although it is not an Ohio state requirement to have a ten year time-of-travel zone,

the Consortium includes this because of the many potential pollution sources located just outside the five-year time-of-travel zone.

Based on these figures, the Consortium developed and has worked to put in place an ordinance that prohibits certain activities throughout the protection area and requires the registration of facilities that store or use regulated materials. Because the Consortium does not have the authority to enact the ordinance, it works with the



cities, townships, and counties within the Consortium to enact it. The Consortium members of the cities of Hamilton and Fairfield have already enacted the ordinance. Although Ross Township and St. Clair Township are not members of the Consortium, they have enacted zoning resolutions that mirror the Consortium municipalities, recognizing that time-of-travel zones do not stop at jurisdictional boundaries.

The Consortium has also conducted an extensive education and outreach program through its committed Groundwater Guardian Team, made up of the Consortium's Public Education Committee (PEC) that has been active since 1993. The PEC began its efforts with the potential contaminant source

inventory in 1994 and since then has developed fact sheets and brochures, staffed booths at local festivals and fairs, and passed out groundwater protection information. The team also developed a groundwater curriculum for school teachers, developed and maintains www.gwconsortium.org, and organizes and sponsors the Butler County Children's Water Festival.

The PEC developed a video on groundwater and

surface water protection to educate the public about the area's source water. The video has been used to demonstrate the impact people may

have on water resources. Conversations with area educators indicate that the use of this video is highly effective in educating school children, teachers, community decision makers, and area business leaders about what groundwater is, how it moves, and how human activities can impact its quality. The goal in creating this video is to further educate the public and improve the understanding of various groundwater concepts.

Evaluation of the project's success involved developing and administering pre and posttests to students to determine the effectiveness of the factual content of the video. A benchmark of 80% improved knowledge after viewing the video is the targeted measure of success. A second survey will be con-

ducted to determine frequency of video use among local schools, public libraries, economic development agencies, nonprofit organizations and governmental offices.

The Consortium's contingency plan addresses both incident-related releases (i.e., hazardous materials releases associated with an accident), and releases detected through a monitoring well. The primary objective of the plan is to ensure that the Consortium is kept up to date on the status of regulated materials releases in the WHP areas. Secondary objectives include tracking the occurrence of regulated substance releases in the WHP areas, spill prevention awareness, and general groundwater education for area fire departments.

The Consortium utilizes the strengths of each of its members. One entity oversees the monitoring program, another overall management, and all participate in public education and pay for the installation and sampling of monitoring wells. Twenty-four monitoring wells around the Consortium's well fields are monitored monthly for water levels and semi-annually for various water quality parameters. Installation of additional monitoring wells is planned in the future.

The Consortium believes in the importance of partnering with and utilizing the assistance of other agencies, and has partnered with local agencies to assist with updates to the program.

