

EXECUTIVE SUMMARY

Key Message:

Analyses of groundwater data collected from 1990 to 2010 continues to show an overall statistically significant increasing trend of community water supply wells with volatile organic compound detections per year. More importantly, Figure 1 shows an overall increasing trend of groundwater degradation. At the same time, future groundwater shortages are predicted in the Northeastern Illinois.

Background

Since the inception of the Environmental Protection Act in 1970, it has been the policy of the State of Illinois to restore, protect, and enhance its groundwater as a natural and public resource. Groundwater has an essential and pervasive role in the social and economic well-being of Illinois, and it is vitally important to the general health, safety, and welfare of its citizens. Groundwater resources should be utilized for beneficial and legitimate purposes. Waste and degradation should be prevented, and groundwater resources should be managed to maximize benefits to the state.

The Illinois Groundwater Protection Act responds to groundwater management by emphasizing a prevention-oriented process that relies upon state and local partnerships. The Illinois Groundwater Protection Act establishes a unified groundwater protection policy by:

- Establishing a groundwater education program;
- Establishing water well protection zones;
- Providing for surveys, mapping, and assessments;
- Monitoring ambient groundwater quality;
- Establishing a regional groundwater protection-planning program;
- Establishing authority for recharge area protection;
- Requiring the establishment of two tiered groundwater quality standards; and
- Requiring technology control regulations.

Additionally, the Illinois Groundwater Protection Act established the Interagency Coordinating Committee on Groundwater in 1988, which is comprised of various state agencies and is chaired by Illinois EPA's Director. The Interagency Coordinating Committee on Groundwater considers diverse stakeholder input from the Groundwater Advisory Council and the four priority regional groundwater protection planning committees in developing groundwater protection policies and programs.

In addition, the Groundwater Advisory Council, also established by the Illinois Groundwater Protection Act, is comprised of nine members appointed by the Governor from the following interests:

- Two representatives from industrial/commercial interests;
- Two representatives from environmental interests;
- One regional planning agency representative;

- One representative from agricultural interests;
- One public water supply representative;
- One water well drilling industry representative; and
- One local/county government representative.

Illinois EPA selected the four existing priority groundwater protection planning regions—northern, central, southern, and northeastern—to assist with establishing a regional groundwater protection planning program, as mandated in the Illinois Groundwater Protection Act. Each of the four regions has its own groundwater protection planning committee. These committees advocate groundwater protection practices and procedures to municipal, county, state, and other local units of government throughout their respective regions.

Further, the Illinois Groundwater Protection Act requires the Interagency Coordinating Committee on Groundwater to report biennially to the Governor and General Assembly on groundwater quality and quantity, as well as the state’s enforcement efforts. This is the 12th biennial report, and the previous 11 reports are available on Illinois EPA’s Web site at <http://www.epa.state.il.us/water/groundwater/groundwater-protection/index.html>.

The intended purpose of this 2012 Biennial Report is to:

- Provide a comprehensive status report on the implementation of the Illinois Groundwater Protection Act;
- Provide a self-assessment of program initiatives in relation to the goals and objectives of the program recommended in the 2010 Biennial Report; and
- Provide environmental and programmatic indicators to help measure and demonstrate program performance.

Volatile Organic Compound Trend Analysis

Protecting and managing groundwater are critical. Groundwater is an important natural resource that not only provides Illinois’ citizens water for drinking and household uses, but also supports industrial, agricultural, and commercial activities throughout the state.

Unfortunately, industrial, agricultural, and commercial activities can often produce volatile organic compounds. They are usually produced in large volumes and are associated with products such as plastics, adhesives, paints, gasoline, fumigants, refrigerants, and dry-cleaning fluids. They can reach groundwater through many sources and routes, including leaking storage tanks, landfills, infiltration of urban runoff and wastewater, septic systems, and injection through wells. Volatile organic compounds are an important group of environmental contaminants to monitor and manage in groundwater because of their widespread and long-term use, as well as their ability to persist and migrate in groundwater.

A long-term investigation by the U.S. Geological Survey continues to provide the most comprehensive national analysis, to date, of the occurrence of volatile organic compounds in groundwater. One of the major findings is that volatile organic compounds were detected in most aquifers throughout the nation, and were not limited to a few specific aquifers or regions. For further detail see http://toxics.usgs.gov/highlights/monitoring_vocs.html.

In the 2010 biennial report, Illinois EPA used its groundwater monitoring data set (1990 to the present) to complete a volatile organic compound trend analysis. While year-to-year evaluation of groundwater monitoring data from community water supply wells has shown fluctuations of

volatile organic compounds, analyses of this data show a statistically increasing trend of volatile organic compound contamination in community water supply wells. Illinois EPA also evaluated the data collected in 2010 for this report. Unfortunately, this overall trend (i.e. Blue Line) has continued to increase as illustrated in Figure 1.

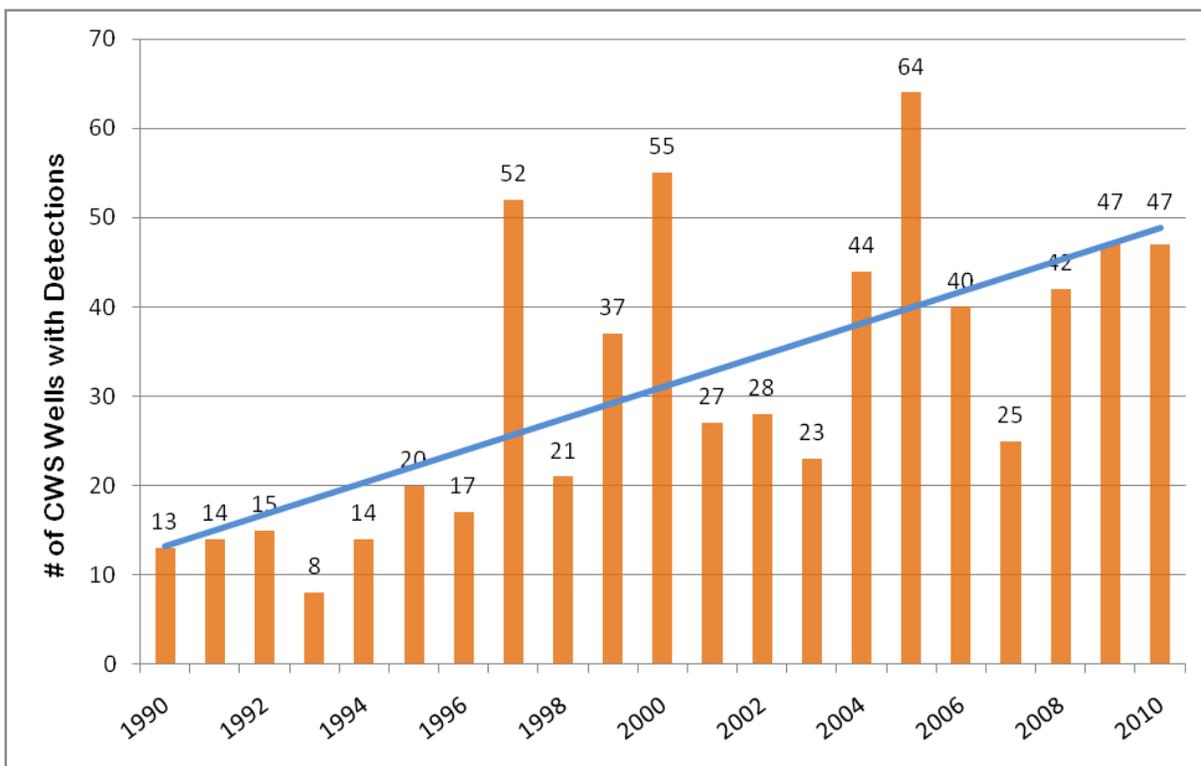


Figure 1. Overall Increasing Trend of Community Water Supply Wells with Volatile Organic Compound Detections

In addition, Illinois EPA used its database of potential sources that have been inventoried as part of well site surveys, hazard reviews, groundwater protection needs assessments, source water assessments, and other special field investigations to determine the most threatening potential contamination sources associated with community water supply wells with volatile organic compound detects. The most threatening potential contamination sources are shown in Figure 2.

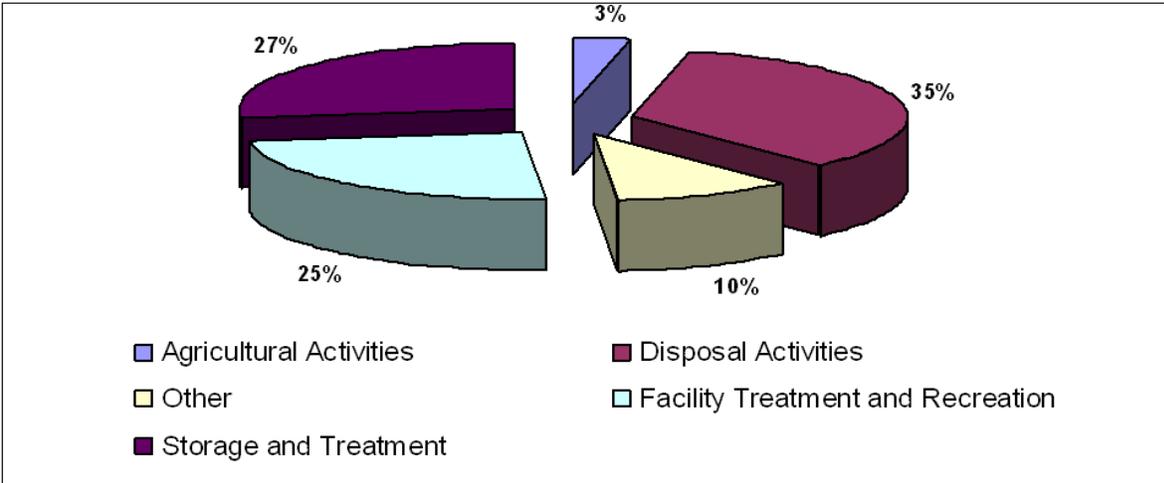


Figure 2. Most Threatening Potential Contamination Sources

An additional concern is that high volatile organic compound levels may be found in nearby private drinking water wells. To that end, Illinois EPA continued to implement the 2002 Right-to-Know law. Moreover, Illinois EPA continued to implement a new Right-to-Know law (Public Act 96-603, effective August 24, 2009), that requires all community water supply users be notified when water is contaminated or there is a threat of contamination. This law also established a monetary penalty and makes providing false information to environmental enforcement officials a felony. A companion Maximum Contaminant Level Prevention law (Public Act 96-1366) became effective on July 28, 2010. Community water supplies must develop a corrective action plan for carcinogenic volatile organic compounds that threaten exceedence of standards at the entry point to the distribution system.

The community water supplies that have triggered Right-to-Know notifications through 2011 are listed below:

Water Supply Name	County
Antioch	Lake
Beardstown	Cass
Belvidere	Boone
Bradley Heights	Winnebago
Byron	Ogle
Carpentersville	Kane
Coyne Center Co-Op	Rock Island
Crest Hill	Will
Crestwood	Cook
Crystal Lake	McHenry
Downers Grove	DuPage

Water Supply Name	County
East Alton	Madison
East Dundee	Kane
East Peoria	Tazewell
Edwardsville	Madison
Fairmount	Vermilion
Ford Heights	Cook
Fox Lake	Lake
Fox River Grove	McHenry
Freeport	Stephenson
Gem Suburban Mobile Home Park	Winnebago
Grafton	Jersey
Harvard	McHenry
Hebron	McHenry
Hennepin	Putnam
Heritage Environmental (Lemont)	Cook
Hiatts Hideaway Mobile Home Park	Tazewell
Hinckley	DeKalb
Hollis Subdivision	Kendall
Hull	Pike
Il American - Sterling	Whiteside
Island Lake	Lake
Kershaw Mobile Home Park	Henry
Lake Marian	Kane
Libertyville	Lake
Lima	Adams
Loves Park	Winnebago
Mackinaw	Tazewell
Marengo	McHenry
Marquette Heights	Tazewell
Mendon	Adams
Milan	Rock Island
Mill Creek Public Water District	Adams
Momence	Kankakee
Montgomery	Kane

Water Supply Name	County
Morrison	Whiteside
Naperville	DuPage
New Lenox	Will
North Park Public Water District	Winnebago
Petersburg	Menard
Plainville	Adams
Plano	Kendall
Princeville	Peoria
Roanoke	Woodford
Sandwich	DeKalb
Sauk Village	Cook
Scales Mound	Jo Daviess
Sheffield	Bureau
Six Oaks Mobile Home Park	Winnebago
South Chicago Heights	Cook
South Elgin	Kane
Union-York Public Water District	Clark
Valley Run Mobile Home Park	Vermilion
Woodstock	McHenry

None of the systems above have exceeded drinking water standards triggering maximum contaminant level violations. Right-to-Know is triggered at contaminant concentrations below drinking water standards. In conclusion, Illinois groundwater resources continue to be degraded. Degradation occurs based on the potential or actual diminishment of the beneficial use of the resource. When contaminant levels are detected or predicted to be above concentrations that cannot be removed by ordinary treatment techniques applied by the owner of a private drinking water system well, potential or actual diminishment occurs.

Furthermore, groundwater quality and quantity are linked. Based on population growth trends, an Illinois State Water Survey study found the State of Illinois may need up to 50 percent more water within 40 years. The biggest driver of water use is population. In 2000, there were about 8.6 million people in Illinois' northeastern region, and that number could grow to 12 million by 2050. In addition, northeastern Illinois could be facing a future shortage given the U.S. Supreme Court's restriction of the region's use of Lake Michigan water.

Two years ago we indicated that:

“These combined factors make it imperative to, at a minimum, require cleanup regulations to apply more stringent objectives within wellhead protection areas delineated for community water supply wells. Wellhead protection areas are currently not considered. Further, consideration should be given to require the implementation of wellhead protection programs versus using a voluntary approach. Water quantity protection efforts continue to be led by the Illinois Department of Natural Resources’ Office of Water Resources and the pilot regional water supply planning committees established by the Illinois Department of Natural Resources.”

This summary is still relevant to today’s situation even though some progress has been made to address these issues in the past two years by increasing the number of maximum setback zones, adopting revised groundwater standards at First Notice that include wellhead protection areas in compliance determinations, and developing draft rules requiring source water protection plans.

Summary of Results

The 2012 Biennial Report provides additional detail for the tables contained in this Executive Summary. These tables provide highlights of the results based on the 2010 Biennial Report objectives, and are organized by the following chapters:

- Chapter I. Interagency Coordinating Committee on Groundwater Operations
- Chapter II. Groundwater Advisory Council Operations
- Chapter III. Education Program for Groundwater Protection
- Chapter IV. Groundwater Evaluation Program
- Chapter V. Right-to-Know Initiatives
- Chapter VI. Groundwater Quality Regulations
- Chapter VII. Wellhead Protection Program
- Chapter VIII. Regional Groundwater Protection Planning Program
- Chapter IX. Non-Community and Private Well Program
- Chapter X. Groundwater Quality Protection Recommendations and Future Directions

CHAPTER I. INTERAGENCY COORDINATING COMMITTEE ON GROUNDWATER OPERATIONS

Key Message: The Interagency Coordinating Committee on Groundwater has actively coordinated groundwater protection programs since 1988.

Objectives	Results
Continue to review and update the Implementation Plan and Regulatory Agenda.	The Interagency Coordinating Committee on Groundwater met eight times during this two-year period.
Work with the Interagency Coordinating Committee on Groundwater and regional groundwater protection and planning committees to sponsor a Groundwater Protection Policy Forum.	This objective was not met.
Continue to assist the Groundwater Advisory Council in the review and development of recommendations pertaining to groundwater quality and quantity issues.	<p>Groundwater Advisory Council members were invited to eight Interagency Coordinating Committee on Groundwater meetings, which included updates from the Department of Natural Resources on the regional groundwater quantity planning process that allowed for input by the Groundwater Advisory Council. Interagency Coordinating Committee on Groundwater meetings also continue to focus on water quality issues. Chlorides in northern Illinois groundwater and road salt application workshops in the priority regions was one of the key focus areas.</p> <p>The Interagency Coordinating Committee on Groundwater and Groundwater Advisory Council provided input to an updated Nonpoint Source Management Plan.</p>
Continue the policy discussion regarding prevention versus remediation.	<p>Amendments were proposed to the Illinois Pollution Control Board to begin a process of including wellhead protection areas under the compliance determination section of the groundwater quality standards regulation. These amendments were discussed during Interagency Coordinating Committee on Groundwater/Groundwater Advisory Council meetings to continue this dialogue. The Illinois Pollution Control Board went to First Notice on this proposal on October 20, 2011.</p> <p>New draft rules for required source water protection planning were discussed for initial input from the Groundwater Advisory Council. More input will be provided during the next reporting period.</p>

**INTERAGENCY COORDINATING COMMITTEE ON
GROUNDWATER OPERATIONS (cont'd)**

Objectives	Results
Continue the policy discussion concerning the integration of wellhead protection areas with Tiered Approach for Corrective Action Objectives.	<p>The Illinois EPA conducted a third comprehensive trend analysis of volatile organic compounds being found in community water supply wells across the state. There continues to be a statistically significant increasing trend.</p> <p>To help address this issue, wellhead protection areas are included under amendments to the compliance point section of the groundwater quality standards. The Illinois Pollution Control Board has adopted this concept in their First Notice proposal.</p>
Continue the subcommittee led by the Illinois Department of Public Health to discuss tracking and registering groundwater monitoring wells.	The Illinois Department of Public Health has revised the Water Well Construction Report Form to include global positioning system coordinates for the location of water wells, including monitoring wells, and to accept data electronically using a pdf smart form.
Continue the subcommittee to discuss registering closed-loop heat pump wells and licensing drillers.	This objective was met through Public Act 97-363, effective August 15, 2011.

CHAPTER II. GROUNDWATER ADVISORY COUNCIL OPERATIONS

Key Message: With significant stakeholder input, the Groundwater Advisory Council continues to provide recommendations on groundwater protection policies and related issues.

Objectives	Results
Conduct policy-related meetings in order to review and make recommendations regarding groundwater issues and policies.	<p>The Groundwater Advisory Council conducted three meetings over the past two years and provided technical expertise and guidance on several priority policy-related issues including participation in the Public Water Supply Loan Program Advisory Committee and the Perchlorate Task Force. In addition, the Groundwater Advisory Council reviewed and evaluated <i>Before the Wells Run Dry: Ensuring Sustainable Water Supplies for Illinois</i>. Two vacancies on the Council were also filled during this reporting period.</p>
Provide input to programs, plans, regulatory proposals, and reports, as appropriate.	<p>Members of the Groundwater Advisory Council continue to provide significant input to programs, plans, and reports.</p> <p>The Groundwater Advisory Council provided input to an updated Nonpoint Source Management Plan which put more emphasis on protecting groundwater.</p> <p>The Groundwater Advisory Council also provided initial input on Illinois EPA’s draft source water protection plan requirement proposal.</p>

CHAPTER III. EDUCATION PROGRAM FOR GROUNDWATER PROTECTION

Key Message: The Illinois Department of Natural Resources supports local groundwater protection efforts through conservation planning, ecological restoration, and natural resource damage assessment programs.

Objectives	Results
Continue to promote a Safe Well Water Initiative.	The Illinois EPA and the Illinois Department of Public Health launched a Safe Well Water Initiative in 2009 that continued to be promoted in 2010 to increase awareness of groundwater quality concerns for private well owners. More information regarding private well safety and use, including information about testing private well water, can be found at http://www.epa.state.il.us/community-relations/fact-sheets/safe-water-wells/index.html .
Market the new source water protection standards.	The Illinois EPA and the Illinois Section-American Water Works Association co-sponsored on November 17, 2010, a source water protection Webinar that included the promotion of the American Water Works Association’s source water protection standards (ANSI/AWWA G300-07). The Source Water Protection Subcommittee of the Illinois Section-American Water Works Association is developing a 2012 training program for the newly released “G300, Source Water Protection Standard and Operational Guide”.
Conduct source water protection workshops.	The Illinois EPA and the Illinois Rural Water Association co-sponsored source water protection workshops at Kishwaukee Community College and in the Village of Troy on January 21, 2010, and April 19, 2010, respectively. The source water protection workshops promoted Groundwater Rule implementation, Source Water Protection CD, Illinois EPA’s interactive Web site, as well as emerging contaminants and volatile organic compound trends in community water supplies.

**EDUCATION PROGRAM FOR
GROUNDWATER PROTECTION (cont'd)**

Objectives	Results
<p>Continue to develop and enhance Web-based educational materials, including ordering and distribution systems.</p>	<p>The Illinois Department of Natural Resources Web site offers a number of resources for teachers and kids at https://dnr.state.il.us/teachkids/orderype.asp.</p> <p>The Illinois State Geological Survey Web site http://www.isgs.uiuc.edu/ has been improved for accessing maps, data, and publications related to groundwater and other geologic topics.</p>
<p>Integrate groundwater education efforts into other state environmental planning and protection programs.</p>	<p>Source water protection areas (including wellhead protection areas) have been integrated with the Resource Management Mapping Service. This mapping service also contains locations where best management practices have been implemented within watersheds to reduce nonpoint sources of pollution under the Clean Water Act. See http://www.epa.state.il.us/water/watershed/nonpoint-source.html for further detail.</p> <p>Proposed Class III groundwater areas have been included under Illinois EPA's source water assessment Web page for Bureau of Land project managers to use in evaluating leaking underground storage tanks.</p>
<p>Work toward enhancing the groundwater protection education resources on a priority basis.</p>	<p>The Illinois State Geological Survey provides information on geology and hydrogeology, annual geological field trips, free downloadable short reports, a glossary of geologic and hydrogeologic terms, and an "Ask-An-Expert" interface at http://www.isgs.uiuc.edu/education.</p>

CHAPTER IV. GROUNDWATER EVALUATION PROGRAM

Key Message: The occurrence, extent, availability and quality of groundwater resources continues to be of significant concern in Illinois.

Objectives	Results
<p>Continue to conduct a program of basic and applied groundwater research programs that allow decisions to be made on sound scientific principles.</p>	<p>Illinois EPA, Illinois State Water Survey, Illinois State Geological Survey, U.S. Geological Survey, and Illinois Department of Natural Resources continue a significant amount of research and program activities to protect groundwater in Illinois. These include:</p> <ul style="list-style-type: none"> • Illinois EPA Ambient Monitoring Network • Illinois EPA Pathogen Monitoring Program • Illinois EPA Trend Network • Statewide and Regional Water Supply Planning • Assessment of the occurrence, extent, availability, and quality of groundwater resources in Northeastern Illinois - Kendall, Lake, and McHenry Counties, and East-Central Illinois and the Mahomet Aquifer • Groundwater Recharge • Groundwater Quality and Agriculture • Groundwater Quality/Arsenic • Groundwater Quality/Urban • Statewide and Regional Water Supply Planning • U.S. Geological Survey Illinois River Basin National Water Quality Studies • U.S. Geological Survey McHenry County Groundwater Monitoring Well Network
<p>Strive to implement monitoring for emerging contaminants.</p>	<p>Illinois EPA has initiated a pilot program with U.S. EPA to sample for perfluorinated compounds in groundwater.</p> <p>In addition, Illinois EPA is working with the U.S. Geological Survey to develop a grant application for submittal to U.S. EPA to sample for chromium-6 groundwater and surface water used by community water supplies.</p>

CHAPTER V. RIGHT-TO-KNOW INITIATIVES

Key Message: Awareness is a prerequisite of prevention.

Objectives	Results
<p>Continue efforts of providing notification for potable resource groundwater users threatened by groundwater contamination.</p>	<p>Illinois EPA has thoroughly evaluated historical and new detections in community water supply wells and completed providing notices for all of these wells.</p> <p>Over the past two years, eight well-centric Right-to-Know notifications have been issued by the Illinois Department of Public Health based on recommendations from the Illinois EPA. Information about Right-to-Know notifications that have been sent out regarding this type of groundwater contamination can be found at http://www.epa.state.il.us/right-to-know/.</p> <p>Additionally, as a follow-up to Public Act 96-603, which was passed as a result of the Crestwood issue, the Maximum Contaminant Level Prevention law (Public Act 96-1366) for carcinogenic volatile organic compounds became effective on July 28, 2010.</p>

CHAPTER VI. GROUNDWATER QUALITY REGULATIONS

Key Message: Groundwater standards protect not only public health, but also the beneficial uses of the resource. Degradation of beneficial uses occurs when groundwater contaminants cannot be removed by ordinary treatment techniques employed by a private drinking water system owner.

Objectives	Results
<p>Continue with proposed changes to the groundwater quality standards and continue efforts of protecting future beneficial uses of drinking water.</p>	<p>On February 19, 2008, the Illinois EPA proposed significant amendments recommending 39 numerical groundwater quality contaminant standards to the Illinois Pollution Control Board. This proposal included a standard for perchlorate and revision of the existing groundwater standard for arsenic to be consistent with the new drinking water standard. The Illinois Pollution Control Board held two hearings on this matter on June 18, 2008, and July 16, 2008. The Illinois Pollution Control Board went to First Notice on this matter on October 20, 2011.</p> <p>The Illinois EPA submitted, and the Board adopted in May 2010, the designation of the groundwater recharge area associated with nine dedicated nature preserves as Class III Groundwater. The designation for six additional areas is currently under development.</p> <p>Groundwater compliance activities continue at contaminated sites throughout the state.</p> <p>Illinois EPA continued to implement an aggressive strategy to assess ash impoundments at coal fired power plants, and to require a groundwater management zone to remediate contamination. Illinois EPA’s Ash Impoundment Strategy Progress Report can be found at http://www.epa.state.il.us/water/ash-impoundment/documents/ash-impoundment-progress-102511.pdf</p>

CHAPTER VII. WELLHEAD PROTECTION PROGRAM

Key Message: Source water protection provides a multi-barrier approach to protecting drinking water. A multi-barrier approach is essential given the emerging contaminants (viruses, pharmaceuticals, endocrine disruptors, and herbicide transformation products) that may not be removed by treatment.

Objectives	Results
<p>Amend rules to require the development of source water protection planning (unless already developed) considering the current state of the art.</p>	<p>Using existing authority, the Illinois EPA modified the construction and operating permit applications for new community water supply wells to require enhanced hydrogeologic information to assist in the delineation of wellhead protection areas.</p> <p>Illinois EPA has developed draft source water protection plan requirement rules.</p> <p>Seven community water supplies have pursued adopting maximum setback zones for 23 community water supplies wells to lower potential for groundwater contamination. Another 15 community water supplies are beginning the application process towards maximum setback zone protection for 39 wells. The Illinois EPA and Illinois Rural Water Association have provided maximum setback zone technical assistance to the majority of these community water supplies.</p> <p>Illinois EPA has conducted groundwater modeling to delineate contributing recharge areas or wellhead protection areas beyond applicable setback zones for seven new community water supplies, and 42 community water supply wellhead protection area delineations were updated during this two-year reporting period.</p> <p>In addition, Illinois EPA is conducting a pilot to close Class V Motor Vehicle underground injection wells within wellhead protection areas. These wells were inventoried by U.S. EPA Region V.</p>
<p>Implement principles developed under the national Source Water Protection Collaborative (e.g., “Marketing for Change”) as part of outreach efforts.</p>	<p>“Marketing for Change” was promoted as part of the source water protection Webinar and workshops sponsored by the Illinois EPA, Illinois Section-American Water Works Association, and the Illinois Rural Water Association. However, significant effort of applying “Marketing for Change” concepts are needed to enhance source water protection in Illinois.</p>

**CHAPTER VIII. REGIONAL GROUNDWATER PROTECTION
PLANNING PROGRAM**

Key Message: A public educated about groundwater will protect groundwater. The regional groundwater protection planning committees continue to implement programs and assist with targeting local contacts and interest groups to advocate groundwater protection practices and procedures.

Objectives	Results
<p>Continue to assist and advocate local groundwater protection, education, and marketing.</p>	<p>During the past two years, Illinois EPA and members of the priority groundwater protection planning committees have met with local stakeholders to encourage the development of groundwater protection programs and to implement activities to protect community water supply recharge areas.</p> <p>Illinois EPA’s Nonpoint Source Management Plan was amended to create more opportunity for projects and programs to increase the number of groundwater wells sampled; to educate and inform the general public about the various ways in which nonpoint source pollution problems in shallow, rural wells and in groundwater can be reduced; and to increase the number of investigations in order to assist in the identification of alternative best management practices that help minimize surface runoff and pesticide leaching.</p> <p>Illinois EPA has worked with University of Illinois to integrate source water assessments and protection areas into geographic information system layers to be incorporated into the Resource Management Mapping Service. This mapping service contains information on locations where nonpoint source best management practices have be implemented.</p>

CHAPTER IX. NON-COMMUNITY AND PRIVATE WELL PROGRAM

Key Message: Volatile organic compounds were detected in approximately half of the 2,401 domestic drinking water wells in a recent U.S. Geological Survey study. Similarly in Illinois, increasing detections of volatile organic compound contamination in private wells support these findings.

Objectives	Results
Continue to implement the Wellhead Protection Program and assist with implementing the technology control and groundwater quality standards regulations.	At the time of the inspection of a non-community public water supply, the Illinois Department of Public Health and local health departments inspect the area surrounding the wellhead for sources of contamination. Permits for new construction, modification of, or an extension of an existing non-community water system will continue to be required.
Continue the source water assessments for new non-community public water supplies.	Illinois Department of Public Health continues to complete source water assessments for new non-community water supplies that become active.
Continue geographic information system coverage for all new non-community public water supplies.	The digitizing of all existing non-community public water supply wells has been completed. The process of digitizing all new non-community public water supply wells will continue.
Continue certification training of non-transient non-community public water supply operators.	Operator training, certification, and recertification are ongoing. As of July 2011, approximately 415 non-community water supply operators are currently certified to operate non-transient non-community public water supplies.
Continue to inspect and perform laboratory analyses on water samples collected from non-community public water supplies.	Inspections continue to be performed at least once every two years. All non-community public water supplies continue to be sampled at least yearly for coliform bacteria and nitrates. Non-transient non-community water supplies continue to be sampled for volatile organic compounds, synthetic organic compounds, and inorganic chemicals, based on the requirements of the Safe Drinking Water Act.
Continue to issue permits for the construction, modification of, or extension of existing non-community public water supplies.	Illinois Department of Public Health issued 191 permits for the construction, modification of, or an extension of existing non-community public water supplies during this reporting period.

**CHAPTER IX. NON-COMMUNITY AND PRIVATE WELL PROGRAM
(cont'd)**

Objectives	Results
Continue the issuance of permits for all types of water wells with the exception of community water supply wells.	Illinois Department of Public Health and local health departments issued approximately 4,200 permits to construct private, semi-private, non-community, and non-potable wells during this reporting period.
Continue to update the Illinois Water Well and Pump Installation Codes to reflect new technology, industry, and public health standards.	Proposed amendments to the Water Well Construction Code would clarify the requirements for grouting drilled wells and sealing abandoned wells; establish requirements for bored well construction materials; update and clarify the requirements for constructing closed-loop wells; clarify the setback requirements between closed-loop wells, water wells, and sources of contamination; and establish requirements for the certification and registration of closed-loop well contractors and the permitting of closed-loop well systems.
Continue supporting education training sessions for licensed water well and pump installation contractors.	Approximately 726 water well and water well pump installation contractors, licensed by Illinois Department of Public Health, are required to attend these training sessions. Nine training sessions were held throughout the state during 2010 and 2011. Nearly all sessions were conducted through the Illinois Association of Groundwater Professionals.
Continue to conduct training sessions pertaining to both the non-community public water supply and private water program for local health department and Illinois Department of Public Health water program staff.	During 2010 and 2011, the Illinois Association of Groundwater Professionals, Illinois Department of Public Health, and several other professional organizations sponsored over 38 water program training sessions approved for water program staff from 96 local health departments and Illinois Department of Public Health water program staff.
Continue implementation of Public Notification for Private Water Supply Potential Contamination.	From July of 2002 through July of 2011, Illinois Department of Public Health and local health departments issued 59 public notices of such contamination.
Continue implementation of the Safe Drinking Water Information System database for compliance monitoring of non-community public water supplies.	Illinois Department of Public Health contracted the company that developed the Safe Drinking Water Information System to convert and migrate Illinois EPA's old database. In December 2010, an upgrade to the newer Web-based Safe Drinking Water Information System was completed.

CHAPTER X. GROUNDWATER QUALITY PROTECTION RECOMMENDATIONS AND FUTURE DIRECTIONS

The following groundwater protection efforts are recommended for the next two years (2012 and 2013) based on the results of the self-assessment and environmental indicators presented in this report. In some tasks, the priority may be shifted due to funding constraints. The following recommendations are organized by the results provided in the preceding chapters.

Interagency Coordinating Committee on Groundwater Operations

- Work with the Interagency Coordinating Committee on Groundwater and regional groundwater protection committees to sponsor a Groundwater Protection Policy Forum.
- Continue to assist the Groundwater Advisory Council in the review and development of recommendations pertaining to groundwater quality and quantity issues.
- Continue the policy discussion concerning the integration of wellhead protection areas with Tiered Approach for Corrective Action Objectives.
- Continue the subcommittee led by the Illinois Department of Public Health to discuss tracking and registering groundwater monitoring wells.

Groundwater Advisory Council Operations

- Conduct policy-related meetings in order to review and make recommendations regarding groundwater issues and policies.
- Provide input to programs, plans, regulatory proposals, and reports, as appropriate.

Education Program for Groundwater Protection

- Market the American Water Works Association source water protection standards.
- Conduct source water protection workshops.
- Integrate groundwater education efforts into other state environmental planning and protection programs.

Groundwater Evaluation Program

- Continue to conduct a program of basic and applied groundwater research programs that allow decisions to be made on sound scientific principles.
- Strive to implement monitoring for emerging contaminants, including but not limited to chromium-6 and Perfluorinated chemicals.
- Update source water assessment fact sheets with information from Right-to-Know, Groundwater Rule evaluations, and field inspections.
- Evaluate trend data collected from ambient community water supply network to publish in the Integrated Report, and summarize the data in the next Illinois Groundwater Protection Act Biennial Report.

Right-to-Know Initiatives

- Continue efforts of providing notification for potable resource groundwater users threatened by groundwater contamination.

Groundwater Quality Regulations

- Continue with proposed changes to the groundwater quality standards and continue efforts of protecting future beneficial uses of drinking water.

Wellhead Protection Program

- Continue the process of stakeholder input and amend rules to require the development of source water protection planning.
- Continue to integrate groundwater into watershed plans.
- Pilot closure of Class V Motor Vehicle underground injection wells within wellhead protection areas.

Regional Groundwater Protection Planning Program

- Continue to assist and advocate local groundwater protection, education, and marketing.

Non-Community and Private Well Program

- Continue to implement the Wellhead Protection Program and assist with implementing the technology control and groundwater quality standards regulations.
- Continue the source water assessments for new non-community public water supplies.
- Continue geographic information system coverage for all new non-community public water supplies.
- Continue certification training of non-transient non-community public water supply operators.
- Continue to inspect and perform laboratory analyses on water samples collected from non-community public water supplies.
- Continue to issue permits for the construction, modification of, or extension of existing non-community public water supplies.
- Continue the issuance of permits for all types of water wells with the exception of community water supply wells.
- Continue to update the Illinois Water Well and Pump Installation Codes to reflect new technology, industry, and public health standards.
- Continue supporting education training sessions for licensed water well and pump installation contractors.
- Begin the certification and registration of closed-loop well contractors.
- Begin the permitting and inspection of the construction of closed-loop well systems.
- Continue to conduct training sessions pertaining to both the non-community public water supply and private-water program for local health department and Illinois Department of Public Health water program staff.
- Continue implementation of Public Notification for Private Water Supply Potential Contamination.
- Continue implementation of the Safe Drinking Water Information System database for compliance monitoring of non-community public water supplies.