



# Illinois Groundwater Protection Program

## Biennial Comprehensive Status and Self-Assessment Report

### Executive Summary



***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  
January 2010***



Illinois Environmental  
Protection Agency  
Bureau of Water





## ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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PAT QUINN, GOVERNOR

DOUGLAS P. SCOTT, DIRECTOR

217/785-4787

The Honorable Pat Quinn  
Governor, State of Illinois

The Honorable Members  
of the Illinois General Assembly

I am pleased to transmit the Executive Summary for the 11th 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.

This Executive Summary presents highlights of the findings reported in the Biennial Comprehensive Status and Self-Assessment Report for the 2008 and 2009 reporting period. For a copy of the complete report please contact the Illinois EPA's Groundwater Section at 217/785-4787. You may also download the report at <http://www.epa.state.il.us/water/groundwater/groundwater-protection/index.html>.

Very truly yours,

Douglas P. Scott  
Director



## EXECUTIVE SUMMARY

**Key Message:**

Analyses of groundwater data collected from 1990 to the present 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 Regional Water Supply Demand Report published by the Chicago Metropolitan Agency for Planning.

**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.

The Illinois Groundwater Protection Act established the Interagency Coordinating Committee on Groundwater, 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.

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.

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 tenth biennial report, and the previous nine 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 2010 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 2008 Biennial Report; and
- Provide environmental and programmatic indicators to help measure and demonstrate program performance.

### **Volatile Organic Compound Trend Analysis**

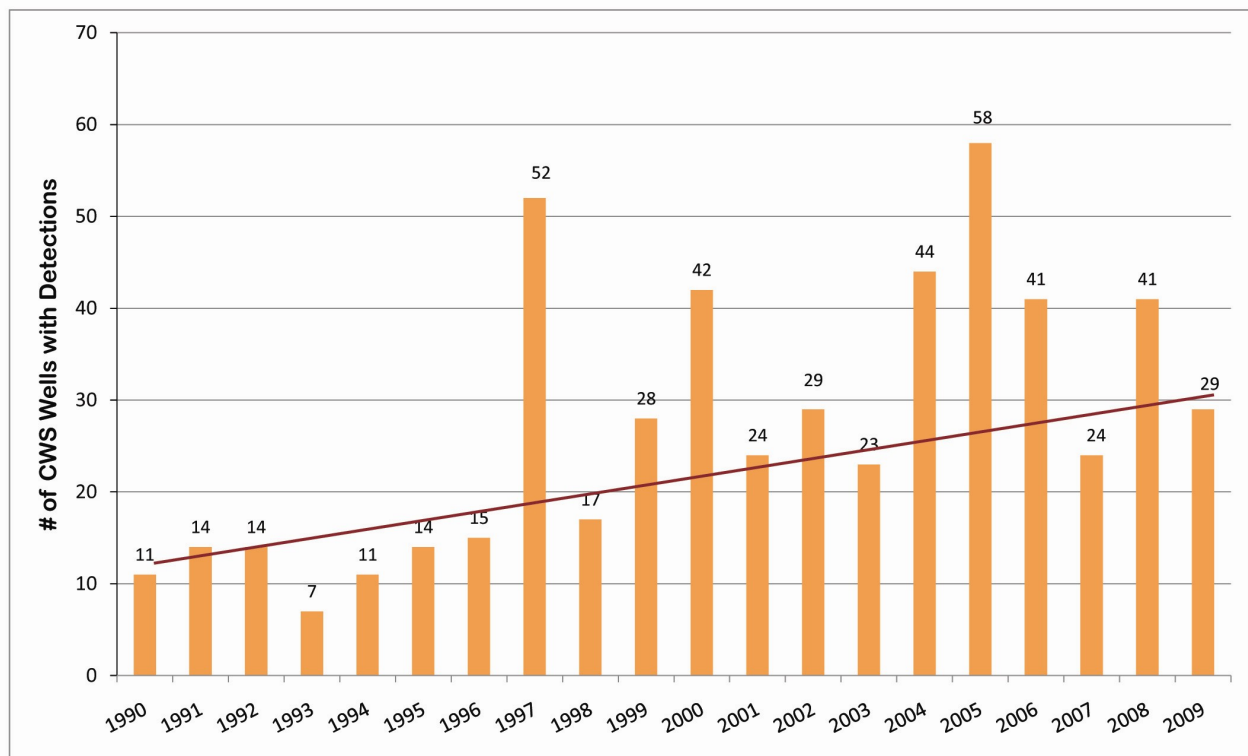
Protecting and managing groundwater are critical. Groundwater is an important natural resource that not only provides Illinois' citizens water for drinking and household uses, but also supports industrial, agricultural, and commercial activities throughout the state.

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](http://toxics.usgs.gov/highlights/monitoring_vocs.html).

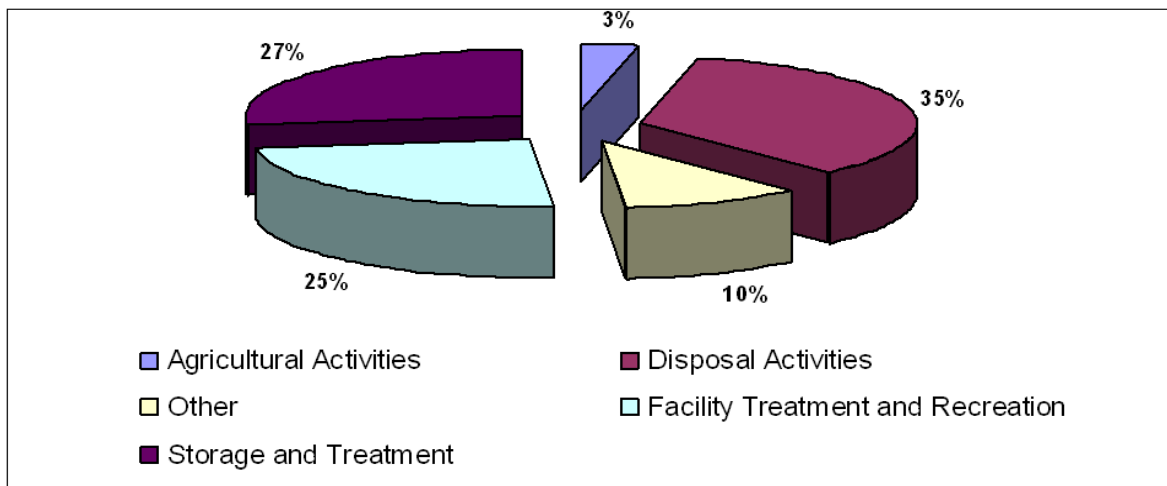
In the 2008 biennial report, Illinois EPA used its groundwater monitoring data set (1990 to the present) to complete a volatile organic compound trend analysis. The number of wells sampled during this period declined. While year-to-year evaluation of groundwater monitoring data from

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. Unfortunately, this overall trend 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 Right-to-Know legislation and rulemaking that were developed and adopted in 2002. A new Right-to-Know law (Public Act 96-603) that was signed and became effective on August 24, 2009, requires that all users of a community water supply be notified when water is contaminated or there is a threat of contamination. Prior Illinois law only required the Illinois EPA to notify water supply owners and operators of contamination. The bill also establishes a monetary penalty and makes providing false information to environmental enforcement officials a felony under state law.

The community water supplies that have triggered Right-to-Know notifications through 2009 are listed below:

| Water Supply Name      | County        |
|------------------------|---------------|
| Belvidere              | Boone         |
| Sheffield              | Bureau        |
| Beardstown             | Cass          |
| Union-York PWD         | Clark         |
| Ford Heights           | Cook          |
| Sauk Village           | Cook          |
| Crestwood              | Cook          |
| South Chicago Heights  | Cook          |
| Heritage Environmental | Cook / DuPage |
| Hinckley               | DeKalb        |
| Sandwich               | DeKalb        |
| Kershaw MHP            | Henry         |



| <b>Water Supply Name</b>    | <b>County</b> |
|-----------------------------|---------------|
| Grafton                     | Jersey        |
| Scales Mound                | Jo Daviess    |
| Carpentersville             | Kane          |
| Momence                     | Kankakee      |
| Plano                       | Kendall       |
| Antioch                     | Lake          |
| Fox Lake                    | Lake          |
| Libertyville                | Lake          |
| Edwardsville                | Madison       |
| Crystal Lake                | McHenry       |
| Hebron                      | McHenry       |
| Harvard                     | McHenry       |
| Island Lake                 | McHenry       |
| Fox River Grove             | McHenry       |
| Petersburg                  | Menard        |
| Nokomis                     | Montgomery    |
| Byron                       | Ogle          |
| Princeville                 | Peoria        |
| Hull                        | Pike          |
| Hennepin PWD                | Putnam        |
| Freeport                    | Stephenson    |
| East Peoria                 | Tazewell      |
| East Peoria                 | Tazewell      |
| East Peoria                 | Tazewell      |
| Hiatts Hideaway MHP         | Tazewell      |
| Mackinaw                    | Tazewell      |
| Mill Creek PWD              | Union         |
| Fairmount                   | Vermilion     |
| Valley Run MHP              | Vermilion     |
| Morrison                    | Whiteside     |
| Crest Hill                  | Will          |
| New Lenox                   | Will          |
| Bradley Heights             | Winnebago     |
| North Park PWD              | Winnebago     |
| Six Oaks MHP                | Winnebago     |
| Ledgewood Elementary School | Winnebago     |
| Roanoke                     | Woodford      |

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, the 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.

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.

### **Summary of Results**

The 2010 Biennial Report provides additional detail for the tables contained in this Executive Summary. These tables provide highlights of the results based on the 2008 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 six times during this two-year period.  |
| Work with the Groundwater Advisory Council and the regional groundwater protection and planning committees to sponsor a Groundwater Protection Policy Forum. | This objective was met. The Groundwater Advisory Council, the Interagency Coordinating Committee, and regional groundwater protection planning committees sponsored a Groundwater Protection Policy Forum on September 24, 2008, in Peoria, Illinois. The theme of the Policy Forum was “Groundwater Degradation & Sustainability.”   |
| Continue to assist the Groundwater Advisory Council in the review and development of recommendations pertaining to groundwater quality and quantity issues.  | The Illinois Department of Natural Resources provided overall project management for two regional water supply committees—Northeastern Illinois Regional Water Supply Planning Group and Mahomet Aquifer Consortium. The plans developed by these groups are now available at <a href="http://chicagoareaplanning.org/watersupply">http://chicagoareaplanning.org/watersupply</a> and <a href="http://www.rwspec.org">http://www.rwspec.org</a> .   |
| Continue the policy discussion regarding prevention versus remediation.  | 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. This matter is still before the Illinois Pollution Control Board. ( <a href="http://www.ipcb.state.il.us/cool/external/pendingrulemakings.aspx">http://www.ipcb.state.il.us/cool/external/pendingrulemakings.aspx</a> ) |

**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. | During this two year period, efforts focused on responding to the two issues that the Site Remediation Advisory Committee requested the Illinois EPA to address. The Illinois EPA conducted a second 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. Moreover the wellhead protection modeling process was documented in testimony supporting the Illinois EPA's amendments to the Illinois Pollution Control Board's groundwater quality standards. |
| Establish a subcommittee led by the Illinois Department of Public Health to discuss tracking and registering groundwater monitoring wells.    | During 2009 a monitoring well subcommittee was established by the Interagency Coordinating Committee on Groundwater and is being chaired by the Illinois Department of Public Health. The monitoring well subcommittee has developed recommendations that were presented to the full committee. The Interagency Coordinating Committee on Groundwater recommended that a straw document be developed for further discussion.  |
| Establish a subcommittee to discuss registering closed-loop heat pump wells and licensing drillers.   | A closed-loop heat pump well subcommittee was established. Legislation was introduced during the 96 <sup>th</sup> General Assembly to enact those requirements. To date, this proposed legislation has not been adopted.  |

## 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 conducted three meetings over the past two years and provided technical expertise and guidance on several priority policy-related issues including: (i) Right-to-Know notification process; (ii) statewide groundwater monitoring and evaluation efforts; (iii) groundwater standards and nuclear power plant inspection regulations; and (iv) water quantity planning studies. |
| 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 a regulatory development session to obtain input from stakeholders prior to submitting the groundwater quality standards proposal to the Illinois Pollution Control Board.  |

### 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   |
|---|---|
| Develop and promote a Safe Well Water Initiative with the Illinois Department of Public Health.               | The Illinois EPA and the Illinois Department of Public Health launched a Safe Well Water Initiative in 2009 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 <a href="http://www.epa.state.il.us/community-relations/fact-sheets/safe-water-wells/index.html">http://www.epa.state.il.us/community-relations/fact-sheets/safe-water-wells/index.html</a> .  |
| Market the new source water protection standards.   | The Illinois EPA and the Illinois Section-American Water Works Association co-sponsored on October 29, 2008, a source water protection workshop in Rochelle, Illinois, that included the promotion of the American Water Works Association's source water protection standards.   |
| Conduct source water protection workshops.  | Three additional workshops were held in Rockford, and at Kankakee and McHenry Community Colleges. The source water protection workshops promoted Groundwater Rule implementation, Source Water Protection CD, the interactive Web site, and emerging contaminants and volatile organic compound trends in community water supplies.   |
| Continue to develop and enhance Web-based educational materials, including ordering and distribution systems. | <p>The Illinois Department of Natural Resources Web site offers a number of educational resources for teachers and kids at <a href="https://dnr.state.il.us/teachkids/ordertype.asp">https://dnr.state.il.us/teachkids/ordertype.asp</a>.</p> <p>The Illinois State Geological Survey Web site (<a href="http://www.isgs.uiuc.edu/">http://www.isgs.uiuc.edu/</a>) has been improved for accessing maps, data, and publications related to groundwater and other geologic topics. It has implemented a Web site for ordering maps and publications at <a href="https://shop.isgs.illinois.edu/index.html">https://shop.isgs.illinois.edu/index.html</a>.</p> <p>All Illinois State Water Survey state and contract reports are available on-line as pdf documents at <a href="http://www.isws.illinois.edu/pubs/isearch.asp">http://www.isws.illinois.edu/pubs/isearch.asp</a>.</p> |

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

| <b>Objectives</b>  | <b>Results</b>  |
|--|---|
| Integrate groundwater education efforts into other state environmental planning and protection programs. | The Governor's state water supply planning initiative, pursuant to Executive Order #1-2006, called for the creation of two regional stakeholder planning committees. A water supply planning Web page has been developed to provide a variety of information to users, especially the stakeholder planning committees. This information may be found at <a href="http://www.sws.uiuc.edu/wsp/">http://www.sws.uiuc.edu/wsp/</a> . |
| Work toward enhancing the groundwater protection education resources on a priority basis.                | The ISGS 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 <a href="http://www.isgs.uiuc.edu/education">http://www.isgs.uiuc.edu/education</a> .  |

## 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 a program of basic and applied groundwater research programs that allow decisions to be made on sound scientific principles. | <p>The Illinois EPA, Illinois State Water Survey, Illinois State Geological Survey, U.S. Geological Survey, and Illinois Dept. of Natural Resources continue research and program activities to protect groundwater in Illinois. These include:</p> <ul style="list-style-type: none"> <li>• Illinois EPA Ambient Monitoring Network</li> <li>• Illinois EPA Pathogen Monitoring Program</li> <li>• Groundwater Resource Assessment</li> <li>• Statewide and Regional Water Supply Planning</li> <li>• Assessment Techniques</li> <li>• Groundwater Recharge</li> <li>• Groundwater Quality and Agriculture</li> <li>• Groundwater Quality and CO<sub>2</sub> Sequestration</li> <li>• Groundwater Quality/Arsenic</li> <li>• Groundwater Quality/Northeastern Illinois</li> <li>• Illinois Natural Resources Geospatial Data Clearinghouse</li> <li>• Illinois Height Modernization Program</li> <li>• ILWATER Interactive Mapping Service</li> <li>• USGS Illinois River Basin National Water Quality Studies</li> <li>• Groundwater Climate Response Network</li> </ul> |
| Strive to implement monitoring for emerging contaminants.  | <p>In the summer of 2010, the U.S. Geological Survey will completely re-sample the entire National Water Quality Assessment program urban land-use network in northeast Illinois/southeast Wisconsin. Analyses will include selected natural and anthropogenic organic compounds that may be wastewater indicators or pharmaceuticals.</p>   |



## CHAPTER V. RIGHT-TO-KNOW INITIATIVES

**Key Message:** Awareness is a pre-requisite of prevention.

| Objectives  | Results  |
|---|--|
| Continue efforts of providing notification for off-site potable resource groundwater users threatened by groundwater contamination. | <p>Over the past two years, 17 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 <a href="http://www.epa.state.il.us/right-to-know/">http://www.epa.state.il.us/right-to-know/</a>.</p> <p>Additionally, due to the Crestwood contamination, the Governor's office, the Illinois Attorney General, and the Illinois EPA developed new legislation that enhanced the notification to community water supply users exposed to groundwater contamination. This legislation (Public Act 96-603) was signed, and became effective on, August 24, 2009. The Illinois EPA issued five such notifications in November and December of 2009.</p> |

## CHAPTER VI. GROUNDWATER QUALITY REGULATIONS

|                     |   |
|---------------------|---|
| <b>Key Message:</b> | 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. | <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 has not gone to first notice on this matter.</p> <p>The Illinois Nature Preserve Commission has petitioned the Illinois EPA to designate the groundwater recharge area associated with nine dedicated nature preserves as Class III Groundwater.</p> <p>Groundwater compliance activities continue at contaminated sites throughout the state.</p> <p>State laws and regulations were approved to require quarterly inspections of nuclear plants and unpermitted release reporting requirements.</p> <p>Illinois EPA developed an aggressive strategy to assess ash impoundments at coal fired power plants.</p> |

## CHAPTER VII. WELLHEAD PROTECTION PROGRAM

|                     |   |
|---------------------|---|
| <b>Key Message:</b> | 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 and planning (unless already developed) considering the current state of the art. | <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>The Village of Arthur and the City of Galena have pursued adopting maximum setback zones for six community water supply wells to lower potential for groundwater contamination.</p> <p>Illinois EPA has conducted groundwater modeling to delineate contributing recharge areas or wellhead protection areas beyond applicable setback zones for 17 new community water supplies, and 20 community water supply wellhead protection area delineations were updated during this two-year reporting period.</p> <p>The Illinois Water Well Decommissioning Program has been expanded to allow 12 well sealing projects in each local soil and water conservation district and to permit the sealing of abandoned irrigation wells at a higher cost-share rate.</p> |
| Implement principles developed under the national Source Water Protection Collaborative (e.g., “Marketing for Change”) as part of outreach efforts. | The concepts of “Marketing for Change” were promoted at the source water protection workshop sponsored by the Illinois EPA and the Illinois Section-American Water Works Association, discussed in Chapter III. However, significant effort of applying “Marketing for Change” concepts is needed to enhance source water protection in Illinois.   |

## 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. |

## 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 GIS 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 2009, approximately 400 non-community water supply operators are currently certified to operate 402 active 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 or extension of existing non-community public water supplies.                               | Illinois Department of Public Health issued 122 and 89 permits, respectively, for the construction, modification of, or an extension of existing non-community public water supplies.  |

**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 7,000 permits to construct private, semi-private, non-community, and non-potable wells annually.  |
| 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 has proposed amendments to the Illinois Water Well Construction and Pump Installation Codes.  |
| Continue supporting education training sessions for licensed water well and pump installation contractors.  | Approximately 772 water well and water well pump installation contractors, licensed by Illinois Department of Public Health, are required to attend these training sessions. Twelve training sessions were held throughout the state during 2008 and 2009. 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 Dept. of Public Health water program staff. | During 2008 and 2009, the Illinois Association of Groundwater Professionals, Illinois Department of Public Health, and several professional organizations sponsored over 40 water program training sessions approved for water program staff from 96 local health departments and the 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 2009, Illinois Department of Public Health and local health departments processed 48 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 began using the Safe Drinking Water Information System as its sole database and uploaded historical data in late 2004. Since then, all new inventory, sampling, and violation data have been entered into this system.  |

## **CHAPTER X. GROUNDWATER QUALITY PROTECTION RECOMMENDATIONS AND FUTURE DIRECTIONS**

The following groundwater protection efforts are recommended for the next two years (2010 and 2011) 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.
- 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 regarding prevention versus remediation.
- 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.
- Continue the subcommittee to discuss registering closed-loop heat pump wells and licensing drillers.

### **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**

- Continue to promote Safe Well Water Initiative.
- Market the new source water protection standards.
- Conduct source water protection workshops.
- Continue to develop and enhance Web-based educational materials, including ordering and distribution systems.
- Integrate groundwater education efforts into other state environmental planning and protection programs.
- Work toward enhancing the groundwater protection education resources on a priority basis.

### **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.

**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**

- Amend rules to require the development of source water protection planning (unless already developed) considering the current state of the art.
- Implement principles developed under the national Source Water Protection Collaborative (e.g., “Marketing for Change”) as part of outreach efforts.

**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 GIS 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 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.
- 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.