

Appendix 2

An Overview of Water Supply Planning and Management Relevant to East-Central Illinois

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Introduction

Water supply planning is not new in Illinois. Although a constituent-based, regional water supply planning approach is new to most of Illinois, other states already have adopted this approach. This chapter provides, in chronological order, historical information on water supply planning and management in Illinois relevant to East-Central Illinois.

Early planning efforts

Water supply planning has long been characterized by a complex interplay among federal, state and local interests and authorities supported by scientific and engineering studies.

In Illinois, most water supply planning and management has been conducted in piecemeal manner at the local level. There are a few exceptions. Upon completion of the Chicago Sanitary and Ship Canal in 1900 the Chicago River was reversed, thus enabling the diversion of water from Lake Michigan. The water permitted to be diverted from Lake Michigan and its watershed is apportioned by the State of Illinois among municipalities, political subdivisions and agencies in the region for domestic use or for direct diversion into the Sanitary and Ship Canal to maintain it in a reasonably satisfactory sanitary condition, in such manner and amounts and by and through such instrumentalities as the state may deem proper, subject to any regulations imposed by Congress, in the interests of navigation or pollution control¹.

4092 Historically, groundwater and surface water have to a large extent been managed separately,
4093 despite being interconnected.

4094
4095 As long ago as 1920, Illinois State Water Survey Chief Arthur M. Buswell proposed a comprehensive
4096 survey of the volume of groundwater available in Illinois. Twelve years later, Buswell broadened his
4097 proposal to include all the state's water resources and to estimate future demand. Although this project
4098 was included in the budget requests for several years, it was not funded².

4099
4100 Studies by Illinois State Geological Survey scientists and engineers, such as the work of Horberg in
4101 the 1940s and 1950s^{3,4}, provide a foundation for our current understanding of the glacial geology of the
4102 Mahomet Aquifer system in East-Central Illinois [i.e., the Mahomet Aquifer and overlying shallow
4103 aquifers within the boundary of the Mahomet Bedrock Valley]. In recent years, the Illinois State Water
4104 Survey has integrated geology, hydrology and climatology to provide a comprehensive framework for
4105 regional water supply planning. At both the Illinois State Water Survey and Illinois State Geological
4106 Survey the development and application of mathematical computer models has enabled the integration
4107 of the knowledge base in these disciplines and the simulation of possible future environmental
4108 conditions.

4109
4110 Institutional and legal changes to manage water supplies also have occurred. In 1948 The
4111 Association of Illinois Soil and Water Conservation Districts was formed. It is made up and serves Illinois'
4112 98 Soil and Water Conservation Districts (SWCDs). Each SWCD is a unique local governmental entity
4113 mandated by state statute to protect the land, water and related resources located within its borders.
4114 Emphasis is on local control and local solutions⁵.

4115
4116 The Water Authorities Act of 1951 allowed the establishment of water authorities with broad
4117 powers of control over local water supplies, excluding water used for agricultural and most domestic
4118 purposes⁶. The powers include the following requirements: the provision by well owners of data and
4119 information on water supply, withdrawals and use; the registration of withdrawal facilities; the
4120 permitting of withdrawals; the reasonable regulation of water use; the levy and collection of a general
4121 property tax; and approval of water facility plans by the Environmental Protection Agency. Today, there
4122 are 17 Water Authorities in Illinois, including 13 in East-Central Illinois.

4123
4124 Late 19th century legislation created extensive changes in local landscapes and initiated the
4125 organization of many local governmental units managing surface water drainage improvements.

4126
4127 "These units have their beginnings in the Levee Act and the Farm
4128 Drainage Act which became law in 1879 and provided for the construction,
4129 reparation and protection of drains, ditches and levees, across the lands of
4130 others, for agriculture, sanitary and mining purposes, and to provide for the
4131 organization of drainage districts. As the need became more evident, more
4132 Acts providing for Sanitary Districts, Surface Water Protection Districts, River
4133 Conservancy Districts, Soil Conservation Districts and Public Water Districts
4134 were passed by the Illinois legislature. The Act closest in area of jurisdiction
4135 to the Water Authorities Act is the Public Water Districts Act of July 25, 1945
4136 which provides areas having a population of not more than 500,000
4137 inhabitants with powers to construct or acquire "Water works properties,"
4138 and by amendment of July 16, 1951, "sewerage properties" ⁷.

4139

4140 The establishment of water authorities and communities taking their own actions to control
4141 development near their water supply facilities are reflections of local efforts to protect local interests. A
4142 goal of regional water supply planning is to facilitate communication and cooperative management
4143 among all local interests for a common good, not to usurp local powers and authorities.
4144
4145

4146 The 1967 state water plan

4147
4148 Recognizing a need for a state water plan, Governor Otto Kerner in 1965 designated Water Survey
4149 Chief William C. Ackermann as director of a task force to formulate a comprehensive state plan for
4150 water resources². A state water plan was released in 1967⁸ and included a recommendation for the state
4151 to initiate an integrated and intergovernmental approach to the management of water resources of
4152 each region, including the establishment and support of regional water resources commissions. This
4153 ambitious and costly state water plan was largely a top-down approach driven by state officials.
4154

4155 In the state water plan, 1965 population of the 15-county region of East-Central Illinois population
4156 was given as 745,200 with municipal, industrial and rural water withdrawals of 183 million gallons per
4157 day (mgd). Population in 2020 was projected to be 1,605,000 with a water demand of 453 mgd. The plan
4158 identified many potential reservoir sites of 40 acres or more with a total yield of about 212 mgd in a 1 in
4159 40 year drought. Potential water supplies from major streams (with 95 percent availability) were given
4160 as 13,640 mgd and potential practical sustained yields of groundwater supplies as 1,135 mgd. About 98
4161 percent of the streamflow sources were in Cass, Mason, Tazewell and Woodford Counties, which also
4162 contained 43 percent of the groundwater potential yields. It was concluded that the increased demands
4163 to 2020 were generally within the capability of the resource⁸.
4164

4165 The 1967 plan provided policy and program guidance in water resources management through state
4166 agencies for such matters as groundwater protection, competition for water, erosion and sediment
4167 control, flood damage mitigation, water conservation, aquatic and riparian habitat, recreation, climate
4168 change, drought and emergency interruption of supplies and water use law. It recommended that the
4169 legal framework governing water be designed so as to create a legal environment which would promote,
4170 not restrain, optimum water management; otherwise, it apprehended that the legal framework would
4171 be the result of discontinuous, piecemeal development based on short-range considerations and crisis
4172 planning. A better state water resources planning program also was recommended.
4173
4174

4175 The 1980 state water plan

4176
4177 Recognizing that the 1967 plan had become increasingly obsolete and observing a trend to shift
4178 water resources planning from the federal to state level, Governor James R. Thompson appointed a Task
4179 Force in 1980 to produce a new state water plan, primarily to develop an improved water management
4180 system⁹. The Task Force consisted of policy-level individuals from state water agencies who sought
4181 outside advice, conducted public hearings, and organized 5 regional advisory committees. The problems
4182 addressed were of statewide importance, but a detailed inventory of water resources was not required.
4183

4184 Since 1980 the Illinois State Water Plan Task Force has coordinated the activities of state agencies
4185 and served as a valuable forum for discussion. The Governor's Drought Response Task Force was
4186 established in response to the 1988 drought and meets as needed to monitor the conditions of the
4187 state's water resources and systems and coordinate the state's response to drought situations. Beck *et*

4188 *al.*¹⁰ reported that the State Water Plan Task Force has identified the lack of statutory authority to take
4189 more action to alleviate water shortage problems as the most important weakness of the Drought
4190 Response Task Force.

4191
4192

4193 The 1983 Water Use Act

4194

4195 The Water Use Act of 1983¹¹ brought Illinois under a unified doctrine of common law which covers
4196 the development and use of both surface water and groundwater resources. This doctrine is based on
4197 the riparian doctrine of reasonable use. Some important aspects of the Water Use Act of 1983 are listed
4198 below^{10,12}.

4199

4200 • Water is a common resource to be shared by all for beneficial use; individuals do not own
4201 water rights as they do in some other states.

4202

4203 • The terms "riparian landowner" and "overlying landowner" are considered interchangeable
4204 in Illinois water law doctrine.

4205

4206 • All riparian landowners and overlying land owners are entitled to a reasonable use of water
4207 in streams and aquifers respectively.

4208

4209 • Reasonable use means the use of water to meet natural wants and a fair share for artificial
4210 wants. The key words of this definition are "natural wants" and "artificial wants", which are not
4211 defined further in the Act. These terms or words also are not defined or used in any of the leading
4212 common law groundwater cases in Illinois. However, it has been reported¹³ that these terms were
4213 clearly defined in Illinois common law in the 1842 Illinois Supreme Court case of *Evans v.*
4214 *Merriweather*. In a discussion of various common law rules of groundwater rights¹⁰, reference is
4215 made to a discussion by Mann *et al.*¹³. In this discussion, the authors summarized the court's
4216 definition of natural uses as quenching thirst, for household purposes, and for cattle and other
4217 domestic purposes. It specifically excluded water for irrigation and water used for propelling
4218 machinery. The authors felt that domestic use was limited to uses of persons living on proprietors
4219 land and questioned whether the court meant to include large commercial herds of cattle.

4220

4221 • Wasteful or malicious uses of water are unreasonable.

4222

4223 • The priority uses in times of shortage are natural wants (i.e., domestic uses).

4224

4225 • In the case of a complaint, courts are allowed to consider the relative needs of landowners in
4226 order to determine the reasonable artificial uses of water.

4227

4228 • The state does not require registration or permits for allocation of surface water or
4229 groundwater withdrawals.

4230

4231 • The lowering of the water table or reduction in water pressure by a groundwater user that
4232 reduces or eliminates the use of a neighbor's well is not necessarily unreasonable.

4233

4234 • Seniority in length of use does not increase the right of use.

- 4235 • The right to transport water for use or sale away from overlying land does not exist without
4236 statutory authority.
- 4237
- 4238 • The state can encourage but not require effective planning by water supply planners and
4239 users.
- 4240
- 4241 • There is no general statute in Illinois allowing comprehensive water resource management at
4242 the state level.
- 4243
- 4244 • Drainage law usually is not included with water quantity law.
- 4245
- 4246 • The state does not have statutory authority to intervene in water conflicts between water
4247 development entities.
- 4248
- 4249 • The General Assembly has authority to modify Illinois water law, but vested interests must be
4250 protected. Even under present law, courts in other jurisdictions have determined that the
4251 right of the riparian owner is not absolute; it is conditioned on the equal right of every other
4252 riparian owner to the use of water¹⁰. “Thus, if the modifications simply further define and
4253 clarify what is considered “reasonable” – an arguably nebulous and uncertain area under
4254 present law – persuasive argument can be made that no valid constitutional problems should
4255 arise” to the modification of riparian rights¹⁰.

4256 An important component of the Water Use Act is to establish a means of reviewing potential
4257 groundwater conflicts before damage to any person is incurred and to establish a rule for mitigating
4258 groundwater shortage conflicts. In the event that a land occupier or person proposes to develop a new
4259 point of groundwater withdrawal, and withdrawals from the new point can reasonably be expected to
4260 occur in excess of 100,000 gallons on any day, the land occupier or person is required to notify the Soil
4261 and Water Conservation District before construction of the well begins. The District in turn is required to
4262 notify other local units of government with water systems which may be impacted by the proposed
4263 withdrawal. The District then is required to review with the assistance of the Illinois State Water Survey
4264 and the Illinois State Geological Survey the proposed point of withdrawal's effect upon other users of
4265 the water. The findings of such reviews are to be made public. However, this is an unfunded mandate
4266 for the Soil and Water Conservation Districts and the Scientific Surveys and reviews are not conducted.

4267

4268 Statutory law and case law, policies, legal opinions, and court decisions guide water management in
4269 the state. Management practices are implemented through the state’s water management institutions
4270 that include public and private entities operating at state, regional and local levels. The policies,
4271 regulations, and actions of the management institutions directly and indirectly influence the interface of
4272 the demands of water users and the supply of the state’s groundwater and surface water resources¹⁰.

4273

4274 Stress on water resources, highlighted by the 1988 drought, led to Governor Jim Edgar’s 1992
4275 appointment of a Water Resources and Land Use Priorities Task Force. The Task Force concluded¹⁴ that
4276 competition for available water supplies will generate increasing levels of conflict in the context of
4277 existing law, especially during droughts. The first recommendation of the Task Force was adoption of a
4278 consolidated water resources act, but there was agreement among legislators that sound scientific
4279 information on the state’s water resources was needed before a comprehensive act could move
4280 forward.

4281

4282 A 1996 report on water quantity law¹⁰ – the result of a Task Force recommendation – identified the
4283 fractured nature of water use law in Illinois and noted that water quantity law was not comprehensive,
4284 was located in numerous areas of the law that divided responsibilities among many state agencies, and
4285 was governed to a significant degree by common law and court precedent. It was concluded that
4286 elements of the law are outdated, confusing, misinterpreted, or not aligned technically with
4287 contemporary water management. The law is fraught with uncertainty and provides users of water with
4288 only limited guidance to answering many issues that will likely arise in the future. The authors expressed
4289 the opinion that as demand for water escalates water users will increasingly look to the courts to resolve
4290 disputes.

4291
4292

4293 **Entering the 21st century**

4294

4295 The Mahomet Aquifer Consortium was formed in November 1998 to further study the Mahomet
4296 Aquifer on a regional basis and to develop options for the management of this valuable resource¹⁵. The
4297 Consortium facilitates communication and cooperative management among local interests for a
4298 common good, has more than 70 members and the members meet quarterly. Activities to date have
4299 focused on further studying the Mahomet Aquifer, but the Mahomet Aquifer Consortium’s current role
4300 in supporting and facilitating the establishment and work of the Regional Water Supply Planning
4301 Committee moves it a step forward in its mission to develop options for the management of the
4302 Mahomet Aquifer.

4303

4304 On 6 June 2000, Governor George H. Ryan established a Governor’s Water Resources Advisory
4305 Committee to focus on water resources and their usage, including water usage by peaker power plants.
4306 The Committee met several times, did not produce a report, but identified 12 consensus principles for
4307 water supply planning and management.

4308

4309 On 22 April 2002, Governor George H. Ryan signed Executive Order 2002-5 requiring the Interagency
4310 Coordinating Committee on Groundwater, chaired by the Illinois Environmental Protection Agency, to
4311 report each January on progress in establishing a water quantity planning procedure¹⁶. Initially, an
4312 Interagency Coordinating Committee on Groundwater sub-committee chaired by the Illinois Department
4313 of Natural Resources was charged to produce an integrated water resources agenda (groundwater and
4314 surface water) and a report assessing the state of water supplies in the state. Building on the consensus
4315 principles identified by the Water Resources Advisory Committee, the report of the subcommittee
4316 argued that expanded, regional water quantity planning and management is needed to address some of
4317 the critical water conflicts emerging in Illinois and recommended an interim framework for establishing
4318 regional water management consortia to begin planning¹⁷. The consensus principles of the Water
4319 Resources Advisory Committee can be found on page 10 of this report.

4320

4321 The Interagency Coordinating Committee on Groundwater accepted most of the recommendations
4322 of the Subcommittee on Integrated Water Planning and Management and found that the operating
4323 principle for water supply planning is simple: the necessary groundwork – including extensive
4324 stakeholder involvement – must be developed first, before moving into legislative and regulatory
4325 solutions. The Interagency Coordinating Committee on Groundwater and its Groundwater Advisory
4326 Committee stated that a new paradigm is essential to get concurrence from constituent groups,
4327 including both private and governmental special interest groups and the public, by creating consensus
4328 on a planning procedure. Initiating discussion of proposed solutions driven by legislative and regulatory
4329 proposals to identify program parameters, without having a defined planning procedure, has proven,

4330 historically, to be an arduous task with unpredictable outcomes. As priority water quantity planning
4331 areas are identified, the Interagency Coordinating Committee on Groundwater recommended that the
4332 state should nurture the development of voluntary, cooperative regional water management consortia
4333 in those areas by providing technical and financial assistance for planning and management efforts¹⁸.
4334

4335 In November 2001, the Illinois State Water Survey and Illinois State Geological Survey produced
4336 reports on the scientific needs for improving water supply planning and management^{19,20} in response to
4337 May 2001 resolutions passed by the General Assembly: Senate Resolution 0137 and House Resolution
4338 0365. In 2006, the Illinois State Water Survey published a framework for drought and water supply
4339 planning²¹. In response to the recommendations of the Interagency Coordinating Committee on
4340 Groundwater¹⁸ and Subcommittee on Integrated Water Planning and Management¹⁷, the Illinois State
4341 Water Survey identified priority aquifers and watersheds for water supply planning²². Two priority areas
4342 were Northeastern Illinois and East-Central Illinois. East-Central Illinois was identified as a priority water
4343 quantity planning area because of expanding use of the Mahomet Aquifer, the aquifer's connections to
4344 shallower aquifers and surface streams, especially the Sangamon River, and proposals to develop new
4345 groundwater and surface water supplies.
4346

4347

4348 **Functions of water agencies**

4349

4350 Today, numerous institutions are involved in some facet of water supply planning and
4351 management²³. Most are government entities, but some are private corporations with which
4352 municipalities contract. It is handy to think of them on geographical scales: municipal, regional, state,
4353 interstate, and federal.
4354

4355

4356 Municipalities, the smallest entities, have control over local water supplies and waterworks. These
4357 either operate as local public agencies or as corporations with which the municipality contracts for
4358 water. There are more than 1,800 virtually autonomous community water systems in Illinois, each
4359 created under separate statutes that provide them with different and sometimes overlapping and
4360 conflicting powers¹⁰.
4361

4362

4363 The Illinois Municipal Code (65 ICLS 5)²⁴ allows corporate authorities to (1) provide for a supply of
4364 water by the boring of artesian wells, or by the digging, construction, or regulation of wells, pumps,
4365 cisterns, reservoirs, or waterworks, (2) borrow money for these purposes, (3) authorize any person to
4366 bore, dig, construct, and maintain the same for a period not exceeding 30 years, (4) prevent the
4367 unnecessary waste of water, (5) prevent the pollution of water, and (6) prevent injuries to the wells,
4368 pumps, cisterns, reservoirs, or waterworks. The jurisdiction of the city or village to prevent or punish any
4369 pollution or injury to the stream or source of water, or to waterworks, extends as far as the waterworks
4370 may extend. Each city or village may go beyond its corporate limits to acquire and hold property for the
4371 purpose of establishing and operating water works. In the past, concerns about development of
4372 groundwater supplies have caused more than 15 communities in East-Central Illinois to invoke the
4373 Illinois Municipal Code to try to control groundwater resources development near their wells and well
4374 fields²⁵.
4375

4376

4377 Regional water entities comprise the next spatial group. Illinois has five types: 1) regional water
4378 commissions that serve two or more municipalities, 2) water service districts for unincorporated areas,
4379 3) public water districts, 4) water authorities that mix municipalities and rural areas, and 5) river
4380 conservancy districts. The Rend Lake Conservancy District, formed in 1960 and is an example of the

4377 latter type. It led to the construction of Rend Lake in the 1960s and subsequent development of an
4378 intercity water system that supplies water to six southern Illinois counties.
4379

4380 The state of Illinois has several agencies that deal with water supplies. The Illinois Department of
4381 Natural Resources is the primary water quantity management agency²⁶. First formed in 1823, the Office
4382 of Water Resources has a long history beginning with flood control and navigation issues that later grew
4383 to include regulation of streams and rivers, locks and dams, construction issues, water conservation, the
4384 National Flood Insurance Program and more. There are certain public rights in public waters that are
4385 reserved for the citizens of the state and the Office of Water Resources issues permits for activities in
4386 and adjacent to the public waters of the state – 8 percent of the total stream miles in the state. Public
4387 waters generally may be described as the commercially navigable lakes and streams and the backwater
4388 areas of those streams. A list of the public waters of the state is provided²⁷. Pursuant to the 1911 Rivers,
4389 Lakes and Streams Act [615 ILCS 5], proposed activities in and adjacent to public waters are reviewed to
4390 ensure that the public's rights are not diminished by the activities. The maintenance of minimum
4391 instream flows in public waters is regarded as a benefit to the public and low flows are protected.
4392 Permits are issued to demonstrate that proposed activities do not diminish the public's rights; they are
4393 not issued to allocate water use. However, this regulation can pose limitations for obtaining water
4394 supply from major public rivers, especially during periods of drought. In East-Central Illinois, the Illinois
4395 River, the Lower Sangamon River to approximately one mile south of Mechanicsburg Road bridge, and
4396 the Sangamon River South Fork to approximately two miles upstream from the mouth are classified as
4397 public waters of the state.
4398

4399 Minimum instream flow in public waters generally is defined as the average flow measured during
4400 the 7 consecutive days of lowest flow during any given year. The 7-day 10-year low flow (Q7,10) is a
4401 statistical estimate of the lowest average flow that would be experienced during a consecutive 7-day
4402 period with an average recurrence interval of ten years. Low flow maps for streams in East-Central
4403 Illinois have been published by the Illinois State Water Survey²⁸. The Q7,10 protected flow is considered
4404 an interim surrogate value where there is insufficient information to define instream flow needs.
4405

4406 The Q7,10 values are affected by natural climate variability, withdrawals, return flows, and
4407 streamflow regulation. Because the Q7,10 values can change over time, they are updated approximately
4408 every 15 years to account for changes in low flow conditions. Over the past several decades, average
4409 streamflow amounts and low flows have increased due to an increase in precipitation; but the first half
4410 of the 19th Century was much drier and streamflows were lower (Appendix 1). If such historical dry
4411 conditions recur in the future, it could be questioned whether low flows established for a recent 10-year
4412 wet period would continue to be appropriate for water resources management. Low flows are expected
4413 to increase in streams that receive substantial increases in wastewater discharges.
4414

4415 The Illinois Environmental Protection Agency ensures that (1) Illinois' rivers, streams and lakes will
4416 support all uses for which they are designated, including protection of aquatic life, recreation and
4417 drinking water supplies, (2) every Illinois Public Water system will provide water that is consistently safe
4418 to drink, and (3) Illinois' groundwater resource is protected for designated drinking water and other
4419 beneficial uses²⁹.
4420

4421 The Agency conducts a groundwater protection program with a mission of restoring, protecting and
4422 enhancing the state's groundwater as a natural and public resource³⁰. The program derives much of its
4423 program authority from the Illinois Groundwater Protection Act that emphasizes a prevention-oriented

4424 process and relies on a state and local partnerships. The program focuses upon uses of the resource and
4425 establishes statewide protection measures directed toward potable water wells³¹.

4426

4427 Integration of wellhead protection programs are implemented for community water supply wells in
4428 priority groundwater protection planning regions. In general, the first step of developing a groundwater
4429 protection program involves determining the recharge area for the wells in unconfined aquifers utilizing
4430 existing aquifer property data. The recharge area is based on a five-year time of travel delineation. The
4431 second step involves determining the potential sources, potential routes, and the land use zoning within
4432 these recharge areas. The Central Groundwater Protection Planning Region includes Peoria, Tazewell,
4433 Woodford and Mason Counties³².

4434

4435 The Illinois Environmental Protection Agency implements permit programs to regulate wastewater
4436 discharges and stormwater runoff to Illinois streams and lakes, including storm water runoff. Permits
4437 can also provide the facility owner with an approval of the treatment systems about to be built³³. The
4438 Agency also is responsible for monitoring the quality of Illinois' surface water resources³⁴ and
4439 implements watershed management programs³⁵. A list of impaired waters has been produced³⁶ and
4440 reports on total maximum daily loads of specified pollutants have been prepared for lakes, streams and
4441 watersheds in East-Central Illinois³⁷. A total maximum daily load evaluation determines the greatest
4442 amount of a given pollutant that a water body can receive without violating water quality standards and
4443 designated uses. Pollution reduction goals then are set to improve the quality of impaired waters. Low
4444 flows are used in the application of water quality standards.

4445

4446 The Illinois State Water Survey³⁸ and the Illinois State Geological Survey³⁹, divisions within the
4447 University of Illinois at Urbana-Champaign collect data and conduct research, as do several other
4448 academic institutions.

4449

4450 Under the 1970 Environmental Protection Act, the Illinois Pollution Control Board is responsible for
4451 adopting Illinois' environmental regulations and deciding contested environmental cases⁴⁰. The Illinois
4452 Environmental Protection Act, under Title IV, indicates that there should be continuous operation and
4453 maintenance of public water supply installations in order to protect the public from disease and to
4454 assure an adequate supply of pure water for all beneficial uses. This concept is carried forward in the
4455 Pollution Control Board Rules, in particular 601.101. This could be interpreted as a 100 percent
4456 dependability standard.

4457

4458 The Illinois Department of Agriculture⁴¹ implements the Cooperative Groundwater Protection
4459 Program (8 Illinois Administrative Code 257) that establishes a potable water supply well setback zone
4460 for a community water supply well. The Department also distributes funds to Illinois' 98 Soil and Water
4461 Conservation Districts for programs aimed at reducing soil loss and protecting water quality. It also helps
4462 to organize the state's annual soil survey to track progress toward the goal of reducing soil loss on
4463 Illinois cropland to tolerable levels.

4464

4465 A major consideration in constructing new wells is to prevent contamination from entering the well.
4466 To ensure the safety of these water supplies, the Illinois Department of Public Health⁴² and local health
4467 departments review water well installation plans, issue permits for new well construction and inspect
4468 wells, and deal with the sealing of abandoned wells. The Department also oversees construction and
4469 operation of non-community public water systems to make sure water is safe to drink and use.

4470

4471 The Illinois Commerce Commission⁴³ regulates 33 water, 5 sewer, and 14 investor-owned,
4472 combination water and sewer utilities that provide water service to almost 1.15 million people. The
4473 Commission also provides comparisons of water and sewer rates.
4474

4475 Interstate compacts comprise the next spatial level of institutions. Illinois is a member of compacts
4476 with Missouri, Indiana, the Great Lakes states, and Ohio River states, and these groups deal with
4477 regional water issues.
4478

4479 Beck *et al.*¹⁰ discuss federal control of water in Illinois. At least six federal agencies have powers and
4480 activities affecting the water supply of Illinois. These include the U.S. Army Corps of Engineers, U.S.
4481 Environmental Protection Agency, and the Departments of the Interior, Agriculture, Commerce, and
4482 Housing and Urban Development. Many of these institutions interact directly with Illinois state agencies.
4483 The U.S. Supreme Court also makes decisions relating to the use and allocation of water supplies. In
4484 1992, the Federal Energy Policy Act⁴⁴ established national water efficiency requirements on new and
4485 renovated residential and non-residential facilities.
4486

4487 **Conclusions**

4490 The all-embracing nature of the water cycle and the wide-ranging characteristics of aquifers and
4491 watersheds necessitate consideration of time and space scales that are long and broad. Regional water
4492 supply planning and management provides an opportunity for all constituents in East-Central Illinois to
4493 improve communication and coordination in identifying and addressing issues that transcend local,
4494 short-term interests and authorities, but does not detract from these authorities.
4495

4496 Executive Order 2006-01⁴⁵ embodies many lessons learned from earlier initiatives in Illinois. In
4497 implementing the Executive Order, the Illinois Department of Natural Resources, Illinois State Water
4498 Survey, Illinois State Geological Survey and the Regional Water Supply Planning Committee are drawing
4499 on lessons learned from other states that have well-established regional water quantity planning
4500 procedures, especially from Texas. Texas has a comprehensive, regionalized, stakeholder-to-state-
4501 bureau management system coordinating the planning of its many different and variously stressed
4502 regions.
4503

4504 Executive Order 2006-01 can be viewed as a continuation of a 50-year trend towards improved
4505 water supply planning and management in Illinois. The Foreword to the 1967 State Water Plan⁹ began
4506 with the assertive statement that “Illinois must plan the long-range development of its water resources,
4507 if the state is to meet the needs of the future.” Forty years later this challenge remains.
4508

4509 It is clear from the long history of local action and management in Illinois that the success of any
4510 future effort to organize the management of water resources must include the provision of responsible
4511 roles for all stakeholders.
4512

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