Illinois Groundwater Protection Program

Biennial Status and Self-Assessment Report

25TH ANNIVERSARY 1988 2013

IGPA

Illinois Groundwater Protection Act

The State of Illinois recognizes the essential and pervasive role of groundwater in the social and economic well-being of the state, and its vital importance to the general health, safety, and welfare of its citizens.

--Illinois Groundwater Protection Act

Prepared by the
Interagency Coordinating Committee on Groundwater

June 2014

Illinois Environmental Protection Agency
Bureau of Water
www.epa.state.il.us

State of Illinois
www.Illinois.gov

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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PAT QUINN, GOVERNOR LISA BONNETT, DIRECTOR

217/785-4787

June 2014

The Honorable Pat Quinn
Governor, State of Illinois

The Honorable Members
of the Illinois General Assembly

I am pleased to provide the 13th Biennial Comprehensive Status and Self-Assessment Report of the Illinois Groundwater Protection Program, which has been prepared pursuant to Section 4(b)(8) of the Illinois Groundwater Protection Act. The Act created a comprehensive, prevention-based policy focused on protecting the beneficial uses of groundwater and preventing degradation.

The biennial report provides a policy perspective on groundwater quality and quantity planning, protection, and management in Illinois. The Interagency Coordinating Committee on Groundwater prepared the report with input from the Groundwater Advisory Council and the four priority regional groundwater protection planning committees.

The Biennial Comprehensive Status and Self-Assessment Report for the 2012 and 2013 reporting period may be downloaded at: *http://www.epa.state.il.us/water/groundwater/groundwater-protection/index.html*.

Sincerely,

Lisa Bonnett
Director

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EXECUTIVE SUMMARY

Key Message: As part of ongoing strategies to address historical contamination-related potential threats to groundwater sources for community water supplies in Illinois, the Agency has developed draft source protection planning regulations and conducted public outreach and education. In addition, the Agency's proposed amendments for 39 new numerical standards and expanding the compliance around public water supplies to include the wellhead protection area were adopted by the Illinois Pollution Control Board; Illinois EPA developed and proposed regulations for coal combustion waste surface impoundments at electric generating facilities to restore and protect groundwater; and Illinois EPA has completed a special network to sample and assess the presence of Chromium 6 in groundwater and surface water used by community water supplies.

Background

Since the inception of the Illinois 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 the Director of Illinois EPA. 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 and implementing groundwater protection policies and programs.

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 Environmental 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 13th biennial report, and the previous 12 reports are available on Illinois EPA's website at www.epa.state.il.us/water/groundwater/groundwater-protection/index.html.

The intended purpose of this 2014 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 2012 Biennial Report; and
- Provide environmental and programmatic indicators to help measure and demonstrate program performance.

Volatile Organic Compound Trend Analysis

Protecting and managing groundwater is 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 2013 Draft Illinois Integrated Water Quality Report and Section 303(d) List - Volume II: Groundwater - 2014, Illinois EPA used its groundwater monitoring data set (1990 to 2012) to complete a volatile organic compound trend analysis. While year-to-year evaluation of ground-water 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 2012 for this report. Unfortunately, this overall trend (i.e. blue line) has continued to increase as illustrated in Figure 1.

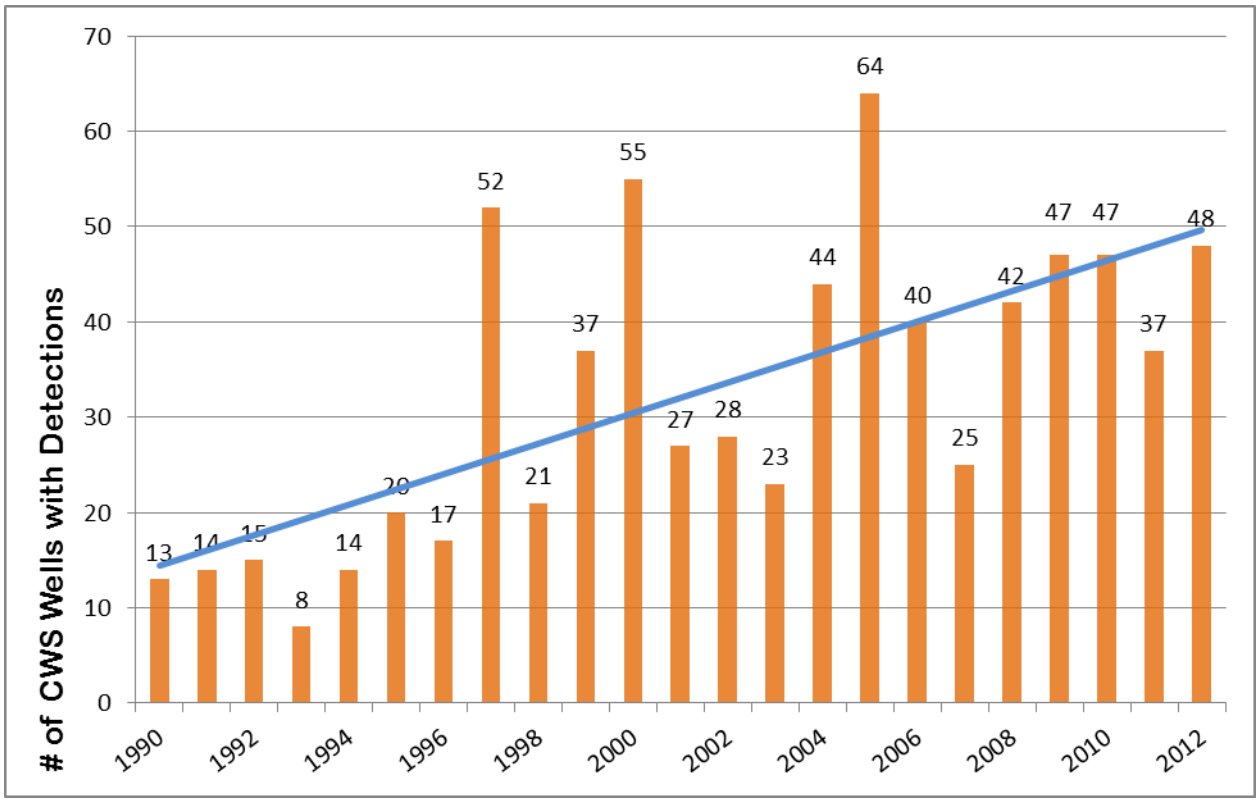

Figure 1. Overall Increasing Trend of Community Water Supply Wells with Volatile Organic Compound Detections

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.

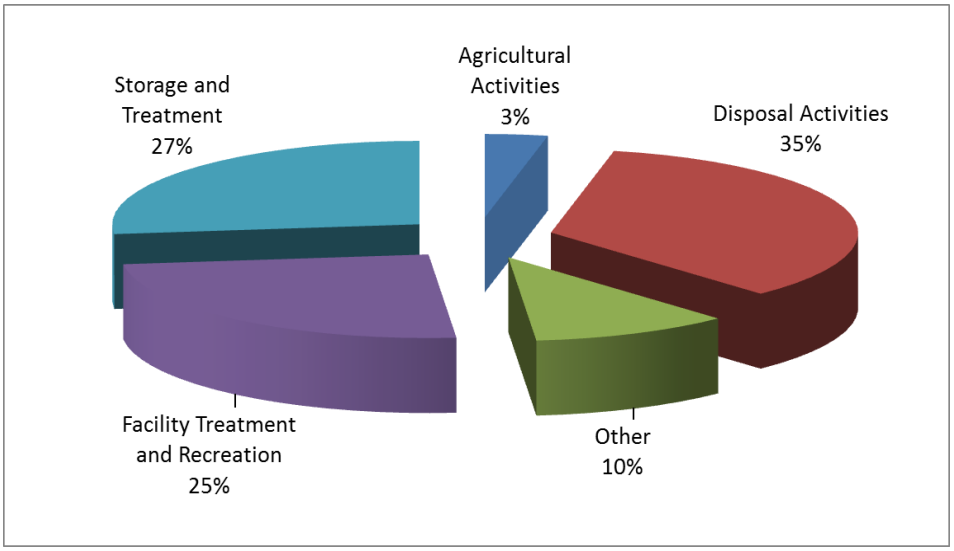

Figure 2. Most Threatening Potential Contamination Sources

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 (RTK) law (i.e. RTK I). Moreover, Illinois EPA continued to implement a new Right-to-Know law (Public Act 96-603, effective August 24, 2009) (i.e. RTK III), 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 of a community water supply. The community water supplies that have triggered Right-to-Know notifications through 2013 are listed below:

Water Supply Name	County	RTK-Type	Year Issued	MCL Prevention
Antioch	Lake	I	7/27/09	
Beardstown	Cass	I	9/16/04	
Belvidere	Boone	I	11/13/02	
Bradley Heights	Winnebago	I	6/24/09	
Byron	Ogle	I	11/23/04	
Carpentersville	Kane	I	3/28/06	
Coyne Center Co-Op	Rock Island	I	5/4/10	
Crest Hill	Will	I	5/4/07	
Crestwood	Cook	I	08/13/08	
Crystal Lake	McHenry	I and III	12//4/09	
East Dundee	Kane	I	3/28/06	

Water Supply Name	County	RTK Type	Date Issued	MCL Prevention
East Peoria	Tazewell	I	11/18/04	
Edwardsville	Madison	I	10/7/04	
Fairmount	Vermilion	I	6/26/07	
Ford Heights	Cook	I	10/5/07	
Fox Lake	Lake	I	5/26/09	
Fox River Grove	McHenry	I and III	11/13/02 and 11/20/09	
Freeport	Stephenson	I	10/14/02	
Gem Suburban Mobile Home Park	Winnebago	I	3/23/10	
Grafton	Jersey	I	8/9/07	
Harvard	McHenry	I	7/8/03	
Hebron	McHenry	I	10/5/04	
Hennepin	Putnam	I and III	11/20/09	
Heritage Environmental (Lemont)	Cook	I	6/26/07	
Hiatts Hideaway Mobile Home Park	Tazewell	I	11/2/07	
Hinckley	DeKalb	I	9/9/07	
Hollis Subdivision	Kendall	I	9/9/10	
Hull	Pike	I	10/18/04	
Il American - Sterling	Whiteside	I	8/25/09	
Island Lake	Lake	I	2/7/05	
Kershaw Mobile Home Park	Henry	I	9/22/05	
Lake Marian	Kane	I	3/28/06	
Libertyville	Lake	I	9/10/09	
Loves Park	Winnebago	I	9/22/02	
Mackinaw	Tazewell	I	5/1509	
Marengo	McHenry	I	9/9/10	
Marquette Heights	Tazewell	I	10/19/10	
Mill Creek Public Water District	Adams	I	11/22/04	
Momence	Kankakee	I	8/6/03	
Morrison	Whiteside	I	3/19/03	
Nokomis	Montgomery	I	10/14/02	
New Lenox	Will	I	11/14/02	

Water Supply Name	County	RTK Type	Date Issued	MCL Prevention
North Park Public Water District	Winnebago	I	11/17/06	
Petersburg	Menard	I	11/19/04	
Plainville	Adams	I	3/29/11	
Plano	Kendall	I	11/14/04	
Princeville	Peoria	I	1/24/05	
Roanoke	Woodford	I	9/21/04	
Rockford	Winnebago	III	11/20/09	
Sandwich	DeKalb	I	4/2/03	
Sauk Village	Cook	I and III	6/11/09 and 7/16/ 12	7/16/12
Scales Mound	Jo Daviess	I	10/26/05	
Sheffield	Bureau	I	8/24/07	
Six Oaks Mobile Home Park	Winnebago	I and III	9/23/04 and 11/20/09	
South Chicago Heights	Cook	I	4/8/03	
South Elgin	Kane	I	3/9/10	
Union	McHenry	I	12/9/09	
Union-York Public Water District	Clark	I	11/22//04	
Valley Run Mobile Home Park	Vermilion	I	4/4/08	
Woodstock	McHenry	I	2/8/11	

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. However, the carcinogenic volatile organic chemical prevention law was triggered at Sauk Village. Treatment was installed to reduce contaminants below detection level. 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.

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 2010, there were about 9.8 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.

Four 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, adopted revised groundwater standards that include wellhead protection areas in compliance determinations, and developed draft rules with stakeholder input requiring source water protection plans.

Summary of Results

The 2014 Biennial Report provides additional detail for the tables contained in this Executive Summary. These tables provide highlights of the results based on the 2012 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 a total of nine times during this two-year period. This included a special meeting to discuss the Mahomet Sole Source Aquifer designation being proposed for U.S. EPA Region 5 consideration.
Work with the regional groundwater protection and planning committees to sponsor a Ground-water Protection Policy Forum.	This objective was not met. Focus was put on regulatory development input for the draft source water protection and coal combustion waste regulations.
Continue to assist the Groundwater Advisory Council in the review and development of recommendations pertaining to groundwater quality and quantity issues.	The Interagency Coordinating Committee on Groundwater has met jointly eight times with the Groundwater Advisory Council to help accomplish this objective.
Continue the policy discussion concerning the integration of wellhead protection areas with Tiered Approach for Corrective Action Objectives.	Updates on the adopted amendments to the Illinois Pollution Control Board's groundwater quality standards (Final Rule October 4, 2012) were discussed with the committee. The adopted regulations include wellhead protection areas under the compliance determination section and definitions. Illinois EPA testimony provided the technical basis of the modeling used to delineate wellhead protection areas and incorporates by reference the Needs Assessment Guidance Document and Illinois approved Wellhead Protection Plan. The next steps of incorporating wellhead protection areas in the groundwater classification section of groundwater standards regulation was discussed.
Continue the subcommittee led by the Illinois Department of Public Health to discuss tracking and registering groundwater monitoring wells.	This objective was not met. Focus was placed on providing regulatory development input on the draft Closed-Loop Heat Pump Well rules with the Illinois Department of Public Health.

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.	The Groundwater Advisory Council participated in a joint meeting regarding a Sole Source Aquifer Petition for the Mahomet Aquifer to U.S. EPA Region 5. The Groundwater Advisory Council also closely followed meetings held by the Metropolitan Planning Council and Chicago Metropolitan Agency for Planning to advance the discussion of water quantity planning and management.
Provide input to programs, plans, regulatory proposals, and reports, as appropriate.	Members of the Groundwater Advisory Council continue to provide significant input to programs, plans, and reports. The Groundwater Advisory Council sponsored regulatory input development sessions for draft source water protection planning rules (May 15, 2013) and draft rules for coal combustion waste surface impoundments at power generating facilities (June 27, 2013).

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
Market the American Water Works Association source water protection standards.	Illinois EPA has coordinated with the Source Water Protection Committee of the Illinois Section American Water Works Association to develop an Exemplary Source Water Protection Award program. The new award was modeled after the national American Water Works Association standard for Source Water Protection (ANSI/AWWA 600-07). Award recipients will be selected from small, medium, and large systems to be honored at WaterCon 2014.
Conduct source water protection workshops.	Illinois EPA and the Illinois Rural Water Association co-sponsored source water protection workshops in the City of Havana and at Kankakee Community College on April 10, 2013, and April 17, 2013, respectively. These workshops included representatives from the Central and Northeastern Regional Groundwater Committees and focused on the proposed source water protection rules being developed by Illinois EPA.
Integrate groundwater education efforts into other state environmental planning and protection programs.	The following Dedicated Nature Preserves have been proposed and adopted by the Illinois Pollution Control Board during this reporting period: Spring Grove Fen, Gladstone Fen, Yonder Prairie, and Cotton Creek Fen in McHenry County; Trout Park, Kane County; Goose Lake Prairie, Grundy County; Sand Ridge, Cook County; George B. Fell, Ogle County; and Searles Park Prairie, Winnebago County. The recently adopted Class III groundwater areas have been included under Illinois EPA's source water assessment webpage for Bureau of Land project managers to use for evaluating cleanup sites, including leaking underground storage tanks.

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
Continue to conduct basic and applied ground-water research programs that allow decisions to be made on sound scientific principles.	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. For detail see Appendix A.
Strive to implement monitoring for emerging contaminants.	Illinois EPA has completed a pilot program with U.S. EPA to sample for perfluorinated compounds (PFC) in groundwater. PFCs was detected in one community water supply well. Illinois EPA has initiated a monitoring program for Chromium-6 and total chromium. Through November 2013, results were available from 98 wells and 26 surface water systems, (including untreated, treated, and distribution sites) representing about 80 percent of the network. Maximum concentrations in untreated and treated water were 2.1 and 2.4 ug/L, respectively. Chromium-6 was detected in 60.5 percent of untreated groundwater samples, with a mean of 0.18 and median of 0.05 ug/L, where detected. Untreated surface-water intake samples had detections in 24 of 26 samples with mean and median concentrations of 0.12 and 0.095 ug/L, respectively, whereas in treated water samples they were 0.61 and 0.19 ug/L. Surface waters treated with lime typically had higher concentrations (mean, 1.2; median, 0.94 ug/L). For more detail on the assessment of Chromium-6 and total chromium in Illinois sources of drinking water see: www.epa.state.il.us/water/compliance/drinking-water/chromium
Evaluate trend data collected from ambient community water supply network to publish in the Integrated Report.	Illinois EPA staff evaluated trend data collected from the ambient community water supply network and published the results of the analysis on pages 20-21, 28-30, and 32 of the Draft Illinois Integrated Water Quality Report and Section 303(d) List - Volume II: Groundwater - 2014. For further detail see: www.epa.state.il.us/water/tmdl/303d-list.html#2014.

CHAPTER V. RIGHT-TO-KNOW INITIATIVES

Key Message: Awareness is a prerequisite of prevention.

Objectives	Results
Continue efforts of providing notification for potable resource groundwater users threatened by groundwater contamination.	Illinois EPA continued to evaluate detection of contaminates in community water supply wells. No new results triggered a notification during this time period to recommend sampling nearby private water supply wells. However, Sauk Village was required to notify all consumers that the concentration of vinyl chloride threatened to exceed the drinking water standard. Bottled water was provided as an option until temporary treatment was installed. In addition this also triggered the new maximum contaminant level prevention law requirements for carcinogenic volatile organic compounds. A consent order was signed by the village to install permanent treatment and removal of these contaminants.

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
Continue with proposed changes to the groundwater quality standards and continue efforts of protecting future beneficial uses of drinking water.	On October 4, 2012, the Illinois Pollution Control Board adopted amendments for 39 new numerical groundwater quality contaminant standards. Illinois EPA submitted, and the Illinois Pollution Control Board adopted in July 2012, the designation of the groundwater recharge area associated with six dedicated nature preserves as Class III Groundwater. The Illinois Pollution Control Board also designated three additional dedicated nature preserves as Class III Groundwater areas in June 2013. Groundwater compliance activities continue at contaminated sites throughout the state. Illinois EPA continued to implement an aggressive strategy to assess and address groundwater impacts at 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 www.epa.state.il.us/water/ash-impoundment/documents/ash-impoundment-progress-102511.pdf. In addition, Illinois EPA has proposed general rules for hydrogeologic characterization/groundwater monitoring, corrective action, and closure of coal combustion waste surface impoundments at power generating facilities in a new Part 841 of Title 35 of the Illinois Administrative Code. The Illinois Pollution Control Board's website contains information regarding this rulemaking in docket R2014-010, see: www.ipcb.state.il.us/COOL/external/PendingRulemakings.aspx.

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
Amend rules to require the development of source water protection planning (unless already developed) considering the current state of the art.	Illinois EPA has developed draft source water protection plan requirement rules. Illinois EPA has completed outreach on the draft rules through Illinois Rural Water Association conferences, Groundwater Advisory Council sponsored input session, and through outreach to the Illinois Section American Water Works Association, Illinois Potable Water Supply Operators Association, and the Illinois Municipal League. Eight community water supplies have pursued adopting maximum setback zones for 33 community water supplies wells to lower the potential for groundwater contamination. Another seven community water supplies are beginning the application process towards maximum setback zone protection for 16 wells. Illinois EPA and Illinois Rural Water Association have provided maximum setback zone technical assistance to the majority of these community water supplies. During this reporting period, Illinois EPA has not conducted groundwater modeling to delineate contributing recharge areas or wellhead protection areas beyond applicable setback zones for any new community water supplies. However, a total of 15 community water supply wellhead protection area delineations were updated during this two-year reporting period.

CHAPTER VII. WELLHEAD PROTECTION PROGRAM (cont'd)	
Objectives	**Results**
Continue to integrate groundwater into watershed plans.	Illinois EPA continues to coordinate with the Chicago Metropolitan Agency for Planning and the Northwest Water Planning Alliance to integrate groundwater into watershed plans. One of three goals established as part of their recently adopted strategic plan is to, "Develop sustainable water-use policies and practices that are widely adopted and protective of water supplies." A strategy developed under this goal is to "Promote wintertime sensible salting as the standard practice at state, county, township, and local levels of road maintenance responsibility."
Pilot closure of Class V Motor Vehicle underground injection wells within wellhead protection areas.	Since March 2012, Illinois EPA has identified, referred and/or inspected and closed 12 Class V Motor Vehicle underground injection wells within wellhead protection areas. Of those 12, eight have been inspected and closed while four have been referred to the Bureau of Land as not meeting the requirements of the pilot program. One additional site has reportedly abandoned their Class V Motor Vehicle underground injection well, but has yet to be field verified by an Illinois EPA inspector.

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
Continue to assist and advocate local groundwater protection, education, and marketing.	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. Members of the priority groundwater protection planning committees have sponsored numerous workshops, field days and training sessions during this reporting period, including: several snow and ice removal training workshops; four children's water festivals, including annual participation in the Clean Water Celebration; an emergency preparedness session; and two source water protection workshops co-sponsored by the Illinois Rural Water Association. Illinois EPA continues to coordinate with the 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, see: www.rmms.illinois.edu. This mapping service contains information on where nonpoint source best management practices have been developed and implemented.

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, 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. A total of 37 source water assessments were completed during 2012, while another 60 assessments were completed by the end of the 2013 reporting period.
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 August 2013, approximately 533 non-community water supply operators are currently certified to operate non-transient non-community public water supplies.
Continue to inspect and require sampling of non-community public water supplies.	Illinois Department of Public Health continues to perform inspections of non-community public water systems at least once every two years. A total of 2,181 inspections were completed during 2012, while another 2,052 inspections were completed by the end of the 2013 reporting period. 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.

CHAPTER IX. NON-COMMUNITY AND PRIVATE WELL PROGRAM (cont'd)	
Objectives	**Results**
Continue to issue permits for the construction, modification of, or extension of existing non-community public water supplies.	Illinois Department of Public Health issued 230 permits for the construction, modification of, or an extension of existing non-community public water supplies during this reporting period.
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 5,620 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.	Illinois Department of Public Health drafted rule changes for the Illinois Water Well Construction Code (77 Ill. Adm. Code 920). These rules were adopted in November 2013. In addition, the Water Well and Pump Installation Contractor's Licensing Code (77 Ill. Adm. Code 915) was updated on June 13, 2012.
Continue supporting education training sessions for licensed water well and pump installation contractors.	Continuing education courses for water well and pump installation contractors were reviewed and approved by the Private Water Program manager. Illinois Department of Public Health provided a presence at each of the training courses.
Begin the certification and registration of closed-loop well contractors	The drafted rule changes for the Illinois Water Well Construction Code (77 Ill. Adm. Code 920) were adopted in November of 2013. The rules are being filed with the Secretary of State and will be implemented.
Begin the permitting and inspection of the construction of closed-loop well systems	The drafted rule changes for the Illinois Water Well Construction Code (77 Ill. Adm. Code 920) were adopted in November 2013. Steps are being taken to implement the new requirements for registration of closed loop well contractors and 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.	A total of 17 training sessions were provided during this reporting period.

CHAPTER IX. NON-COMMUNITY AND PRIVATE WELL PROGRAM (cont'd)	
Objectives	**Results**
Continue implementation of Public Notification for Private Water Supply Potential Contamination.	Illinois Department of Public Health continues to work with Illinois EPA to notify potable resource groundwater users of threats by groundwater contamination triggered by detections of contaminants in community water supply wells. No new results triggered a notification during this time period to recommend sampling nearby private water supply wells.
Continue implementation of the Safe Drinking Water Information System database for compliance monitoring of non-community public water supplies.	The Safe Drinking Water Watch public web site for non-community supplies was put online on September 21, 2012. This allows the public access to non-community supply sampling data. The database was upgraded to the most current version 3.21 in July 2013. This version is current with the federal drinking water rules.

CHAPTER X. GROUNDWATER QUALITY PROTECTION RECOMMENDATIONS AND FUTURE DIRECTIONS

The following groundwater protection efforts are recommended for the next two years (2014 and 2015) 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

- Continue to review and update the Implementation Plan and Regulatory Agenda.
- 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.
- Initiate geothermal and closed loop well program implementation discussions
- Continue the subcommittee led by Illinois Department of Public Health to discuss tracking and registering groundwater monitoring wells.
- Continue coordinating on regional groundwater quantity planning and climate resiliency.

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

- Conduct source water protection workshops.
- Integrate groundwater education efforts (including geothermal and closed loop wells) into other state environmental planning and protection programs.

Groundwater Evaluation Program

- Continue to conduct basic and applied groundwater research programs that allow decisions to be made on sound scientific principles.
- Finish the chromium-6 sampling project and work with the United States Geological Survey to publish results.
- Continue to update source water assessment fact sheets with information from Right-to-Know, Groundwater Rule evaluations, and field inspections.

Right-to-Know Initiatives

- Continue efforts of providing notification for potable resource groundwater users threatened by groundwater contamination.
- Continue efforts of implementing the carcinogenic Volatile Organic Compound Maximum Contaminant Level prevention law.

Groundwater Quality Regulations

- Continue with new proposed changes to the groundwater quality standards and continue efforts of protecting future beneficial uses of drinking water. Propose wellhead protection areas under the classification system.
- Participate in Board hearing set for proposed regulations for coal combustion waste in surface impoundments at power generating facilities to protect and restore groundwater resources

Wellhead Protection Program

- Propose source water protection planning rules to the Illinois Pollution Control Board.
- 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 require sampling of 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.

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