













## Boise City ID

**Years Designated** 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Approximately 80 percent of Boise's drinking water is supplied by groundwater. Declining water levels, groundwater contamination, drought, and increased demand are of concern. Boise uses Groundwater Guardian to energize support, knowledge and interest in protecting and conserving groundwater supplies.

### **Result Oriented Activities:**

Continued education and outreach projects during Water Awareness Week in May, including classroom presentations, teacher training, and tours at the Boise WaterShed Environmental Education Center. Other activities take place during the school year to supplement the weeklong celebration of water, including field trips to area wastewater and drinking water plants. -- Continued to sponsor a series of water-efficient landscaping courses and tours in partnership with the University of Idaho Extension Service. The workshops provided information about water efficient landscaping and selecting appropriate plants for the Boise area. -- Participated in a symposium to educate gardeners on reducing water and pesticide use.

# City of Rock Falls IL

**Years Designated** 1997, 1998, 1999, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

Public wells provide the 9,700 residents of Rock Falls with 85 percent of their drinking water. The chief concerns are nitrates, arsenic, VOC's and SOC's in the water. Rock Falls uses Groundwater Guardian to help educate the public about groundwater.

## **Result Oriented Activities:**

Provided a \$1000 scholarship with the local electric department to a senior high school student. -- Provided groundwater presentations to seven area schools 5th and 10th grade classes. -- Provided classes tours of the Water Department plant for 2nd grade students to learn where the city's water comes from and water treatment.

## Loves Park IL

**Years Designated** 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

The 23,996 people who live in Loves Park receive all of their drinking water from local groundwater supplies. Currently, one municipal well finished in the shallow sand and gravel aquifer is at risk for groundwater contamination from several sources within the well's ten year capture zone. An abandoned landfill, numerous small businesses generating auto and industrial wastes, and a residential area with abandoned wells on most properties contribute to the possibility of contaminants reaching the drinking water supply. Loves Park uses Groundwater Guardian to develop public awareness and understanding of what can impact the quality of the city's water supply, raise awareness about water protection, and encourage businesses and residents in the capture zone to voluntarily protect their drinking water source.

### **Result Oriented Activities:**

Continued to sponsor an annual Youth Groundwater Festival. Over 700 students participated in four water activities.

## McDonough County IL

**Years Designated** 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

McDonough County is home to 32,393 residents, as well as a major university, a number of small businesses, ten incorporated communities in various stages of development and excellent farmland. This great economic diversity, together with local landfill expansion, commercial animal confinement operations, and unsewered communities, combine to increase the type and number of concerns related to potential groundwater pollution. Most recently, an over-abundance of phosphate in Macomb's reservoir has become a concern. McDonough County uses the Groundwater Guardian program to expand public education programs in order to keep the population informed about the aquifer and its vulnerability to pollution, as well as to help the public understand where their water supply comes from.

### **Result Oriented Activities:**

Provided free water testing kits for coliform and nitrates to area residents as a part of Drinking Water Week. Distributed a total of 65 water testing kits at the county health department and a local farm supply store. Many residents have begun returning each year, illustrating the understanding of the need to annually test well water. -- Presented a booth, activities, and distributed information and materials about preventing groundwater contamination at the Western Illinois University Environmental Summit. -- Held a Conservation Day, presenting information about groundwater and surface water pollution prevention to 5th grade students. -- Presented information about water issues and the activities of the team to a local Rotary Club.

# Carmel IN

**Years Designated** 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

Carmel is home to over 80,000 people. Because the community relies 100% on groundwater and because the community is growing, concerns have arisen about efficient water usage and persisting drought conditions. Carmel uses Groundwater Guardian to bring awareness to the City's Wellhead Protection Areas and spread the word about the importance of efficient water use and water conservation.

## **Result Oriented Activities:**

Collected over 100 tons of materials such as paint, oil, antifreeze and more for proper disposal at a Household Hazardous Waste Collection Center. -- Posted signage marking the wellhead protection area to increase awareness. -- Created eight YouTube tip videos on various topics (energy saving tips for the winter months, paint tips, a water plant tour, fixing a leaky toilet, and more).

## Elkhart IN

**Years Designated** 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Groundwater provides 100 percent of the drinking water to 50,000 residents living in the City of Elkhart. Several sites within the community have been included on the Superfund National Priority List due to a threat of contamination from chemicals such as TCE. These threats have caused a great deal of concern for area residents who rely on groundwater for all of their drinking water needs. Elkhart uses the Groundwater Guardian program to increase public awareness and understanding about groundwater issues, to encourage citizens to become more involved in their community and to encourage water conservation and pollution protection.

### **Result Oriented Activities:**

Continued an Aquatic Biology program to investigate and evaluate the biological communities in the St. Joseph and Elkhart Rivers and their tributaries. -- Through the stormwater program, 1,406 catch basins were cleaned. Over 200 stormwater drains were labeled with storm drain markers. -- Held a water conservation seminar, which provided information on Elkhart's drinking water source, water protection, and conservation techniques. Attendees received a water conservation kit. -- Published the City's annual Water Quality Report, which included information about Elkhart's water source. -- Created additional water education posters for display at the water billing office about water conservation, preventing sewer backups, and where drinking water comes from. -- Organized a clean-up of the St. Joseph River with volunteers.

## Indianapolis-Marion County IN

**Years Designated** 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Indianapolis-Marion County's 928,281 residents receive the majority of their drinking water from surface water supplies; however, no additional surface water supplies are available and all growth in the public water supply will come from groundwater sources. Most of the productive aquifers in Marion County are relatively vulnerable to contamination from surface spills. Two of the wellfields are located in older areas of the city with heavy concentrations of industrial and commercial land use. Indianapolis-Marion County Groundwater Guardian is committed to working with owners of potential sources of contamination to teach them best practices.

### **Result Oriented Activities:**

Continued to identify and educate business owners in the county that might be potential sources of groundwater contamination, with a focus on identifying potential contaminant sources and engaging site owners/occupants in an educational dialogue. Over 50 site visits were completed as part of an ongoing face-to-face program. Business owners receive information about groundwater, best management practices, and other resources offered by the Marion County Wellfield Education Corporation. -- Continued participation in the "Indy Rezone" project, a comprehensive rewrite of the community's zoning ordinance. Specifically, team members have provided input on ordinances pertaining to water and groundwater. The final draft has been assigned to a City-County Council Committee for review and recommendation to the full Council.

# Marion IN

Years Designated 2013, 2014, 2015

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## Community Profile:

Marion is home to 30,000 residents that use groundwater for all their water needs. Many Marion residents don't know that their drinking water comes from groundwater, and have not been educated on the importance of preventing groundwater contamination. The Marion team uses Groundwater Guardian to educate citizens about the important role groundwater plays in the community and ways they can act to prevent groundwater contamination.

## Result Oriented Activities:

Promoted and provided materials for local Girl Scouts to get patches with a groundwater focus. -- Created and delivered door hanger packets providing septic system, wellhead protection, waste disposal, and well testing information to residents in Wellhead Protection Areas. -- Posted information and tips quarterly to social media. -- Incorporated groundwater activities to educate students touring a water treatment plant on groundwater resources and contamination.

# Valparaiso IN

**Years Designated** 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

The 33,000 residents of Valparaiso are 100 percent dependent on local groundwater supplies for their drinking water needs. Current groundwater-related concerns and issues include both groundwater quality and quantity, as well as pollution prevention, road salt intrusion, and community outreach and education. Valparaiso uses Groundwater Guardian as a source of ideas and information to further the local wellhead protection program, and to become part of a network to help provide solutions to other communities with similar issues.

## **Result Oriented Activities:**

Distributed the Annual Water Quality Report to consumers to educate on drinking water testing, and conserving and protecting groundwater. -- Distributed a calendar listing household hazardous waste collection events. The calendar was provided to all water customers and landowners in the wellhead protection area, and provides education about the proper disposal of hazardous waste to protect drinking water sources. -- Participated in an Earth Day celebration with a booth to educate the public on conservation and protection. -- Hosted National Drinking Water Week activities, which included handing out educational materials.

## Charter Township of Texas MI

**Years Designated** 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Groundwater supplies 100 percent of the drinking water to the 15,000 residents of Texas Township. Texas Township has many areas that are not serviced by a public waste water system so it is concerned about the impact on the aquifer. The Township is always seeking ways to protect the aquifer as it continues commercial and residential growth. Texas Township uses the Groundwater Guardian program to develop public awareness and understanding about the township's groundwater resources, educate the citizens on the protection of its aquifers and the importance of safeguarding this valuable resource, as well as to develop a voluntary/regulatory means for protection of the groundwater supply.

### **Result Oriented Activities:**

Worked toward installing Groundwater Guardian signs on each Charter Township of Texas signs entering the township.

# City of Battle Creek MI

**Years Designated** 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

Battle Creek uses one prolific wellfield, the Verona Wellfield, as the drinking water source for the city's 54,000 residents. It is located in the Marshall Sandstone Aquifer, which is fractured and bordered on its east side by a railroad yard. Twenty years ago contamination was discovered in the area and linked to dry cleaning solvents and questionable storage practices. As a precautionary measure, 12 blocking wells are used to protect the city's 22 production wells, and three backup wells are located in another wellfield. Current industrial activity near the city's main wellfield is a concern. Battle Creek uses Groundwater Guardian as a resource for goal setting and public education in groundwater protection.

## **Result Oriented Activities:**

Held the 15th annual Children's Water Festival for over 700 fourth and fifth graders. The festival helps educate students about the City's wellhead protection plan and areas of interaction of groundwater and surface water. -  
- Continued participation in various community events to share general information about groundwater and drinking water protection, household hazardous waste, and responsible use of fertilizers and pesticides with over 2,500 people. -- Partnered with adjacent townships to enact a similar groundwater ordinance to that of Battle Creek. -- Developed and distributed a 2015 wall calendar with monthly water quality protection tips. The team also runs monthly letters to the editor in the local newspaper, radio and movie advertisements, and posted groundwater protection messages on the City's website and Facebook page.

## City of Kalamazoo MI

**Years Designated** 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

The City of Kalamazoo is an older, urban community with typical known and potential sources of contamination, including industrial and commercial sites. Groundwater provides all of the drinking water for the City's 122,000 water customers. Five of the City's 17 wellfields have had detectable levels of contamination, with two requiring air strippers to remove volatile organic compounds. The Kalamazoo Public Water Supply has 10 franchise agreements to provide water, with capture zones existing within eight jurisdictions. Currently, land use in Kalamazoo and Texas Township is managed by specific Wellhead Ordinances and Performance Standards. Kalamazoo actively participates in intergovernmental cooperation with a proactive approach to public education. Kalamazoo uses Groundwater Guardian to plan and implement non technical WHP Program projects, as well as providing project framework to focus specific efforts.

### **Result Oriented Activities:**

Continued comprehensive public education and outreach efforts; including classroom visits, a radio ad campaign, community events, movie trailer ads, public events, bus placards, articles, website visits, presentations to youth groups, and facility tours. -- Collected chemical storage information from Michigan Fire Prevention Code and the City of Kalamazoo Wellhead Protection Zoning Overlay and Performance Standards to educate and encourage businesses to properly store chemicals. Held training sessions for Public Safety Inspectors to increase awareness of proper methods for storing chemicals.

# City of Marshall MI

**Years Designated** 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

The City of Marshall's 7,500 residents rely on groundwater for 100 percent of their drinking water needs. Though there are currently no major problems with local drinking water supplies, residents are concerned about protecting groundwater resources for future uses. Marshall uses Groundwater Guardian to educate local citizens about the need to safeguard water resources and their role in its protection.

## **Result Oriented Activities:**

Participated in the Calhoun County Conservation District's Earth Day celebration. Over 200 students participated and played the Water Jeopardy game to teach them about water resource conservation and protection. -- Participated in the City's annual River Clean Up & Conservation Day by conducting tree planting, native plant demonstrations, and providing wellhead protection and groundwater education. -- Participated in the annual Battle Creek Children's Water Festival for school-aged children with an activity that investigated various water-related topics including the water cycle, groundwater pollution, and conservation. -- Participated in the Greening of Marshall in the spring and fall by planting trees. Participants and volunteers learned about water's vital role in everyone's daily lives and the importance of protection.

## Coldwater MI

**Years Designated** 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Coldwater's population of 10,555 receives all of its drinking water from four public wells located within a 8.2 square mile area. Protecting the water supply and continuing to encourage conservation are top priorities for Coldwater's Groundwater Guardian team. Coldwater uses the Groundwater Guardian program to bring national attention to local groundwater protection efforts.

### **Result Oriented Activities:**

Continued a Pollution Recycling and Reduction Initiative. -- Educated elementary school children about the importance of conservation and pollution prevention. Students attended tours of the water treatment plant. -- Continued to update and improve a source water protection program and management plan for the area's drinking water supply. -- Distributed informational material with bills to water customers.

## Greater Lansing Area MI

**Years Designated** 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

The Greater Lansing Area's 465,000 residents receive 100 percent of their drinking water from local groundwater resources. Currently, groundwater-related concerns are carbon sequestration, unsealed abandoned wells, urban sprawl and additional infrastructure, manufacturing and heavy industry, as well as the ongoing education and involvement of elected officials and the loss of state funding and staff for wellhead protection efforts. The Greater Lansing Area Groundwater Guardian team uses the program to encourage communication among neighboring communities and to provide education to elected officials.

### **Result Oriented Activities:**

Completed final draft of a regional water gap analysis to evaluate water policy and practices as they apply to groundwater, storm water, surface water, and waste water. -- Held three "Meet Your Match" events to pair facilities with waste streams with facilities that can re-purpose the waste as inputs to reduce waste and the need for additional raw materials.

# Michigan State University MI

**Years Designated** 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

Michigan State University is home to 50,000 students who receive 100 percent of their drinking water from groundwater. The majority of the campus water supply wells are located south of the main campus where the University's agricultural research farms are located. These land uses within the recharge area may pose a threat to the groundwater supply. Michigan State uses Groundwater Guardian to build support for the University's drinking water and stormwater management programs.

## **Result Oriented Activities:**

Updated training materials and launched online training aimed at farm managers whose land is part of the south campus well head protection areas. This training has been added to requirements for all Farms employees. -- Presented at the MSU Science Festival on water sources and the local drinking water supply to approximately 100 students and educators. -- Worked to achieve verification under the Michigan Agriculture Environmental Assurance Program (MAEAP) aimed at preventing and/or minimizing agricultural pollution risks, for south campus farms.

## City of Detroit Lakes MN

**Years Designated** 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Groundwater supplies 100 percent of the drinking water to the 8,763 people who live in the City of Detroit Lakes. The City is committed to locating and properly closing abandoned wells within capture zones and continues to seek funding for proper sealing. Detroit Lakes uses Groundwater Guardian to educate local students about the water system, involve the public in groundwater protection, and continue management practices of the land within the groundwater recharge area.

### **Result Oriented Activities:**

Coordinated with Rossman Elementary and Holy Rosary Catholic Schools to hold a one day water festival for 16 fourth grade classes from five schools with hands-on activities to learn about wellhead protection, fluoride in drinking water, AIS, storm water run-off and conservation. Students gave presentations about a variety of groundwater-related topics. City staff serve as mentors, and provide tours of the water plant, wells, wellhead protection areas, and wastewater treatment facility. -- Hosted a booth at a builders association fair and distributed materials on groundwater conservation and wellhead protection.

# Holy Rosary Catholic School MN

**Years Designated** 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

Holy Rosary Catholic School is located in the City of Detroit Lakes and receives all of its drinking water from local groundwater supplies. This elementary school is committed to educating its students and the surrounding community about the importance of protecting groundwater, and will use Groundwater Guardian to help do so.

## **Result Oriented Activities:**

Held the 2015 Water Festival attended by 150 students, parents, and the general public. Fourth grade students, working with mentors from Detroit Lakes, served as festival presenters and shared the groundwater protection message with those in attendance. Presentations focused on wellhead protection, water conservation, water treatment, groundwater, surface water, wells, and wastewater treatment

## Rossman School - Detroit Lakes MN

**Years Designated** 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Rossman School is located within the City of Detroit Lakes in western Minnesota. Because the residents rely on groundwater for all of their drinking water needs, educating the public and youth about the protection and conservation of this resource is the primary goal. The Rossman Team uses Groundwater Guardian to identify private wells that could pose a risk to city wells and their recharge area.

### **Result Oriented Activities:**

Students worked with mentors at the City of Detroit Lakes to learn about the importance and protection of the water supply. Students took tours of the wells, water plants, water towers, and learned about water treatment, wastewater treatment, wellhead protection, contamination, conservation, watersheds, and more. The students then presented what they learned to other students and community members as part of a community water festival.

# Independence MO

**Years Designated** 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

The 116,000 residents of Independence rely on groundwater for all their drinking water needs. However, the wells and treatment facility are located in an adjoining political entity so the City of Independence doesn't have control over zoning and land use. There are several high profile sites in the vicinity of the treatment plant that could possibly endanger the water supply, and public perception often focuses on these sites as a cause for concern. A wellhead protection plan is in place and a network of early warning monitoring wells are tested on a routine basis. The plan calls for public education as a component, which is fulfilled through Groundwater Guardian efforts. The Independence team uses Groundwater Guardian for ideas and solutions in local groundwater education efforts.

## **Result Oriented Activities:**

Provided groundwater protection, pollution prevention, and water cycle education to 5th grade students from all 18 schools in the school district. Students toured the water plant, learning about the water cycle and the importance of keeping groundwater safe. Students also made edible aquifers to demonstrate groundwater contamination. Around 1,100 students participated.

## Sedalia MO

**Years Designated** 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Sedalia is home to 21,000 people. Sixty percent of the community's drinking water is supplied by groundwater. Current sedimentation rates are threatening surface water supplies, along with high levels of phosphorus and nitrogen. Dropping groundwater levels also are a concern for residents. Sedalia uses Groundwater Guardian to continue community education efforts to the community on their role in protecting groundwater.

### **Result Oriented Activities:**

Continued to provide education to the community about their role in the preservation and quality of safe drinking water, through bi-lingual flyers with water bills, classroom visits to elementary and high school classes, and presentations to community leaders and civic groups. -- Worked with 61 volunteers to hold a clean up to remove debris at Breakfast Branch and the Pearl River.

## Beatrice NE

**Years Designated** 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

The City of Beatrice relies on groundwater for all its drinking water needs. The city is home to over 12,000 residents. Drinking water is supplied by and blended from two separate wellfields. Nitrate levels in both wellfields are a concern, and the City uses Groundwater Guardian to help educate farmers and city residents about best management practices.

### **Result Oriented Activities:**

Held an educational training for 32 farmers with land in the wellhead protection area. Presentations included information on best management practices for irrigation. -- Held an educational training for 20 city residents about chemical use and water conservation in lawn care. Both trainings are aimed at getting residents to look at the bigger picture of groundwater protection.

## Cargill Team Blair NE

**Years Designated** 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Blair is a mostly rural area, home to a population of 9,000, with an emphasis on agriculture, but is also home to several large industrial facilities, including Cargill. Cargill is a large industrial user of water, and its treatment and reuse are top priorities as the water used by the plant is returned to the environment. As an agricultural partner in the farming community, Cargill supports best land management practices, pollution prevention, and water conservation/reuse. Land and water conservation and pollution prevention are some of the most important issues for this community. Cargill Blair uses Groundwater Guardian to provide educational tools and activities in local schools and participates in the Nebraska Children's Groundwater Festival to extend its scope of beyond the local Blair community.

### **Result Oriented Activities:**

Presented educational activities at the 2015 Nebraska Children's Groundwater Festival. -- Worked with one High School science classes to present a groundwater and wastewater solutions presentation with class lab exercises to demonstrate water treatment methods.

## Grand Island NE

**Years Designated** 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Grand Island relies on wells within the city and wells located on an island in the Platte River to supply the city's 50,000 residents with drinking water. The sand and gravel aquifer underlying the area is very porous, causing rapid recharge. While the porosity makes the aquifer suitable for well installation, any contaminants present can easily leach into the aquifer. Severe contamination from industrial solvents was discovered in 2003, as well as other pollutants in December 2004 and January 2006. Grand Island uses Groundwater Guardian to help educate local citizens about the importance of keeping contaminants out of the water supply.

### **Result Oriented Activities:**

Presented the "Water Rockets" activity at the 2015 Nebraska Children's Groundwater Festival for over 160 students, and provided information about the city's water use. -- Worked with the local public access television station to air "The Price of Water," a documentary about the state's water resources. -- Continued to work with a local school and Natural Resources District to beautify a portion of the Wood River. Native trees and shrubs were added and dead ones replaced. -- Continued to maintain an Outdoor Learning Area at Nebraska's State Fair Park in Grand Island. The learning area educates the public about water quantity and quality, groundwater stewardship, natural filtration techniques, efficient water use, and the Ogallala Aquifer. The team installed permanent signage to identify the bioswale, rain garden, prairie, and general layout of the area. The State Fair is attended by over 300,000 people annually. The site was also selected as part of the Great Park Pursuit in conjunction with the Nebraska Recreation & Parks Association and the Nebraska Game & Parks. The Great Park Pursuit is designed to promote active lifestyles.

## Keith County NE

**Years Designated** 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2012, 2013, 2014, 2015

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### **Community Profile:**

Keith County is also home to Nebraska's largest reservoir, Lake McConaughy. While no major problems exist with drinking water, residents are concerned about nitrate levels and agricultural and domestic contaminant sources. Keith County uses Groundwater Guardian as part of its educational programs for students and community members.

### **Result Oriented Activities:**

Presented water education events and activities at the Lake McConaughy Visitor's Center to inform students and visitors about the many competing issues surrounding water resources. Events and activities included a Water Science Day to 50 students; an outdoor education event for 200 students to learn about groundwater/surface water, hydrogeology, water properties and hydroelectric power; and a kids fishing clinic and water expo.

## Lincoln NE

**Years Designated** 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Lincoln's over 250,000 residents rely on groundwater for their drinking water needs. The Platte River provides most of the recharge for the city's water supply near Ashland. Maintaining quality water to sustain the community, especially during warm weather months and/or drought conditions is currently a major concern. The continued growth of Lincoln also requires the city to continue long-term water conservation programs. Lincoln uses Groundwater Guardian in combination with the Mayor's Water Conservation Task Force and the Mayor's Environmental Task Force to educate and inform the public to help them conserve water and better utilize it using best management practices.

### **Result Oriented Activities:**

Sponsored an annual citywide water conservation poster contest for 5th grade students. The winning "Be Water Wise" posters were featured on the city website, on bookmarks distributed to local city libraries, billboards, and busboards. -- Continued to update and expand the City's website to include additional information about water conservation and team projects. -- Continued to provide speakers for a water conservation Speakers Bureau. -- Participated in Earth Wellness Festival where 5th graders circulate through hands-on workshops covering topics such as: water treatment, water pollution, and drinking water regulations. -- Included the Groundwater Guardian logo on all printed materials and displays.

## Village of Trenton NE

**Years Designated** 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Groundwater provides all of the drinking water for the 560 residents of Trenton. Two new wells provide excellent high quality water to the community, and the Groundwater Guardian team plans to reinforce citizen awareness regarding their drinking water and its protection. The new wellfield has been enrolled in the Conservation Reserve Program (CRP), with some additional private land also enrolled in CRP for wellhead protection. Trenton uses the Groundwater Guardian program to encourage water conservation in all areas of water use.

### **Result Oriented Activities:**

Maintained the Village wellfield's involvement in the Groundwater Guardian Green Site program to ensure best practices around the City's wells. -- Continued to conduct an annual update to a survey among residents about changes in plumbing connections in order to prevent backflow.

## Las Vegas Valley NV

**Years Designated** 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

The Las Vegas Valley hydrographic basin has been over-appropriated since 1955 and the area's population of two million continues to grow. The declining water table has caused well failures and higher pumpage costs for public and private well users. In 1997 the Nevada Legislature authorized the Southern Nevada Water Authority to establish a Groundwater Management Program and the Advisory Committee for Groundwater Management. The Groundwater Management Program uses Groundwater Guardian to promote the importance of protecting groundwater supplies from contamination, as well as informing well users about important groundwater issues.

### **Result Oriented Activities:**

Continued the Well Conversion Grant Program, which provides assistance to households wishing to connect to a municipal water system. Close to 500 businesses and households have utilized the program since it began in 1999. -- Provided financial incentives to homeowners who replaced turf with water smart landscaping, such as drought tolerant plants and trees. Since the program's inception in 2002, 689 conversions have been completed, converting a total of more than 1.8 million square feet of turf to water-smart landscaping. Water meters are also offered to help monitor usage, distributing 396 meters and 208 installation rebates to well owners since 2008. -- Provided funding to plug unused and abandoned wells. More than 350 unused wells have been closed as a result of the program. -- Continued to hold Advisory Committee meetings and an annual public workshop to work with the State Engineer and other stakeholders to address issues facing well owners in the valley, with a focus on recharge and water quantity issues.

## Merrimack NH

**Years Designated** 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Because groundwater supplies 100 percent of the drinking water needs for Merrimack's 26,600 residents, keeping up with water demand throughout the town's new construction is a concern. Keeping the public aware of groundwater and wellhead protection, as well as levels of iron, manganese, sodium, and chloride in District wells, are top priorities for the community. In addition, the Groundwater Guardian team wants to emphasize wellhead protection, education of the community and especially town officials.

### **Result Oriented Activities:**

Participated in a Water Festival to educate over 400 4th graders through presentations, exhibits, and hands-on activities. Water-related science fair projects made by students were also presented. -- Because of concern over rising levels of sodium and chloride levels in community wells, certain streets were targeted as no salt/low salt areas during snow removal. The Village will continue to monitor salt application throughout the coming winter, and work to educate local businesses about salt use and alternatives to salt for de-icing. -- Educated and involved community in preventing a gas pipeline's installation. The Groundwater Guardian community is concerned that the potential use of fire retardants in the event of a fire could compromise groundwater quality.

## Stafford Township NJ

**Years Designated** 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2013, 2014, 2015

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### **Community Profile:**

Groundwater provides for all of the drinking water needs of the 26,535 residents in the Stafford Township area. Currently, the community is facing problems from the unsolicited distribution of a newspaper; resulting in littering, damage to street sweepers, and pollution to waterways. Stafford Township uses Groundwater Guardian to help educate the public regarding potential sources of groundwater contamination and the importance of stormwater management to enhance clean groundwater recharge and discharge into the Bay.

### **Result Oriented Activities:**

Passed an amendment to a littering ordinance in response to the distribution of unsolicited handbills. The township has experienced a reduction in the amount of litter on streets, in stormwater management systems and waterways. The ordinance also fostered a dialogue between township officials and companies that distribute publications, one such company has begun using biodegradable bags for newspaper delivery.

## Moodna Watershed Intermunicipal Council NY

**Years Designated** 2011, 2012, 2013, 2015

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### **Community Profile:**

Approximately half of the population of the Moodna Creek watershed rely on groundwater for drinking water from many different sources, including tributaries, sand and gravel aquifers, and bedrock aquifers. The community is very concerned with preserving water quality in the face of intense growth. The Moodna Watershed uses the Groundwater Guardian program to educate the public about potential threats to water quality.

### **Result Oriented Activities:**

Monitored the pressure and temperature of the Moodna Creek and three tributaries. -- Hosted guest speakers at quarterly Council meetings that addressed water resource issues in the Moodna Creek and Hudson River Watersheds.

## Town of Wallkill NY

**Years Designated** 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

The 15,500 people who live in Wallkill receive all of their drinking water from local groundwater supplies. Wallkill's main wellfields are along the Wallkill River and subject to potential contamination from an urban setting. The Town wishes to continue to protect its groundwater by educating its citizens about groundwater protection options and water conservation. Wallkill uses the Groundwater Guardian program in its education and wellhead inspection programs.

### **Result Oriented Activities:**

Prepared and distributed the Annual Water Quality Report to water customers and the Department of Health. The report included information for water customers to learn more about water conservation and groundwater protection. -- Continued to air public service announcements about water conservation and wellhead protection on local cable television. -- Continued implementation of the Stormwater Phase II requirements, with an emphasis on education and outreach and public involvement, and the connection to groundwater. -- Hosted a Groundwater Night to educate the community about groundwater concepts, including geology, and the community's water resources.

# Mecklenburg County NC

**Years Designated** 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

In Mecklenburg County, population 990,977, approximately 15 percent of homes and businesses rely on groundwater as their drinking water source. Most of the people access groundwater through private and neighborhood wells. Mecklenburg County is in an urban area and has almost 1,500 known groundwater/soil sites of contamination. It is important to protect the groundwater as a safe drinking water source and to identify areas where it is not safe to drink. Mecklenburg County uses Groundwater Guardian to participate in community events that provide opportunities to educate the public about the groundwater system.

## **Result Oriented Activities:**

Held a booth at a citywide, public information event for realtors to provide information and education on groundwater resources, private wells and septic systems.

## Orange County NC

**Years Designated** 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Approximately 37 percent of the drinking water needs for Orange County's 140,000 residents are met by local groundwater supplies. The County is working to proactively address the quality and quantity of local groundwater supplies, including radon and arsenic concentrations. In general, the County's groundwater is of acceptable quality, though concerns exist over the availability of groundwater, especially during periods of drought. Orange County uses Groundwater Guardian in local public education and awareness efforts.

### **Result Oriented Activities:**

Participated in various community events and activities to educate the public about the importance of groundwater. Information about local groundwater issues was distributed, and groundwater model presentations were given to demonstrate groundwater movement. -- Continued collecting data for a groundwater observation well network, Orange Well Net (OWN), to monitor groundwater levels across the county. The network serves as a drought monitoring tool with an early warning system for declining groundwater levels. Groundwater levels are currently collected every hour in 12 wells, and the information is available to the public via the North Carolina Division of Water Resources website.

# Brown County OH

**Years Designated** 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

The Brown County Rural Water Association is a rural water system relying completely on groundwater, with wells over 70 feet deep tapping into the Ohio River Aquifer. This aquifer is highly susceptible to contamination, due to the sand and gravel composition of the aquifer and its proximity to potential contaminant sources. Specific contamination concerns include septic tanks, agricultural chemicals, highway traffic, and potential gravel mining operations. One production well was contaminated by VOCs in 1996. A pump-and-treat remediation system was installed as a result, and the aquifer has been restored to the point that no detectable contaminants were found. The lessons learned from this experience were great, none more important than the value of groundwater pollution prevention. Brown County is home to 25,000 people, and uses Groundwater Guardian to educate the public about the importance of protecting groundwater resources and to instill a sense of ownership of the well fields in community residents.

## **Result Oriented Activities:**

Continued implementation of a long-term wellhead protection management plan, which has been approved by the Ohio EPA. The plan was created to ensure a long-term, easy to follow and implement plan to manage the area to ensure groundwater is protected. Participation in Groundwater Guardian is included as part of the plan.

- Held regular wellhead protection committee meetings for local groundwater users. The meetings address local and national environmental issues and regulatory updates.
- Continued to update and maintain a website for the Brown County Rural Water Association and Groundwater Guardian team. The site includes links to federal, state, and local groundwater sites, as well as information about wellhead protection efforts, water treatment, and public education.
- Adopted a section of highway US52 between White Oak Creek and Straight Creek for quarterly cleanups. This section of the highway is near community wellfields and is part of the wellhead protection area.

# Dayton Multi-Jurisdictional Source Water Program OH

**Years Designated** 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

The City of Dayton taps a sole source aquifer for 400,000 water consumers. Hundreds of businesses with 175 million pounds of hazardous materials operate near the wellfields. Over 17 million pounds of hazardous materials have been permanently removed from the Source Water Protection Area by financial incentives. Dayton, Huber Heights, Riverside, Vandalia, Harrison Township, and Wright-Patterson Air Force Base initiated a wellfield protection program using overlay zoning, monitoring, emergency response and financial incentives for risk reduction activities. Each jurisdiction has at least one person assigned to monitor compliance with the Source Water Protection Program. The Dayton Multi-Jurisdictional Source Water Protection Program uses Groundwater Guardian to increase citizen awareness of the wellfield protection program, establish a risk assessment program for businesses handling chemicals, provide groundwater and environmental education for children and the general public.

## **Result Oriented Activities:**

Continued to manage and oversee contracts for Multi-Jurisdictional Economic Development, Fire Prevention Inspector, and Environmental Specialists authorized by the Wellfield Protection Board, which promotes groundwater-friendly economic development of the area. -- Provided materials about the importance of water protection and the importance of water to the community and its economic vitality to over 400 businesses in the source water protection area as part of yearly inspections. -- Held the 19th Annual Children's Water Festival, which was attended by 1,800 fourth grade students from 29 area schools. It featured presentations, entertainers, mascots and outdoor activities focused on groundwater, surface water, land use, pollution prevention, environmental stewardship, and recycling. -- Dayton's Groundwater Guardian designation was celebrated and Multi-Jurisdictional partners recognized during the festival's Dignitaries Luncheon. -- Continued community outreach and educational events, making 70 presentations to citizens' groups, community organizations, school classrooms, and the business/economic development conference on groundwater protection. Other events included river cleanups, water treatment plant tours, maintaining green roofs on City Hall, using portable taps and a water trailer to provide free drinking water at public events, using an Enviroscope model to demonstrate runoff and pollution prevention, and maintaining partnerships. -- Supported the City of Dayton's resolution to encourage regional sustainability by involving Kittyhawk Golf Course and city wellfields in the Groundwater Guardian Green Site program. -- Promoted a Blue-Gold and DRG3 (Dayton Regional Green) certification to businesses in the source water protection area. The certification stresses the benefits of green/sustainable business practices. -- Established a process to assist businesses in their decision making concerning equipment operation and maintenance and chemical handling and usage, as well as develop employee training programs for spill prevention and response. -- Worked to update the Ohio EPA delineation for the source water protection area. A model has been completed, business and town hall meetings held, information posted on the city's website, and proposed changes were adopted by the City Commission.

## Hamilton to New Baltimore OH

**Years Designated** 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014

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### **Community Profile:**

The Hamilton to New Baltimore Groundwater Consortium is made up of the cities of Cincinnati, Fairfield, Hamilton, the SW Regional Water District, the SW OH Water Co. and MillerCoors LLC, and includes a population of 315,000. The Consortium wells are interrelated physically and directly influence the capture zone size of each system's wells. The Wellhead Protection (WHP) Area consists of a sand and gravel buried valley aquifer overlain by a densely populated industrial community. The majority of the wells behave hydrogeologically as a collective wellfield yet politically are separate. The characteristics that make it a productive source of drinking water are the same characteristics that make it susceptible to pollution from USTs, general chemical handling, dry wells, and improperly abandoned wells. The Consortium uses GG to inform the public about protecting groundwater resources, teach a basic understanding of what groundwater is and how human activities may affect its quality, and instill a sense of ownership of the wellfields and understanding that protection is necessary and worthwhile for the community.

### **Result Oriented Activities:**

Continued administration of the area's Source Water Protection Program. The Consortium worked with communities to update their ordinances, as well as businesses in new time of travel zones. -- Continued to update and maintain the local Source Water Protection Program website, with updated event information and photo galleries. A Facebook page also shares information about events and other program activities. -- Planned and implemented a cleanup of a 17 mile stretch of the Great Miami River with 300 volunteers. -- Held the 17th Butler County Water Festival, attended by over 1,000 4th, 5th, and 6th grade students and 40 presenters. -- Updated banners with the Groundwater Guardian logo at water plants and supply centers within the Consortium. -- Distributed a WHP Program newsletter for businesses within the WHP area to share information about program activities and updates. -- Offered assistance to help two businesses apply for Groundwater Guardian Green Site designation and further management. -- Held an Earth Day event in downtown Hamilton attended by over 1,000 people, and demonstrated a groundwater model. -- Continued to utilize a mini drinking water tower at community events to promote the use of tap water. The mini water tower is nine feet tall and weighs 800 pounds. -- Worked with volunteers from MillerCoors to have over 95% of the network wells wirebrushed and painted. -- Held a Butler County Soil and Water Educational Field trip for over 50 volunteers and participants. -- Began developing signage to be installed along bike trails to raise awareness about the local aquifer, groundwater protection, and conserving energy through wise water use.

## Wright-Patterson Air Force Base OH

**Years Designated** 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

The WPAFB community is concerned with the quality of the base's drinking water for its population of 27,000. This concern is due to the number of landfill contaminants that have been found throughout the base. Extensive remediation has been accomplished; however, it has been difficult to change perceptions. Wright-Patterson uses the Groundwater Guardian program to develop and provide public awareness programs regarding the remediation of landfill contaminants, as well as implement a wellfield protection program to prevent possible groundwater contamination.

### **Result Oriented Activities:**

Continued to maintain an up-to-date potential contaminant source inventory that identifies whether initial storage limits are exceeded and reduce the possibility of potential pollutant releases to the wellfield protection areas as part of a memorandum of understanding for the City of Dayton wellfields. -- Investigated seven former underground storage tank sites and one former oil/water separator sites to ensure no contaminants of concern are found. One site has been flagged for remediation for low level soil contamination. -- Participated in the City of Dayton's Annual Children's Water Festival as presenters and volunteers. The festival reached around 2,000 Dayton area students. -- Continued to provide an education outreach program. Events were held during the week of Earth Day and news articles were printed in the base newspaper. -- Continued monitoring underground storage tanks.

# Southern Willamette Valley Groundwater Management Area OR

**Years Designated** 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

A reconnaissance study done by the Oregon Department of Environmental Quality (ODEQ) in the 1990s and early 2000s indicated that private and public wells within the Southern (Upper) Willamette Valley were experiencing nitrate contamination. The area is home to approximately 21,000 people who receive 85% of their drinking water from groundwater. In 2004, the ODEQ declared the area as a groundwater management area. Oregon law requires that such a declaration be accompanied by the development of an action plan to reduce the contamination. This action plan must be developed by a committee representing local stakeholders and was completed in late 2006. This community will use the Groundwater Guardian program to focus on a select few of the implementation of strategies identified in the action plan.

## **Result Oriented Activities:**

Worked to identify rural neighborhoods for educational outreach about nitrate issues and steps they can take to protect the health of their households. Staff are researching and mapping variables (population, septic system density, monitoring data, crop types, soil sensitivity, etc.) that define a "neighborhood" and assessing contamination susceptibility in the Groundwater Management Area.

## Springfield OR

**Years Designated** 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Springfield's wells are distributed throughout the city and surrounding residential, agricultural, commercial and industrial land use areas. Groundwater supplies 90 percent of the city's 56,000 residents' drinking water needs. Some wells are in or adjacent to areas where leaks and spills have caused groundwater contamination, and these plumes are being tracked and some undergoing bioremediation. Springfield uses Groundwater Guardian to help publicize the city's reliance on groundwater and the contamination risks faced, support educational programs in schools, participate in local organizations and support ordinances that help reduce the risk to drinking water supplies.

### **Result Oriented Activities:**

Worked with high school students to test water from private household wells to provide a basic analysis and suggest alternatives for further testing and treatment. -- Continued progress on the Cedar Creek Project, which involves 50-70 students and 10 teachers in a multi-faceted approach toward the monitoring and restoration of the Cedar Creek basin and illustrating the connections between groundwater and surface water. -- Continued to update and revise a plan for enhancing current groundwater education activities, focusing on ways the team can educate and inform the public about Springfield's groundwater supplies. -- Continued an inspection program to map stormwater quality facilities like bioswales and retention ponds. The program helps educate residents and business owners about the hydrologic connection between stormwater and groundwater in Springfield. -- Participated in a household hazardous waste roundup. -- Installed demonstration rain garden educational kiosks to educate homeowners and students on protecting water quality. -- Worked on creating a best practices manual for pesticide application.

# Buhl Community Water PA

**Years Designated** 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

Groundwater is the sole source of drinking water for the 1200 residents served by Buhl Community Water. Some of the groundwater-related concerns for this area include building public awareness and education, pollution prevention and conservation. The Villages use the Groundwater Guardian program to educate residents about the importance of groundwater protection through a variety of public information activities.

## **Result Oriented Activities:**

Continued local groundwater education and outreach efforts for businesses and residents.

## Keystone Clean Water Team PA

**Years Designated** 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

4.5 million of the 12.7 million people in Dallas receive their drinking water from groundwater supplies. Currently, the lack of private well standards and testing is a concern. Keystone Clean Water Team will use Groundwater Guardian to legitimize the group's efforts and empower local grassroots approaches.

### **Result Oriented Activities:**

Participated in four events in three school districts to provide information on careers in energy, and in classroom workshops about energy efficiency, conservation, and renewable energy. -- Provided an easy-to-read guide for private well owners, including information on drinking water standards, water treatment, well maintenance and construction, and oil and gas development and subsurface mining. -- Started development of a mobile phone app that will cover issues of baseline water testing. -- Partnered with an environmental consulting firm to publish an e-book on water quality in the state.

## Meadville Area PA

**Years Designated** 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

The Meadville Area Water Authority serves a population of 16,000 with all of the drinking water supplied by groundwater. In 2006, the Authority received a Source Water Protection Grant to delineate the source water area, identify potential contaminants from residential, commercial, and industrial sources, and to develop action items to protect source water. The Authority has developed a state-approved wellhead protection program, and the team's goal is to maintain and update the program to work with municipalities, citizens, schools, and other organizations to provide education and make recommendations of needed ordinances to the proper governing bodies.

### **Result Oriented Activities:**

Continued Source Water Protection education to approximately 300 sixth graders at six schools. A Source Water Protection Poster Contest was held as part of this effort during Drinking Water Week.

## Shrewsbury Borough PA

**Years Designated** 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Shrewsbury Borough, with a population of 3,800, has all of its drinking water supplied by groundwater. It is currently dealing with the costs and fees related to current regulations, and uses Groundwater Guardian for educational resources and to learn more about regulations that may affect the Borough's water supply.

### **Result Oriented Activities:**

Continued to involve surrounding communities in the York County Source Water Coalition, which will function to share ideas and resources to protect groundwater and surface water in the area. -- Monitored development in wellhead protection area. Worked with a business to make corrections to a development plan. -- Worked on emergency response to chemical spill, learned from the emergency response of a neighboring town during a chemical spill. -- Worked with an engineer to map distribution system assets and wellhead protection zones.

## Washington County PA

**Years Designated** 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Groundwater provides 45 percent of the drinking water to the area's 208,716 residents. Current threats to groundwater include possible impacts from development of natural gas resources in the Marcellus Shale formation, particularly in the quality of well water, and the impact of urban and suburban development on groundwater. Washington County uses Groundwater Guardian to continue public education efforts in local schools and for the general public.

### **Result Oriented Activities:**

Continued stream monitoring efforts for potential negative impacts from Marcellus Shale drilling. Monitoring equipment is installed in 20 streams throughout the county, and the data has been distributed at various outreach events to residents of the county, as well as with public agencies and local municipalities. Most of the county's streams are groundwater-fed, establishing baseline readings for streams and groundwater in the region. The data is uploaded to a local University's website for public access. Funding will provide an environmental consultant to review the data and make restoration and protection recommendations. -- Conducted groundwater monitoring concurrent with the team's stream monitoring project.

## North Kingstown RI

**Years Designated** 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

The 26,296 people who live in North Kingstown rely on groundwater for all of their drinking water needs. Currently the community is concerned about the potential for bacterial contamination, as well as wastewater management and continued development. North Kingstown uses Groundwater Guardian as a component of various education programs.

### **Result Oriented Activities:**

Continued a public education initiative to educate the citizens of the community about the benefits of good wastewater management, stormwater management, and appropriate groundwater protection policies. A yearly community environmental fair is part of this effort, which is attended by over 1,000 people.

# Memphis and Shelby County TN

**Years Designated** 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

Shelby County's residents draw 100 percent of their drinking water from the largest public artesian water supply in the U.S. Protecting the purity and quality of this groundwater supply is imperative. In 1987, for the first time, one of the water wells used to supply public water showed traces of chemical contamination. At approximately the same time, wells in a smaller municipality were contaminated with TCE which had spilled at a nearby manufacturing facility several years earlier. The contamination of these wells revealed that the depth of the aquifer and its confining strata would not act as a barrier to the downward migration of the variety of chemicals generated by an urban society. Memphis and Shelby County use Groundwater Guardian to develop a comprehensive aquifer protection and conservation education program and conduct annual regional conferences about groundwater issues.

## **Result Oriented Activities:**

Sampled and tested approximately 307 quasi-public wells located within Shelby County and 15 newly-installed residential wells for various contaminants. -- Continued the Well Survey Program. Performed 75 well surveys and 15 abandoned wells were closed. -- Performed 19 site inspections of 15 new water wells to verify construction standards are met. -- Reviewed all applications for proposed installation of remediation systems at sites throughout Shelby County. Issued 142 permits for remediation efforts and performed 34 site inspections. - - Provided a presentation on the value of water resources and the Memphis Sand Aquifer for use by the Ground Water Quality Control Board members for presentations to rotary clubs, schools, and other community groups. -- Reviewed 262 site plans and inspected 39 sites before new development was allowed in the aquifer recharge area. Seven abandoned wells were located as a result, and properly filled before construction activities began. - - Continued to utilize GIS to map areas with the greatest concern in relation to the Memphis Sand Aquifer. Twenty-eight GIS projects were completed that dealt with the protection of the water-bearing aquifers of Shelby County and other health-related issues. -- Sealed 19 abandoned water wells within Shelby County. -- Maintained a permanent collection site for Household Hazardous Waste. -- Continued age-dating of local groundwater. Continued sampling and testing indicate no modern water is entering the Memphis sand aquifer. -- Properly abandoned 308 unused monitoring wells. -- Made 151 site inspections to properly site 111 subsurface sewage disposal systems within Shelby County.

# North Plains Groundwater Conservation District TX

**Years Designated** 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

Groundwater depletion is the major concern for the eight counties within the North Plains Groundwater Conservation District. This region is home to over 71,000 people who utilize groundwater for 100 percent of their drinking water. Lack of recharge in this part of the Ogallala Aquifer indicates groundwater mining, and teaching water conservation and raising public awareness is a major goal of this District. Rules are now in place that regulate the amount of groundwater that can be pumped by well owners each year and that limit the proximity of new wells to existing wells. As a Groundwater Guardian Community, the District offers education to the public through outreach programs.

## **Result Oriented Activities:**

Held water festivals for 4th graders in 17 school districts. Since 2005, over 7,500 students have been reached with messages about water protection and preservation. -- Held a day-long class on water-wise gardening and xeriscaping in partnership with local Master Gardeners for 85 residents. -- Continued distribution of the "Major Rivers" water conservation curriculum to 4th grade teachers and their students in the District. The curriculum educates students about their water resources and their role in protecting and conserving them. -- Sponsored a water conservation artwork contest for 4th- 6th graders in District counties. Thirteen winning entries are featured in a water conservation calendar provided free to the public, given away to hundreds each year. -- Gave classroom presentations to over 400 students in all age levels, from K-12. -- Provided presentations on the Ogallala Aquifer and the need for conservation to 4th grade students attending the Farm Bureau Ag Fairs in eight district counties. -- Continued a five-year reduced irrigation for corn production demonstration project using the latest irrigation management strategies and techniques. The project is aimed at showing producers how their efficient use of water can help them maximize their return on investment while preserving water for the future, as corn irrigation uses 63% of the groundwater pumped in the District. -- Continued the "Operation: Summer Showers" public relations campaign to help residents reduce their water use, particularly during the summer months. Conservation kits were distributed in cooperation with water utilities in each county, and radio and newspaper PSAs were run. -- Educated 5th graders about water conservation and water saving techniques.

## Renton WA

**Years Designated** 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Renton is home to 95,540 people that receive all of their drinking water from local groundwater supplies. The protection of a shallow aquifer located beneath downtown businesses from various forms of contamination is a top priority for the residents of the area, as well as maintaining quality and quantity of service in the face of new City growth. Renton uses the Groundwater Guardian program to raise awareness about local drinking water and groundwater issues.

### **Result Oriented Activities:**

Participated in Renton River Days, by hosting a booth. Educational materials were distributed about where the city gets its drinking water and how to protect it. The team used a fish tank model of an aquifer and had other groundwater games and activities as part of their outreach. -- Worked to redefine the location of the local aquifer through an updated model. Working with the City Council, the model will help change aquifer protection area boundaries. -- Participated in Family Science Night to educate parents and children about groundwater.

## Chippewa Falls WI

**Years Designated** 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

The 13,682 people who live in Chippewa Falls use groundwater for all of their drinking water needs. The City of Chippewa Falls obtains its water supply from wells located in a shallow sand and gravel aquifer. These wells are in wellfields with the majority of the zone of contribution area outside city boundaries. Nitrate, iron, and manganese levels are a concern, along with the strong probability that over 425 acres of agricultural land in the zone of contribution will soon be developed for industrial, commercial and residential uses in the next five to ten years. Chippewa Falls uses Groundwater Guardian to educate residential, business and agricultural landowners.

### **Result Oriented Activities:**

Staffed booth at Northern Wisconsin State Fair, attended by approximately 71,000 people. Various educational materials and water conservation kits were distributed. -- Demonstrated an aquifer recharge model and distributed Groundwater Guardian bracelets and groundwater information to 5th grade students at State Park Conservation Days. -- Helped host the Safe & Green Sweep Project to collect and properly dispose of expired and unwanted pharmaceuticals. Over 1,100 pounds of pharmaceuticals have been collected. -- Worked towards developing public service announcements for groundwater protection and conservation.

# Kewaunee County WI

**Years Designated** 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

Over 75 percent of the land in Kewaunee County is dedicated to agriculture, making the preservation of a clean, safe water supply for the public a top priority for the team. Recent private well testing indicates the presence of nitrates and bacteria, which has not only raised awareness but prompted well owners to become involved with the Groundwater Guardian team. The team is working to become a sustaining informational and educational, neutral organization that informs the public regarding potential groundwater contamination hazards. Kewaunee County, with a population of 20,648 relying more than 70 percent on groundwater for drinking water supplies, uses Groundwater Guardian to educate the public about potential private well contaminants through well testing programs, school programs and local event booths.

## **Result Oriented Activities:**

Assisted the Kewaunee County Land & Water Dept. in collaboration with the University of Stevens Point in a private well testing program. Team members tested 124 wells, and worked with well owners on proper well water sampling and the importance of regular private well testing; the wells will be tested for coliform bacteria and nitrates, mapped, and documented. An informational seminar was held to discuss results, which was attended by 150 people. -- Created and sold 60 rain barrels as a fundraiser for the team's groundwater education activities.

## Marshfield Area WI

**Years Designated** 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

The 20,000 residents of the Marshfield area receive all their drinking water from local groundwater supplies. Marshfield's municipal wells are shallow (50-90 feet deep) and exist in narrow, confined bedrock channels. Domestic and farm wells are low yielding wells drilled into fractured rock. Top soil consists of 8 to 10 feet of tight clay soils, which limits recharge. Marshfield uses Groundwater Guardian to promote education and awareness of the need for groundwater protection.

### **Result Oriented Activities:**

Continued to educate residents about the efforts of the Marshfield Groundwater Guardian program and projects to generate interest in the group's efforts and recruit new team members. An ad runs on the local AM and FM radio stations monthly, as well as on the Utility's telephone system. -- Continued the Rx Round-Up Pharmaceutical Take-Back Program. A permanent site has been established for residents to take their unused/expired pharmaceuticals for proper disposal through incineration. Since the program began in 2006, over 8,000 pounds of pharmaceuticals have been collected. -- Continued to promote the Groundwater Guardian Green Site program and offer assistance throughout the community. The team worked with Milladore, Wisconsin to assist with their application. -- Held a groundwater education event for 30 Girl Scouts to earn their second groundwater patch.

## Milladore Area WI

**Years Designated** 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

The Village of Milladore and the Towns of Eau Plaine and Milladore make up the Milladore Area, with a population of approximately 2,000 people. This area relies solely on groundwater for all its drinking water needs. Testing has indicated the presence of bacteria in drinking water, and nitrate levels have been a concern. The Milladore Area Groundwater Guardian team uses the program to educate the public and youth about keeping groundwater a priority in their everyday lives.

### **Result Oriented Activities:**

Worked to inform community members on the importance of properly disposing of hazardous materials through flyers and radio, television, and newspaper ads. Assisted with collecting outdated, unused, and/or hazardous chemicals.

## Casper Aquifer Protection Network WY

**Years Designated** 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

The Casper Aquifer Protection (CAP) Network is made up of private well owners located in or near the Casper Aquifer Protection Zone, and includes roughly 1000 people that depend on groundwater for all their drinking water needs. While there are no serious problems with the area's groundwater supply, Network members want to educate rural property owners about ways they can protect groundwater quality through wellhead and septic tank maintenance, regular water quality testing, the use of best management practices, and environmental awareness. The CAP Network uses Groundwater Guardian to provide information to property owners in the community.

### **Result Oriented Activities:**

Participated in a local Fourth of July celebration to provide information about the geology of the Casper Aquifer, groundwater protection, groundwater flow, and updates on protection measures in case of a chemical spill.

# Alabama Department of Environmental Management AL

**Years Designated** 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

**Mission:** To provide technical, financial and program support to communities and utilities throughout the state regarding groundwater protection and assessment. **Service Area:** The State of Alabama.

## **Result Oriented Activities:**

Continued to work to recruit new communities into the Groundwater Guardian program through breakout sessions at the state annual groundwater conference. -- Assisted with the state's Groundwater Festivals program by helping find funding and providing support to add to the counties in Alabama with active festival programs. Approximately 21,500 students have attended 26 Groundwater Festivals around the state. -- Continued to provide technical assistance with Source Water Assessments and Local Wellhead Protection programs. Five Source Water Assessments have been reviewed.

# Alameda County Water District CA

**Years Designated** 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

**Mission:** To manage and protect the Niles Cone Groundwater Basin and ensure a reliable supply of high quality water that satisfies present and future uses of the service area at a reasonable cost. **Service Area:** The cities of Fremont, Newark and Union City; a 104.8 square-mile area with a population of over 340,000.

## **Result Oriented Activities:**

Continued education and information support in area schools and communities. Over 822 students in 27 classes participated in programs that stress the importance of groundwater during the 2014-2015 school year. Another 85 classes received materials about groundwater. The District also worked with area Advanced Placement classes to provide more in-depth information about water resources. Pamphlets and brochures explaining the importance and benefits of groundwater protection, pollution prevention and water conservation methods were distributed at public events as well as in water bill inserts. -- Updated content on the District website, with additional information about the groundwater basin, District programs, Groundwater Guardian, and Groundwater Awareness Week on the District's website. -- Continued to implement an ordinance to regulate wells, exploratory holes, and other excavations in district communities. -- Worked to digitize over 14,763 well permits and other records to further reconcile well location information, locate abandoned wells and evaluate their potential to negatively impact the groundwater basin. -- Continued to update the District's groundwater management policy, including groundwater monitoring and reporting on groundwater conditions.

## Mission Springs Water District CA

**Years Designated** 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

**Mission:** To provide, protect, and preserve our most valuable resource - water. **Service Area:** The district operates three separate water distribution systems and two separate wastewater collection and treatment systems, serving Desert Hot Springs, 10 smaller communities in Riverside County, mobile home parks, resorts and a small portion of Palm Springs. The District was incorporated in February 1953 as a County Water District and is now a Special District of the State of California. The service area includes 135 square miles and over 25,000 people.

### **Result Oriented Activities:**

Continued to provide support to the Desert Hot Springs Groundwater Guardian team in the form of office storage, operating space, administrative support and technical support. -- Provided \$30,000 in funding to support the various groundwater protection and education activities of the Desert Hot Springs Groundwater Guardian team during the 2014/2015 fiscal year.

## Santa Clara Valley Water District CA

**Years Designated** 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

**Mission:** Aggressively protect the groundwater basin from contamination and the threat of contamination, and ensure groundwater supplies are sustained. The District manages Santa Clara County's wholesale drinking water resources, coordinates flood protection, and provides stewardship for the county's 10 reservoirs and more than 700 miles of streams. **Service Area:** Santa Clara County, a 1,300 square mile area with a population of over 1.8 million people.

### **Result Oriented Activities:**

Continued a water conservation program, which included rebates for water-efficient water fixtures in homes and businesses, free "Water Wise House Calls," and extensive outreach and education. In 2015, the District conducted 2,725 "Water Wise House Call" surveys, issued rebates for/or installed 6,902 residential high efficiency toilets, issued 289 commercial clothes washer rebates and issued 2,384 landscape rebates. The program saved over 62,000 acre feet of water, which is more than 15% of the total water used in the county. -- Continued a groundwater management program that provides services to well owners and groundwater users in the area, including offering free basic water quality testing (sampling 302 wells for nitrates and bacteria), commemorated Groundwater Awareness Week through a resolution adopted by the District Board and promoted on the District website and social media, presented groundwater information to small acreage owners, distributed a groundwater quality report to all well owners, and continued a rebate program for the installation of point of use treatment systems for domestic wells with elevated nitrate. -- Continued an educational outreach program, making classroom presentations, giving tours, and training teachers. Nearly 14,200 students and 537 educators were involved during the 2014-2015 year. Staff also engaged high school students in a career development program, encouraging them to pursue careers in the water industry, as well as hosting informational booths at a number of local community events.

## Central Regional Groundwater Protection Planning Committee IL

**Years Designated** 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

Mission: To develop and implement local programs aimed at preventing groundwater contamination. The organization attempts to do this by educating adults and children about risk factors and methods of pollution prevention. Service Area: Central Illinois, including Mason, Peoria, Tazewell and Woodford Counties.

### **Result Oriented Activities:**

Continued to co-sponsor the Clean Water Celebration for nearly 3,000 students to learn about water and encourage them to make a difference in the protection of this precious natural resource. The 2015 theme was "Many Lands, One Earth: Water Wisdom from Around the World." The celebration was a zero waste event - recycling stations collected paper, cardboard, aluminum, plastics, and compost materials. -- Organized the Tazewell County Health Department Environmental Education Day for around 400 county 5th graders, who participated in hands-on activities like making edible aquifers and jungles in a jar, and learning about water, recycling, and other environmental issues. -- Offered free arsenic and nitrate testing to private well owners during Groundwater Awareness Week. -- Distributed 400 free leak detection kits during Fix a Leak Week.

# Northeastern Illinois Regional Groundwater Protection Planning Committee IL

**Years Designated** 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

Mission: To advocate groundwater protection practices, procedures, and education throughout the Northeastern Planning Region. The Northeastern Illinois Groundwater Regional Protection Planning Committee is organized as a protective and collaborative effort of citizens, businesses, and local and state government officials to further groundwater protection in this sensitive region. Service Area: DuPage, Kane, Kankakee, Kendall, and Will counties.

## **Result Oriented Activities:**

Held a Field Day for 50 health department sanitarians, well contractors, and local water system operators. -- Continued a program to purchase ample quantities of bentonite to provide through local health departments to private well owners who want or need to seal a private well. The committee also provides funding to each health department to promote the program. Seven wells were sealed in conjunction with the program. -- Participated in a variety of regional community outreach events with activities and giveaway items, which reached several thousand people, including the Kendall County Natural Resource Tour, school group meetings and Earth Day and Arbor Day celebrations. The Committee also maintains a Facebook page and posts brochures in public places like libraries and city buildings to reach additional members of the public. -- Provided a program for snow and ice removal operators to educate them about chlorides and their potential hazards.

## Northern Regional Groundwater Protection Planning Committee IL

**Years Designated** 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

**Mission:** Established in 1991, the Committee emphasizes information transfer, education, and advocacy rather than regulation. **Service Area:** Winnebago, Boone and McHenry Counties in Illinois.

### **Result Oriented Activities:**

Continued to develop programs to educate county boards, city councils, and planning/zoning officials about groundwater protection, which included working with McHenry County on their groundwater protection program, attending meetings of the Regional Water Supply Planning Group as part of the Chicago Metropolitan Agency for Planning and working with communities to become Groundwater Guardians. -- Conducted public education and outreach by participating in the 21st annual youth groundwater festival at Rock Valley College which drew more than 250 fourth and fifth graders, a Youth Groundwater Festival in McHenry County for 240 students, the Boone County Fair, the McHenry County Field Day, providing support for a county unused and expired medications collection effort, and other local initiatives. -- Continued to work with Winnebago, Boone and McHenry Counties to abandon unused wells. Over 260 have been abandoned since 2001, and an additional two were abandoned last year.

# Southern Regional Groundwater Protection Planning Committee IL

**Years Designated** 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

**Mission:** To advocate groundwater protection practices and procedures throughout the Southern Illinois Planning Region. **Service Area:** Madison, St. Clair, Monroe and Randolph Counties in Southwestern Illinois.

## **Result Oriented Activities:**

Hosted a groundwater field day with various educational activities and speakers. Over 75 citizens, government officials, and others attended. -- Continued to maintain and update a library of groundwater educational materials for loan to citizens, schools, and other interested groups. The library consists of books, pamphlets, flow models, videos, and a traveling display. The team is looking into starting an electronic library for wider distribution. -- Continued to work to recruit new Groundwater Guardian Communities within the four county area. -- Continued to promote well sealing as a means of groundwater protection and to provide bentonite for use in sealing. -- Maintained and updated a Committee Networking Guide to serve as a resource guide for members and the public providing points of contact within various areas of expertise.

## U.S. Geological Survey (USGS) Michigan Water Science Center MI

**Years Designated** 1998, 1999, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

**Mission:** USGS has the principal responsibility within the federal government to provide hydrologic information and understanding needed by others to achieve the best use and management of the nation's groundwater. To accomplish this, USGS, in cooperation with state, local and other federal agencies, systematically collects and analyzes groundwater data; conducts water-resource appraisals describing the occurrence, availability, and physical, chemical, and biological characteristics of groundwater; conducts basic and problem-oriented hydrologic and related research that aids in alleviating groundwater problems; and provides and understanding of groundwater systems sufficient to predict their response to natural and/or human-induced stress. **Service Area:** The State of Michigan and multi-state initiatives sponsored by the USGS and other federal agencies.

### **Result Oriented Activities:**

Continued to make real-time data available online for two groundwater stations. Continuous and discrete data, as well as water quality data, is available for other groundwater sites throughout the state to assist with local groundwater evaluation and protection. -- Continued investigating the potential effects of irrigation withdrawals on aquifer levels and local streamflow through a number of groundwater model scenarios. A report is being developed to document field and modeling work. -- Installed wells and began collecting samples to monitor pesticides and metabolites in groundwater. The information collected will be used to make management decisions. -- Continued compiling public supply water use sites and comparing information in other databases as part of the USGS Water Census program.

## U.S. Geological Survey (USGS) Nebraska Water Science Center NE

**Years Designated** 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

**Mission:** We provide scientific data collection and interpretation for Congress, State and local agencies, and tribes. Part of our mission is to educate these agencies and the public about all water-resource issues. **Service Area:** State of Nebraska.

### **Result Oriented Activities:**

Participated in several outreach events in Nebraska to help communicate water science to the public and to tell them about the Groundwater Guardian program, including the Nebraska's Children's Groundwater Festival, Ralston BioBlitz, and the Upper Loup NRD Annual Field Day.

# Mecklenburg County Groundwater & Wastewater NC

**Years Designated** 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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## **Community Profile:**

**Mission:** In order to protect the public's health through the protection of groundwater resources, the Groundwater and Wastewater Program approves and oversees private wells, on-site wastewater treatment and disposal systems and other regulated sites. **Service Area:** Mecklenburg County is a 524 square-mile area located in the southern Piedmont region of North Carolina. It is home to more than 990,000 people (15 percent utilizing groundwater) and is the center of a seven county metropolitan statistical area with an aggregate population of more than 1.3 million people. Mecklenburg County is divided into seven incorporated municipalities, ranging in size from Charlotte at 207 square miles to Pineville at 3.0 square miles.

## **Result Oriented Activities:**

Instructed 21 middle school students participating in Envirothon, an environmental science and natural resource management competition, on how to use a county Soil Survey book, the USDA soil textural triangle, and how to texture soils using the Texture-By-Feel analysis. -- Continued to be part of the North Carolina Source Water Collaborative, which will mirror the National Source Water Collaborative. The Collaborative's participants will promote source water protection, help align funding sources toward source water projects, provide expertise and guidance to address specific source water protection issues or problems, and recognize source water protection achievements. ([www.ncwsc.org](http://www.ncwsc.org))

## Miami Conservancy District OH

**Years Designated** 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

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### **Community Profile:**

**Mission:** To maintain a groundwater monitoring network that provides valuable data on groundwater quality and quantity in the watershed of the Great Miami River. To conduct special groundwater investigations individually or in partnership with other government agencies that address groundwater issues of concern in the watershed. **Service Area:** The watershed of the Great Miami River in southwest Ohio. The watershed encompasses nearly 4,000 square miles and includes the cities of Dayton, Hamilton, Middletown, Sidney, Springfield, and Troy.

### **Result Oriented Activities:**

Continued collecting data for a Groundwater Monitoring Network to provide important data on groundwater quality and quantity in the Great Miami River Watershed. Specifically, nutrient levels in the Great Miami River and its tributaries and quantifying the water budget for the Great Miami River Watershed. The annual water resources report was completed. -- Provided financial support and presenters for the Dayton Children's Water Festival and the Butler County Water Festival. Together these festivals are attended by over 3,000 students. -- Provided support for the Great Miami Watershed Network by helping plan and coordinate meetings.