



Troubled Waters: Facts and Findings

Troubled Waters: Meeting Future Water Needs in Illinois is part of a year-long, Joyce Foundation-funded study undertaken by Openlands and the Metropolitan Planning Council, in conjunction with the Campaign for Sensible Growth.

Troubled Waters highlights the challenges to maintaining a sustainable water supply in Illinois and the Chicago metropolitan region, and recommends that Illinois develop a statewide framework for regional water supply planning and management to meet the water supply needs of a growing population.

This summer, Illinois experienced the fourth driest March-October period since 1895 (when records first began to be kept). These ongoing drought conditions highlight the need to address water supply planning concerns. In addition, according to a study completed in January 2005, researchers from Southern Illinois University's Department of Geography project water use will increase in 89 of 102 Illinois counties, for a total statewide increase of nearly 28 percent by 2025.

Currently, Illinois residents draw water from several sources. Lake Michigan, groundwater, and other surface waters (rivers, lakes, reservoirs).

- Lake Michigan provides water for citizens in Cook, DuPage, and portions of Lake, and Will counties.
- Other northern Illinois communities including some parts of Lake and Will, as well as all of Boone, DeKalb, Grundy, Kane, Kankakee, Kendall, LaSalle, and McHenry counties use wells to draw groundwater from the aquifer system, which includes sand and gravel aquifers and deep bedrock aquifers.
- Some rivers, such as the Fox and Kankakee, also supply water for public use.
- Eleven counties in east-central Illinois – Champaign, DeWitt, Ford, Iroquois, Logan, Macon, Mason, McLean, Piatt, Tazewell and Vermilion – tap into the Mohamet Aquifer.
- Other central and southern Illinoisans draw water from streams or reservoir systems created by damming local waterways, such as streams, rivers and lakes.

An aquifer is an underground bed or layer that can yield useful amounts of groundwater to wells, springs, wetlands or streams. The amount and quality of groundwater that can be withdrawn varies. Shallow aquifers can be subject to contamination. In addition, natural areas such as fens and wetlands are dependent on groundwater discharges to the surface to maintain their viability as important habitat.

In northern Illinois, withdrawals from the deep aquifer system are now at or near sustainable levels, with shortages projected in many areas corresponding to increasing growth and new development. Meanwhile, a U.S. Supreme Court decision – plus prohibitively expensive delivery methods and environmental recommendations – prevent the region from relying on additional allocations of Lake Michigan water.

– see reverse for more *Facts and Findings* –

Currently, no comprehensive statewide or regional plans or entities exist for managing the water supply. Water supply is managed by communities, counties and private companies in a fragmented manner. Because aquifers and watersheds are regional in nature – cutting across political boundaries – so, too, must water quantity planning occur at the regional level.

Historically, groundwater and surface water have been managed separately. A better scientific understanding of their interconnectedness is needed to plan and manage the state's resources.

The region's top water quality and quantity challenges – projected to intensify with increased growth pressure – include:

- supply shortages, as demand for water in some parts of the region is increasing faster than underground aquifers, can recharge, or refill.
- pollutants, another result of development, as stormwater that runs off pavement into sewers cannot filter contaminants as well as water that drains through soil; and
- lack of geologic and hydrologic information about both shallow and deep aquifers.

In addition to establishing a statewide framework for regional water supply planning and management, *Troubled Waters* recommends several actions to ensure Illinois' water supply meets mounting societal demands, as well as those of aquatic ecosystems. Here is a sampling:

- Carry out a statewide coordinated ground and surface water inventory, resource assessment, and modeling program, to establish a scientific basis for managing the state's water resources.
- Evaluate the water demand aspect of land-use plans.
- Implement local recharge area protection programs.
- Develop guidelines for local water conservation practices.
- Encourage alternative wastewater treatment systems.

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