ASSESSMENT OF ILLINOIS WATER QUANTITY LAW

FINAL REPORT

July 1996

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by

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I. INTRODUCTION

In 1992 Governor Edgar appointed a Water Resources and Land Use Priorities Task Force (WRLUPTF) with a wide-ranging expertise in agriculture, conservation, recreation, water resources, business, and land use. Among its responsibilities, the Task Force was charged with developing recommendations for the governor to reduce the increasing number of conflicts in Illinois over the state's water resources.

The Task Force determined that the existing water law in Illinois is inadequate to meet present and future needs. It found water rights in Illinois to be poorly defined and suggested that most of the water use conflicts during recent droughts could be traced to the lack of a comprehensive water resources act. The Task Force concluded that as water demands increase in the state, the competition for available supplies will generate increasing levels of conflict in the context of the existing water law. In response to this situation, they recommended that the state "prepare a comprehensive water resources act to replace the inadequate collection of statutes and court decisions scattered throughout Illinois law" (WRLUPTF, 1993).

PURPOSE

The Task Force noted that the first step in the development of a comprehensive water resources act would be to retain expertise outside state government to conduct an independent assessment of Illinois water law. Accordingly, the Illinois Department of Natural Resources (IDNR) contracted with Planning and Management Consultants, Ltd., to conduct the assessment of Illinois water *quantity* law. The Office of Water Resources of IDNR assisted in the development of the scope of the effort and in the identification of information sources but explicitly stipulated that, as recommended by the Task Force, the assessment should be independent and unbiased.

The purpose of this report is to provide the results of this assessment, which involved (1) review of Illinois system of water rights and water resources management, (2) definition of its strengths and weaknesses, and (3) comparison of its system with the evolving systems being implemented in other states. This report initially focuses on identifying conflicts and inefficiencies in water resources management in Illinois as a means to determine any inadequacies that the existing legal framework may have. After these problems are identified, optional legal responses to these inadequacies are presented.

SCOPE

This analysis is assessing Illinois water quantity law. The scope of the analysis has been defined by the recommendations of the Task Force. As discussed below, there are a variety of reasons, legal and managerial, for focusing on state water quantity law.

Water Quantity

This analysis concentrates on water *quantity* issues. The Task Force recognized that many water *quality*-related laws, regulations, and programs can have significant impacts on the availability, control, and distribution of the state's water resources. Instream flows are one example the close interconnection between water quantity and quality. Despite these linkages, the Task Force chose to differentiate its analyses and recommendations by quantity and quality purposes. The distinctions between water quantity and quality laws may be one explanation for this segregation.

Water *quantity* in this report refers to water supplies for instream or socioeconomic uses. In general, it does not encompass issues of drainage and flooding. While drainage and flooding issues are also intertwined with water quantity issues, they are relevant to the scope of this report only as they affect streamflows and associated instream or socioeconomic uses.

State Law

This assessment is focusing on Illinois state law. Federal laws are discussed only to the point required to differentiate state and federal roles and responsibilities in water management. For instance, this text has limited consideration of the regulation of Illinois' withdrawals from Lake Michigan, which are governed by decree from the United States Supreme Court in accordance with international agreements.

Drainage Law

Drainage usually is not included with water quantity law, as it deals with disposal of unwanted water. Drainage law has always been separate, particularly in the eastern United States, because the waters to which drainage law applied were defined differently: as diffused surface waters. This was done to contrast those waters with useable bodies of water such as rivers, lakes, and ponds. Furthermore, numerous single-purpose local government units known as drainage districts, were established over the past century to deal with this one perceived problem. Many, if not most, of those districts remain. While the Regulated Riparian Model Water Code defines waters subject to its jurisdiction as all-inclusive, it recognizes that states will

be excepting some waters and provides for that opportunity with only some suggestion as to what might be excluded (Ch. III, part 1).

METHODOLOGY AND CONTENTS

The identification of inadequacies in Illinois water law is based on (1) the technical analysis of water management issues and conflicts and (2) the legal analysis of the state's statutory law and case law. The identification of alternative responses focuses on legal remedies to these conflicts and issues. There are many dimensions to the component issues of water quantity management in Illinois. From the perspective of the state government, modification of the legal framework may provide the most effective and efficient solutions to water management issues and conflicts.

This assessment of Illinois water quantity law is driven by issues and conflicts in water management. The issues and conflicts are used to identify inadequacies in Illinois water law. The ultimate products of this study are optional legal responses to those inadequacies. The general sequence of study activities is outlined below, including a description of this report's organization.

This assessment approached Illinois water quantity law from three fronts. First, a review of literature on Illinois water management was conducted. It included the reports of state agencies, special committees, and task forces. The review was used to understand the contexts for water management in Illinois, presented in Chapter II, as well as identify specific water management issues in the state. Second, a concurrent survey of Illinois water quantity case law and statutory law was conducted. The survey, presented in Appendix A, summarizes the statutes and court cases that presently affect water management in Illinois. Third, focus groups were held around the state to gain more in-depth perspectives on the issues identified through the literature search.

As explained in the methodology description in Chapter III, the literature review, the legal analysis, and the focus groups have been used to develop an issue-oriented assessment of Illinois water law. Based upon these information sources and the goals of the assessment, the water management issues and conflicts in Illinois have been organized into three categories: surface water, groundwater, and management institutions. Chapters IV, V, and VI present profiles of the issues/conflicts and optional legal responses for the component issues and conflicts in the surface water, groundwater, and institutional categories. The Survey of Eastern Water Law and the Regulated Riparian Model Water Code are treated as integral parts of this study and are referenced frequently in these chapters.

Finally, conclusions and closing remarks are provided in Chapter VII. It identifies possible next steps to build upon the issues and options identified in this report.

II. WATER MANAGEMENT CONTEXTS

This chapter provides an overview of water quantity management in Illinois. This overview contains profiles of surface water management, groundwater management, and water management stakeholders (including institutions and user groups). There are five broad conclusions about water management contexts in Illinois that can be drawn from this overview: (1) Illinois has abundant water resources; (2) the citizens and economy of the state place great demands on these resources; (3) competition between users is high in some locations, stressing available water supplies; (4) competition can quickly escalate to conflict during droughts; and (5) human-induced climate change could dramatically affect the balance of water supply and demand. Before examining these water management contexts, the legal and institutional framework for water management is outlined.

LEGAL AND INSTITUTIONAL FRAMEWORK

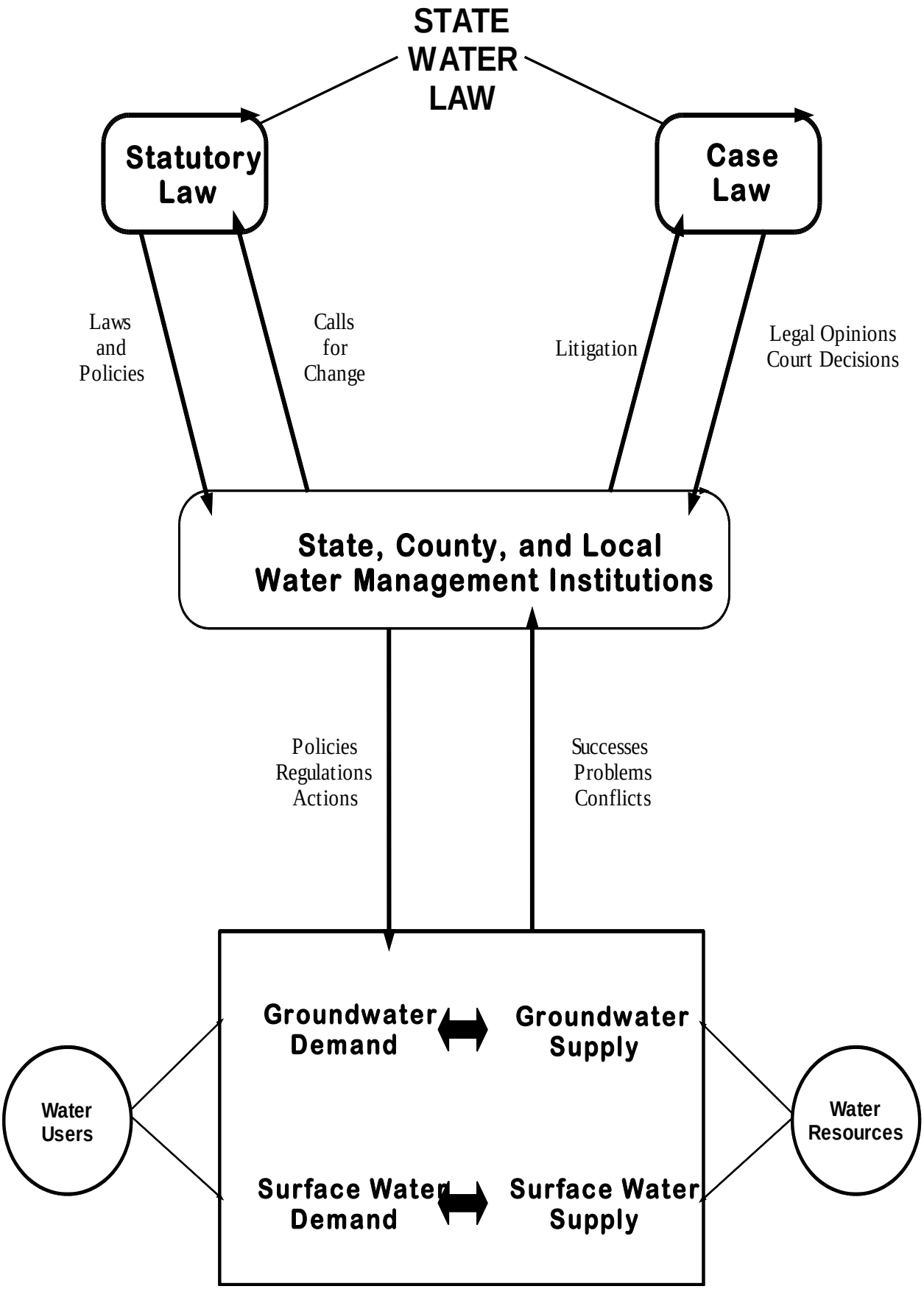
Illinois water resources are managed through complex interactions between water law, public and private water management institutions, and the interplay between groundwater and surface water supply and demand, as illustrated in Figure II-1. Illinois water law provides a framework for the management system through its statutory law and case law. These are described in detail in Appendix A. The statutory law and case law are manifested as laws, policies, legal opinions, and court decisions that guide water management in the state. These management goals and requirements are implemented through the state's water management institutions that include public and private entities operating at the state, regional, and local scales. The policies, regulations, and actions of the management institutions directly and indirectly influence the interface of the demands of water users and the supply of the state's groundwater and surface water resources.

As illustrated in Figure II-1, there are feedbacks between the components of the management system. If there are problems or conflicts regarding surface water or groundwater supply and demand, they will eventually become evident to the water management institutions. The conflicts may move to the courts, perhaps becoming part of the case law, or they may be manifested as calls for change in the state's statutory law.

WATER RESOURCES SUPPLY AND DEMAND

In general, Illinois has abundant water resources. The state is bounded by the Mississippi River to the west, the Ohio and Wabash rivers to the southeast, and Lake Michigan to the northeast.

Precipitation in the state ranges from an average of 46 inches per year at the southern tip of the state to 33 inches in the far north. This precipitation feeds the state's network of rivers illustrated in Fig-ure II-2. As shown in this figure, the major waterways of Illinois are the Rock, Kankakee, Illinois,



LEGAL AND INSTITUTIONAL FRAMEWORK FOR WATER MANAGEMENT

FIGURE II-2
MAJOR RIVERS AND COUNTIES OF ILLINOIS

Spoon, Sangamon, Kaskaskia, Big Muddy, Saline, Little Wabash, Embarras, Des Plaines, Fox, Edwards, and Vermillion rivers.

In addition to these surface water resources, Illinois draws upon its groundwater resources. There are three major aquifer groups in Illinois: deep sandstone, shallow dolomites, and surficial and buried sand and gravel deposits. As will be evident below, the state's groundwater resources are particularly important in meeting the water supply needs of rural areas in Illinois.

Illinois contains a diverse mixture of urban and rural land uses that draw upon the state's water resources to meet their needs. As presented in Table II-1, in 1990 all of the Illinois water users withdrew an estimated 18,000 million gallons per day (mgd) from the state's surface and groundwater resources (United States Geologic Survey, 1991). More than 84 percent of this withdrawal was by thermoelectric plants that provide power to the state. Excluding this category, surface water usage exceeded groundwater usage by a factor of almost two to one. On a per capita basis, the 11,432,000 population (1990) of the state withdrew 1,587 gallons per day (gpd).

TABLE II-1
1990 GROUND AND SURFACE WATER WITHDRAWALS
In Million Gallons Per Day
1990

Use Sector	Groundwater	Surface Water	Total
Public	444	1,420	1,864 (10.3%)
Domestic	115	0	115 (0.6%)
Commercial	54	119	173 (0.9%)
Irrigation	75	4	79 (0.4%)
Livestock	61	2	63 (0.3%)
Industrial	155	309	464 (2.6%)
Mining	33	61	94 (0.5%)
Thermoelectric	90	15,200	15,290 (84.5%)
Total	1,027 (5.7%)	17,115 (94.5%)	18,142 (100%)

Source: United States Geologic Survey 1991.

These water demands are not distributed evenly in time or space. Many water uses, including irrigation and thermoelectric demands, vary seasonally. In addition, different land uses have different water needs. Nearly 50 percent of the water use in Illinois is derived from Lake Michigan for the urbanized northeastern part of the state. The remaining 50 percent is primarily groundwater in agricultural areas, where competition for water resources is experienced most frequently. There is increasing potential for competition in rural areas, since irrigation demands on surface water and groundwater resources are increasing rapidly.

In addition to the usage categories identified in Table II-1, there are a variety of instream uses that do not withdraw from the waterways. These include the flows required to maintain the state's fish and wildlife resources as well as those needed for commercial navigation, boating, fishing, and other water-based recreational activities. As described later in this report, instream uses have become a legitimate category of water demand that competes with economic and public water uses.

The diversified economy and land use patterns of Illinois underlie the water usage profile provided by Table II-1. A wide variety of groups, organized and unorganized, have an interest in how water is managed in Illinois. The individuals and groups identified as part of this study contain a sampling of water interests in Illinois, including both private interests and public institutions (see Appendix B). Among the private interests represented are agricultural, urban, industrial, commercial, development, recreation, and environmental. The relationships between these interests are fundamental to how Illinois surface water and groundwater resources are managed. Prior to examination of the current surface water and groundwater management in Illinois, it is first necessary to place the state's water management systems in a historical context.

HISTORICAL PERSPECTIVES ON WATER MANAGEMENT

Water management in Illinois is rooted in history. As explored in Appendix A, the management of water resources in Illinois is very much affected by case law dating back to the mid-nineteenth century. In addition, one of the most important statutes that authorizes state powers to regulate the management of water resources is the 1911 Rivers, Lakes, and Streams Act.

Some of the water management issues and laws addressed in this report have been of concern for many years, sometimes decades. For example, in 1948 the Illinois Legislative Council prepared the report Control of Ground Water, which recognized localized groundwater problems and called for legislation authorizing state regulation of groundwater withdrawals. In 1958, University of Illinois Professor J. E. Cribbet prepared Illinois Water Rights Law (and What Should Be Done About It) for the Illinois State Chamber of Commerce. As in the case of this effort, the Cribbet report recommended that any modification of Illinois water law be based on thorough analysis of the problems in water management.

Issues of water supply and water law are highlighted in the 1967 report Water for Illinois: A Plan for Action prepared by the ad hoc Illinois Technical Advisory Committee for Water Resources. That report calls for studies very similar to this effort:

> It is strongly recommended that such a framework be developed through a comprehensive, in-depth study of Illinois water law and of the relationship between the legal framework and the goals of water resources management.

In 1974, the Illinois Economic and Fiscal Commission conducted a program review entitled Water Resources Management in Illinois. This report drafted a water permit statute for Illinois. The draft statute was intended to serve as a starting point for the process to provide the state with permit authority for surface water and groundwater use and development.

The effects of these historical influences and more recent events have shaped the current management systems for groundwater and surface water resources. The following descriptions of these systems are complemented by the survey of Illinois water law in Appendix A.

SURFACE WATER MANAGEMENT

The two most influential state agencies involved with surface water management in Illinois are the Illinois Department of Natural Resources (IDNR) and the Illinois Environmental Protection Agency (IEPA). The formation of IDNR as part of the Conservation 2000 initiative has incorporated several water resources management elements of the state government into a single agency. These elements include the former Department of Conservation, Department of Energy and Natural Resources, the Department of Mines and Mining, and the Water Resources Division of the Department of Transportation. IDNR is primarily concerned with water quantity issues, and IEPA is primarily involved with issues of water quality.

As described in Appendix A, the Rivers, Lakes, and Streams Act in 1911 gave a state agency, the Rivers and Lakes Commission, authority to control activities affecting public bodies of water in Illinois. This authority came to the Illinois Department of Transportation (IDOT) in 1972 and then to the newly created Illinois Department of Natural Resources (IDNR) in 1995. (*Note: Given this history, this report contains multiple references to IDOT authority in water management. These discussions are referring to the authority that has been transferred to IDNR.*) The Rivers, Lakes, and Streams Act vests IDNR with "general supervision of every body of water in the state of Illinois, wherein the State or people of the State have any rights or interests." It directed IDNR to "jealously guard (these waters) in order that the true and natural conditions thereof may not be wrongly and improperly changed to the detriment and injury of the State of Illinois."

In the public waters of the state, IDNR has the authority to regulate stream channelization, placement of fill or structures, removal of snags and debris, and withdrawal of water. As discussed in Appendix A, IDNR's definition of *public waters* is based on the

navigability test. Currently, eight percent of the total stream miles in the state (2,504 of 33,000 miles) are recognized as public waters. The above categories of physical disturbance of the riparian beds of public waters are subject to IDNR's permit program. These permits are reviewed on the basis of impacts to human safety and property. IDNR's authority also extends to *nonpublic* streams that drain either more than ten square miles in rural areas or more than one square mile in urban areas.

The state does not require registrations or permits for surface water withdrawals. However, withdrawals from public waters may be limited or prohibited by the state during periods of low flow to prevent adverse effects on public uses of the waterway. Under the Water Authorities Act, these local water supply entities can require registration of surface water withdrawals.

Surface water withdrawals are apportioned according to the doctrine of riparian rights under the rule of reasonable use. Water rights are associated with riparian land. The Rivers, Lakes, and Streams Act does not confer on IDNR explicit authority to regulate withdrawals by riparian landowners or use of water under either normal or emergency situations.

The right to develop water supplies for use on nonriparian land is granted only under statutory authority and only for industrial manufacturing or to water utilities. A variety of public and private entities are authorized to develop water supplies. This includes municipalities, counties, public utilities, and special water districts (public water districts, water authorities, water service districts, water commissions, and water/wastewater commissions).

GROUNDWATER MANAGEMENT

The management of groundwater in Illinois has marked similarities with the management of surface waters. Rights to groundwater are appurtenant to overlying land. Any right to transport and sell water for use on nonoverlying land is granted only under statutory authority and may be limited to municipalities and water authorities.

Illinois does not require permanent or annual permits for groundwater withdrawals. Any quantity of groundwater may be withdrawn without a specific use permit. In accordance with the Water Use Act of 1983 (WUA), groundwater withdrawals, like surface water withdrawals, are governed under the rule of reasonable use, defined as the use of water "to meet natural wants and a fair share for artificial wants. It does not include water to be used wastefully or maliciously."

The WUA establishes a review process for potential groundwater conflicts before any damage occurs. It also provides rules for mitigating groundwater quantity conflicts. Under the WUA, landowners must notify their local county Soil and Water Conservation District (SWCD) of new groundwater wells withdrawing over 100,000 gallons per day. Local governments must also be notified. The SWCD reviews the proposed withdrawal effect on other users of groundwater and notifies other groundwater users and local authorities regarding anticipated

impacts. The Illinois State Water Survey and Illinois Geologic Survey are to provide technical support for this review of the proposed withdrawal with respect to effects on neighboring groundwater users. The SWCD publishes a review of the proposed withdrawal in a general circulation newspaper and sends copies to the local units of government.

The Illinois Department of Agriculture (IDOA) has an important role in groundwater management under the WUA. When recommended by the SWCDs, IDOA is authorized to restrict groundwater withdrawals from large capacity wells during emergency periods within four counties: Kankakee, Iroquois, McLean, and Tazewell (see Figure II-2). This provision of the Act is significant in that it (1) illustrates the localized characteristics of groundwater conflicts and (2) is an example of state powers that some groundwater interests would like to see applied to the entire state.

Although there are no permits required for groundwater withdrawals, drilling permits from the Department of Public Health (DPH), IEPA, and IDNR may be required, depending on the intended use of the wells. Household well-drilling permits are required by DPH, as well as permits for irrigation, industrial, and nonpotable wells. Drilling permits for public supply wells are required by IEPA.

IMPACTS OF DROUGHT

Droughts are slow onset phenomena that are widespread but spotty (i.e., spatially irregular) in their effects. The literature regarding water management in Illinois indicates that droughts can greatly intensify competition for the state's water resources, particularly surface waters (Illinois Division of Water Resources 1983). Although groundwater resources are more resilient to their effects, droughts put pressure on virtually all aspects of water management systems. Not only are water supplies reduced, but water demands are simultaneously increased, especially the needs of agricultural crops and residential lawns. During dry years, competition can often become a conflict among water users within and between the various water use sectors (e.g., agricultural, municipal, industrial, environmental, and recreational).

The most recent major drought in Illinois was in 1988, which made many issues of water management in Illinois quite apparent. Competition for available supplies escalated to conflict in many areas. In the wake of this event, the state government devoted additional resources to water management, and the studies and reports that resulted have been an important source of information regarding water management in Illinois, including its successes and shortcomings (Changnon 1987; Brim et al. 1991).

PROSPECTS OF CLIMATE CHANGE

The drought of 1988 stimulated a plethora of actions in Illinois and nationwide to improve water management and drought preparedness (President's Interagency Drought Task Force 1988). It also created widespread concern about the possibility of anthropogenic climate change, known as global warming (Karl and Heim 1990). The concept of global warming, which correlates rising atmospheric concentrations of carbon dioxide and other greenhouse gases with warmer average temperatures, has achieved a wide acceptance among the international community of atmospheric scientists (Houghton et al. 1990, 1995). While the rate and amount of warming are uncertain at this time, many institutions have begun to prepare for its effects, including coastal nations concerned about rising sea levels and insurance companies concerned about greater damages resulting from more powerful or frequent hurricanes (Mitchell and Ericksen 1992; Wigley and Raper 1992)

Global warming has the potential to significantly impact the hydrologic cycle (Miller and Russell 1992). Agriculture could be particularly vulnerable to its effects, since higher temperatures would increase evaporation and more quickly deplete soil moisture (McCabe and Wolock 1992; Pigram 1992). Urban water systems could also be impacted if streams feeding reservoirs are reduced in flow or if more severe droughts result from climate changes (Cooley et al. 1992; Major 1992).

In 1990, Illinois established the Task Force on Global Climate Change to develop and implement an action plan for Illinois to respond to the prospect of climate change (Illinois State Water Survey 1991). This includes policies to prevent and adapt to global warming (Task Force on Global Climate Change 1996). Among the scope of the Task Force's efforts has been an assessment of the institutional implications of climate change for Illinois water management (Center for Regulatory Studies 1994). The documents produced by the Task Force have been important sources of information about water management in Illinois and the potential effects of climate change. The prospect of climate change therefore provides a critical context for all aspects of water management in Illinois. Efforts by the Task Force to alert the state to the implications of climate change produce a win-win situation, as management responses to climate change can improve management efficiency and effectiveness that benefit the state whether or not climate change occurs.

SUMMARY

This chapter has presented a profile of water management contexts in Illinois, including water supplies, demands, and institutions. The broad discussions in this chapter will be supplemented by more detailed examinations of the issues and conflicts in Illinois water management in subsequent chapters. Many of these issues and conflicts will be traced to inadequacies in the current legal and management structure for Illinois water resources.

III. METHODOLOGY

This assessment of Illinois water quantity law was conducted using a three-part methodology: literature review, focus groups, and legal assessment (see Figure III-1). The ultimate products of this methodology are optional responses to the issues and conflicts in Illinois surface water and groundwater management. As described below, the assessment was issue-driven. The literature review and focus groups were used to identify the issues and conflicts. This was complemented by a legal review of current Illinois water quantity law, including statutory and case law. Together these analyses constituted a baseline of information that supported development of optional responses to the issues and conflicts.

This chapter details the methodology used for this assessment of Illinois water quantity law. It also explains the organization and formats for the detailed discussions of issues and options in subsequent chapters.

LITERATURE REVIEW

The literature review of available documents was conducted to identify problems in water quantity management in the state. It commenced with telephone contact of representatives of water interests in Illinois using a list of stakeholders (public and private) supplied by IDNR (see Appendix B). The water management stakeholders were contacted for three reasons. The first reason was to inform them of the purpose and scope of this assessment. This proved to be important in alerting water management stakeholders that the study had commenced and in clarifying misunderstandings about the scope of the investigation. The second reason was to identify literature on water management in Illinois. The stakeholders were asked to identify any documents that could provide insight into the important water management issues in Illinois. The third reason was to informally solicit the stakeholders' perspectives on water management issues and conflicts. The representatives not only provided significant insights into water management issues and conflicts and their connections to water law but also offered possible solutions. In addition, the stakeholders were asked to identify any additional persons or interests who should be contacted as part of this effort. The stakeholder list in Appendix B contains the original contacts and these additional parties.

Through the telephone contacts with water management stakeholders and standard library research, literature on water management in Illinois was identified, obtained, and reviewed. This included published reports, studies, and memoranda of state agencies and interest groups. In addition, special studies by ad hoc committees and task forces were reviewed, including those of the State Water Plan Task Force, Illinois Instream Flow Protection Committee, Drought

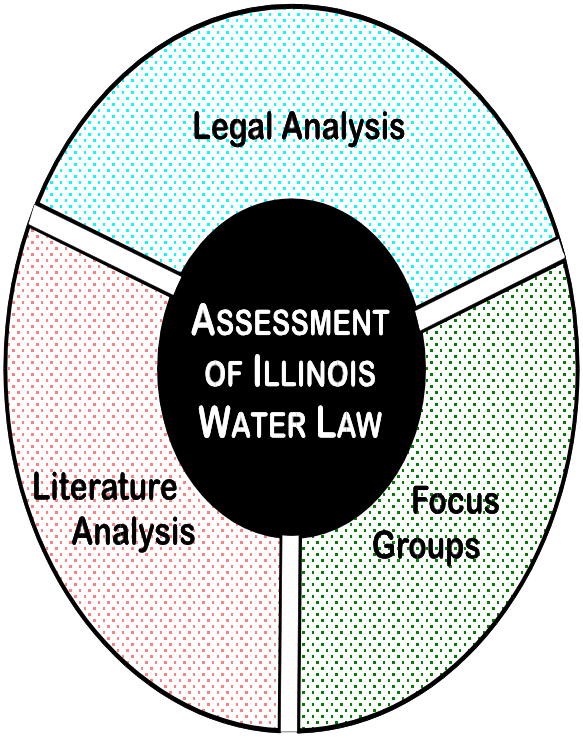


FIGURE III-1
COMPONENTS OF ASSESSMENT METHODOLOGY

Response Task Force, and Global Climate Change Task Force. The reviewed documents that describe issues of water quantity management in Illinois are presented in Appendix C.

FOCUS GROUPS

Following the literature review and telephone contact of water management stakeholders, four focus groups were held to (1) identify and explore issues and conflicts in water management in Illinois and (2) develop and consider alternative solutions to these management problems. They also provided an opportunity to explore new issues and conflicts that were not documented in the literature. The meetings were designed to generate information about water management issues and conflicts, not to develop group consensus or prioritize issues.

The water management interests represented in the four focus groups included agriculture, environment, municipalities, utilities, drainage districts, water authorities, and recreation. All parties on the stakeholders list provided by IDNR, supplemented with additional parties identified through the phone contacts, were invited to attend (see Appendix B). Thirty-

two stakeholders were able to attend. Three locations were chosen (Chicago, Champaign, and Springfield) to provide convenient access for participants. One of the focus groups contained only state representatives to solicit state perspectives and draw upon their extensive water management experience. The focus groups proved to be a rich source of information, since the participants have so much experience with water management in Illinois, and many were familiar with Illinois water law.

The half-day meetings were designed to allow the group to focus on groundwater and surface water issues and conflicts. To promote the free flow of information between the participants, the groups were kept small (i.e., fewer than 10 people), and a professional facilitator was used to keep each group focused.

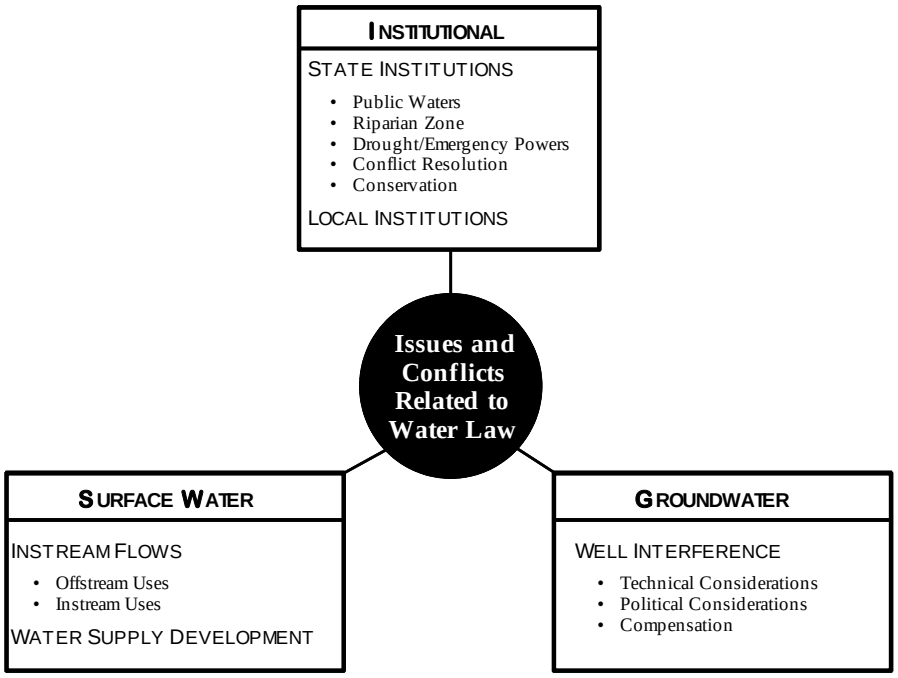
For some issues, the various stakeholders may have very different perspectives. It may be that their interests are conflicting. It is also possible that perceptions of problems and solutions may differ. While perceptions can be right or wrong with respect to historic or legal accuracy, in water management it is common for public perceptions to contain inaccuracies and half-truths. Indeed, false perceptions of water management issues can constitute issues in themselves, and clarification of misperceptions can, in turn, be optional responses. For these reasons, the information generated through the focus groups has not been evaluated for relevance, accuracy, or completeness. Instead, the purpose of the focus groups (stated at the meetings and maintained in this report) was to describe the issues and conflicts in Illinois water management so that optional responses could be effectively formulated.

ISSUE IDENTIFICATION

The focus groups and the literature review were conducted to identify the issues and conflicts in Illinois water management that suggest inadequacies in the state's legal framework. In the chapters that follow, the issues and conflicts will be identified using information that is synthesized from these sources.

Before exploring the water management issues in the following chapters, it is first important to recognize two fundamental realities of Illinois water management: (1) while Illinois water resources are abundant, they are nonetheless finite, and (2) the demand and supply of surface water and groundwater are not uniformly distributed. Under the current surface water and groundwater management systems, these realities have produced significant competition within and between different water use sectors. For some water resources, the competition is low-intensity and regional or statewide in scale. For others, the competition may be very intense and limited to a very small area. In some circumstances, competition can escalate to conflict. Conflicts may arise from a technical issue, such as the amount of water available from a given source. They can also arise when legal rights to water resources are unclear or unfair from the perspectives of some water users. Many water conflicts lead to litigation. Some conflicts become chronic when (1) resolutions are reactive rather than proactive, (2) institutional responses are insufficient or inappropriate, or (3) court decisions are ambiguous.

Based upon the competition and conflict identified through the literature review, contacts with water management stakeholders, and focus groups, the water quantity management issues can be organized into three categories: surface water, groundwater, and institutional (see Figure III-2). The institutional category could be subsumed into the other two categories, but it has been segregated to highlight the diverse functions of water management institutions and recognize the critical linkage that institutions provide between water management and law (see Figure II-1).



LEGAL ASSESSMENT

The legal assessment of Illinois water quantity law was a two-part process. First, a survey of current Illinois statutory law and case law was conducted. This survey is contained in Appendix
A. Second, optional responses to the issues and conflicts identified through the literature review and focus groups were identified. The development of these options drew upon (1) the issue identification activities, (2) the survey of Illinois water law, and (3) other legal resources such as authorities identified in the Illinois water law survey, the Survey of Eastern Water Law, previously commissioned by IDNR and The Regulated Riparian Model Water Code.

FIGURE III-2
ILLINOIS MANAGEMENT ISSUES RELATED TO WATER LAW

A consistent process was used to develop optional responses to the water management issues and conflicts. This methodology applied the following sequence of analyses to each issue:

(1) Review of existing Illinois law regarding the particular issue
- Relevant Law
- Relation to the issue
- Implications to water management options

(2) Identification of options as to the law applied to the issue. Such options, depending on the specific issue, may include the following:
- Do nothing
- Acquire additional data
- Provide guidance documents
- Broker a group of diverse interests to negotiate settlement
- Change or clarify the law
  - Common law by courts
  - Legislation
  - New agency regulations

(3) Qualitative assessment of the pros and cons (costs and benefits) of each option. Such pros and cons, depending on the specific option, may include the following:
- Time
- Money
- Certainty
- Equity/fairness/efficiency
- Stress on the institution
- Clarity of legal authority
- Significance of option (evolutionary or revolutionary?)

Generally when "comprehensive" water laws are discussed, the usual meaning attributed to comprehensive is the allocation of water in rivers or lakes or groundwater for public or private uses other than disposal of pollutants. One reason for the distinction between water quantity and quality is that water pollution generally is handled by a specialized pollution statute under a specialized control agency. Here the current movement is to consolidate water pollution with air pollution and disposal of hazardous wastes into a single pollution control system. Thus, it was just recently reported that a 3M plant in Minnesota was set to receive the first "multi-media" permit. In contrast, riparian law is common law, not statutory law. Under the regulated riparian mode, however, there is an extensive statutory base as well, thus, the recent Regulated Riparian Model Water Code does provide the opportunity for coordination of water allocation and water quality regulation (Ch. VI, part 4, at 233-244).

The following three chapters (IV, V, and VI) discuss the issues and options regarding surface water, groundwater, and management institutions. Although some chapters have more component issues than others (see Figure III-2), the formats for discussing the issues and options are the same. The issue will first be identified and explored using information provided by the

literature review and generated through the focus groups. The sources of information (i.e., literature or focus group) will be cited. Once the issue has been explored, optional legal responses will be identified and assessed using the methodology described above. Finally, with each discussion of issues and options, a summary table will be included.

IV. SURFACE WATER ISSUES AND LEGAL OPTIONS

As illustrated in Figure III-2, there are two principal issues that relate to surface water management: instream flows and water supply development. This chapter examines these issues and their associated optional responses.

INSTREAM FLOWS: ISSUES

Since the 1970s, instream flows has emerged as one of the most important and complex issues in Illinois water management. In 1984, the Illinois State Water Plan Task Force found that the protection of instream flows is in the public interest and described their significance:

> The State of Illinois finds that the pubic health and safety, the water quality, the riverine flora and fauna, the aesthetic qualities and the recreational potential of the rivers of Illinois are dependent in substantial measure upon the protection of reasonable flows in the rivers of the State.

Competition for Finite Surface Water Resources

The issue of instream flows is fundamentally about competition between water users for finite surface water resources. Traditionally, the issue of instream flows concerned the preservation of sufficient streamflow for two purposes: (1) to allow users downriver to divert water for their needs offstream and (2) to provide sufficient depths for commercial navigation. In recent years, however, recognition of the value of instream uses (i.e., uses that do not involve water withdrawal offstream) has been broadened to include environmental uses that need minimum streamflows to support aquatic ecosystems and recreational uses, such as boating and fishing. There is now the additional competition and conflict between those who value instream uses of surface waters, such as recreation and environmental interests, and those who value offstream uses, such as public water supply and agricultural interests.

Offstream uses impact instream flows through consumptive use. Because some water is consumed (or lost via leakage or evaporation) when it is diverted offstream, the return flow to a waterway is often substantially less than the original withdrawal. For example, the return flow from a municipal wastewater treatment plant is significantly less than the original withdrawal from the waterway, resulting in reduced flows downstream.

Competition for the allocation of instream flows is unique to each waterway and is dependent on the season and whether or not drought conditions prevail. Depending on the circumstances, the competition can quickly turn to conflict. The antagonists often turn to the state or the courts for resolution of the conflict. As described in Appendix A, the riparian concept of reasonable use has been applied to balance the surface water withdrawals of offstream users (Clark 1985). As noted by the focus group participants, reasonable use does not necessarily mean reasonable allocation with respect to the public interest.

The issue of instream flows is both technically and legally challenging. The legal rights of instream users are much less clear than those of riparian landowners downstream who want to withdraw water for offstream uses. In addition, there can be technical challenges to determine the need of instream uses, such as the flow requirements for canoe passage or the requirements of aquatic ecosystems. When droughts occur, this competition can be aggravated as offstream users' demands increase at a time when instream flows are particularly low.

The issues of water management in Illinois are thoroughly intertwined. Instream flows are no exception. They are directly and indirectly involved with other issues of surface water management, including those associated with water supply development and management institutions. In addition, instream flows are indirectly connected to issues of groundwater management by virtue of the hydrologic linkages between surface water and groundwater.

In 1983, the State Water Plan Task Force sponsored a workshop on instream flow protection. The participants in the workshop acknowledged the need to balance instream and offstream uses but recognized the technical challenges of determining minimum streamflows needed to protect aquatic resources (Illinois Instream Flow Protection Committee 1991). The seasonal requirements of aquatic biota and the natural variability of streamflows were two important components of this complex undertaking. The workshop participants recommended that the state (1) develop a policy regarding flow protection, (2) prepare a planning and research agenda on this issue, and (3) formulate a planning standard for instream flows. Following this workshop, the State Water Plan Task Force recognized that any instream flow regulations need to protect aquatic ecosystems without unnecessary regulation of water management. The Task Force recommended such regulations should incorporate the following criteria:

X Reasonable degree of environmental protection
X Reasonable degree of cost-effective water supply development
X Statewide applicability
X Sensitive to temporal and spatial variability

In response to the social, economic, and ecological significance of instream flows and the increasing competition for surface water resources experienced during the drought of 1988, Governor Thompson signed legislation that established the Instream Flow Protection Committee in 1989. This committee included representatives of the state resource agencies and water use sectors. The committee submitted a report to the Governor in 1991 (Illinois Instream Flow Protection Committee 1991). The report described the adjustments needed to balance competing demands on surface water resources:

> It is now becoming recognized that most of the streams in Illinois cannot meet the demands of all users at all times. Therefore, developers of the surface water resources of the State of Illinois must recognize the need to cease withdrawals at various times to protect the values of instream uses and recognize that most water supply developments in Illinois will require that additional storage or alternative sources of supply be developed as a necessary part of any secure water resource development project.

The Report of the Instream Flow Protection Committee presented 16 papers that described critical components of the issue of instream flows. Most of the papers were concerned with the competing uses of instream flows, considering both instream uses and offstream uses. Based on the water management literature and focus group discussions, the instream/offstream competition for surface water resources continues. Following are discussions of the principal instream and offstream uses categories and their relevance to the issue of instream flows.

Offstream Uses

As indicated in Table II-1, the principal surface water withdrawals in Illinois are by public, industrial, and commercial users, accounting for 74 percent, 16 percent, and 8 percent of total surface water withdrawals, respectively (when excluding thermoelectric withdrawals). In its report, the Instream Flow Protection Committee suggested that if the water uses that withdraw large quantities of surface water reduce their consumptive use, instream flows could be protected. The committee indicated that the development of contingency plans for drought periods would be particularly helpful at a time when instream flows are particularly low. Such preparedness measures would include supplemental sources of supply, additional storage capacity, reduced sedimentation in reservoirs, raised reservoir pool levels, interconnected systems, leakage detection programs, and other conservation measures.

At the focus groups, the participants noted the differences in consumptive use between different water users, such as irrigation, municipal water supply, and industrial. There was also recognition that the same use can have seasonal changes in consumptive use (e.g., irrigation). The trend toward land application of sewage sludge was cited as illustrative of how changing wastewater treatment methods can greatly increase consumptive use and decrease downstream flows.

The focus group participants recognized competition between agricultural, municipal, industrial, and instream uses for surface water supplies. Some felt that the state could provide more active leadership to resolve this competition. One recurrent theme was that municipal and irrigation withdrawals are not regulated to the same extent. One example offered regarded a side-channel pumping pool in the Mackinaw River for drought contingencies. This facility was described as requiring many different permits, while nearby irrigation wells have no permits or regulations.

Another example offered at one of the focus group meetings was that of the Vermillion River, which virtually stopped flowing during the drought of 1988. This caused concern for the instream fish and wildlife resources. The IEPA was described as not intervening in this situation, in spite of what some participants viewed as excessive irrigation withdrawals upstream. Several participants observed that during droughts temporary irrigation intakes constitute what are essentially nonpoint withdrawals, which can collectively reduce river flows downstream substantially. The participants suggested that if the state is going to regulate surface water withdrawals, it needs to regulate all withdrawals, temporary and permanent, with no agricultural exemptions. Some participants felt that there should be consistency in the law with respect to all withdrawals in a given watershed. Currently, permits are required for permanent withdrawal facilities but not temporary withdrawal facilities that do not involve construction. Some participants suggested that it would be unfair to ask individual landowners to go through the same regulatory/permit process that municipalities do, since they have fewer funds and smaller impacts on water resources. However, other participants stated that irrigators should not be able to drain streams during droughts.

Instream Uses

The principal instream uses in Illinois are those of commercial navigation, recreation, and the environment. Since one instream use typically does not diminish other uses, these three water uses often have similar interests. While the timing, location, and amount of water needed by the three interests may not fully coincide, they are generally interested in maintaining some minimum streamflow in Illinois waterways.

Commercial Navigation

On several Illinois waterways, commercial navigation is a major instream use. These waterways include the Mississippi, Ohio, Des Plaines, Kaskaskia, and Illinois rivers. Commercial navigation is a critical determinant of state powers in water management, since it is used by IDNR to define public waters. Even when commercial navigation is no longer active, it can be an important factor in surface water management. For instance, at one of the focus groups, the Illinois-Mississippi Canal was cited as a water management issue derived from commercial navigation. This canal is fed through a diversion from the Rock River at Rock Falls. The diversion was initially used to provide water for commercial navigation. However, there is no longer commerce on this waterway. There was a suggestion that this diversion needs to be reconsidered, since the water is not needed for commercial navigation or agriculture along this canal. However, other participants noted that the canal provides important fishing and boating opportunities to local residents.

Environment

Environmental uses are one of the most significant and challenging categories of instream uses. Its significance was documented in the Report of the Instream Flow Protection Committee and was a recurrent theme in the focus groups. The significance is derived from the fact that some minimum level of instream flows are necessary to support a healthy aquatic ecosystem. The challenges of environmental instream uses involve determining what levels of instream flows are appropriate along a given stretch of waterway at any given time.

The water management literature suggests that environmental instream uses have four critical components: fish and wildlife habitat, unique and sensitive aquatic resources, waste assimilation, and stream bed and bank stability. These topics, with examples from the public and nonpublic waters of Illinois, are presented below.

Fish and Wildlife Habitat. The main function of environmental instream uses is to provide and maintain habitat for fish and wildlife. As described in the Instream Flow Protection Committee's report, the determination of flows needed for fish and wildlife can be very complex. Different organisms require specific environmental, physical, chemical, and biological conditions as habitat. The determination becomes more complex when spatial and temporal variability are considered. Spatial variability considerations include habitat needs along a given waterway, with particular emphasis on stream order. Included in temporal considerations are seasonal variations of fish and wildlife habitat needs, especially with respect to spawning and nursery habitat. Finally, aquatic organisms are adapted to natural variability of streamflow. Incorporation of habitat variability into assessment of instream flows needed for fish and wildlife habitat is a challenging technical problem.

Habitat assessment models can incorporate many different ecosystem parameters to assess the habitat suitability for a given species. However, the complexity of aquatic ecosystems, the spatial and temporal aspects of habitat, and natural habitat variability challenge the use of habitat models for statewide determination of minimum streamflows. This does not preclude habitat considerations from regulation of instream flows. Instead, it is a recognition that these models are complex instruments that may not be practically applied statewide. A statewide instream flow standard would probably have to be a less refined instrument based on some proportional discharge instead of an absolute amount. An example is provided by the following interim standard recommended by the State Water Plan Task Force in 1983. The flow available for offstream use from a given waterway would be the maximum of either

Q sub {streamflow}
~-~ Q sub {75}

(i.e., the streamflow minus the 75% duration flow)

or

(i.e., the difference of streamflow minus the 7-day, 10-year low flow divided by 2)

Unique and Sensitive Resources. Habitat assessment models may be appropriate tools for establishing minimum flows on waterways with unique or sensitive habitat. As discussed in the committee's report, it may be most appropriate to categorize rivers by their best uses rather than set minimum flow levels for streams statewide. Priority would be given to threatened and endangered and economically important species. According to the committee, "unique and sensitive resources should deserve more than minimal protection." Later, the committee recommended that "for the Unique Resource Rivers, protected flow levels should be set separately for each of these rivers. The rest of the State could best be covered by a general rule such as the current interim rule *[see above]* or other chosen measure. "

Waste Assimilation. As described in the committee's report, instream flows have an important function in diluting and assimilating point and nonpoint source pollution. However, as in the case of the needs of aquatic biota, the committee recognized that this is a very challenging parameter for managing instream flows.

Streambed and Bank Stability. In addition to the effects on aquatic biota, low flows can impact the physical structure of streams. As stream banks dry, they lose their integrity and collapse into the stream. Bank habitat can be lost, and water quality may deteriorate as a result of increased sedimentation.

Examples from Public and Nonpublic Waters. Some of the participants in the focus groups indicated that there are no strong criteria for protecting instream flows for fish and wildlife purposes. As a result, regulation of low flows in public and nonpublic waters is problematic. The participants offered examples of each case. For low flow in public waters, the case of the city of Joliet and the Kankakee River is illustrative. The city's proposed withdrawals from the river would have been an insignificant portion of low flow ($Q_{7,10}$), but there was great public resistance that complicated a relatively straightforward decision. It was noted that the social and political aspects of low-flow regulation were particularly important here.

For low flow in nonpublic waters, the case of the city of Bloomington and the Mackinaw River were cited at one of the focus group meetings as an illuminating example. State permits were granted for the city's withdrawal, but the state has no power to set low flows. As a result, the Army Corps of Engineers decided to set low flows under public interest review of the Section 404 permit. The result is that the federal government made low-flow decisions in lieu of state action. The conclusion of the group was that the state needs additional authority to regulate low flows. Some participants also observed that fish and wildlife considerations in low-flow regulations have very little legal standing.

Recreation

The report of the Instream Flow Protection Committee also contained a paper on recreation as an instream use. The paper characterizes water-based recreation as concentrated on select bodies of water. As in the case of unique and sensitive resources, the committee suggested that the most popular rivers for recreation be identified and their flows regulated to ensure recreational opportunities. Boating and fishing are the two most popular forms of instream recreation. Their relationships to instream flows are described below.

Boating. The depth requirements of various watercraft, such as canoes, are well known. The determination of the flows necessary for depths needed for safe passage along a given waterway is in most cases a fairly straightforward hydrologic calculation.

Fishing. The instream flow requirements of recreational fishing includes many of the environmental considerations above and may or may not include the boating considerations as well. The committee noted that it would be inappropriate to assume that instream flows regulated for environmental purposes would be sufficient to meet recreational needs. It recommended that the instream flows required by the two uses be compared and the streams be managed conjunctively.

INSTREAM FLOWS: OPTIONAL RESPONSES

The development of optional responses to the issue of instream flows begins with a review of existing Illinois water law as it applies to this issue. This is followed by identification and assessment of optional responses to problems associated with instream flows. After these discussions, a summary table is provided for the issues and legal options of instream flows.

Existing Law

Illinois common law does not directly require the maintenance of minimum or required streamflow for fish and wildlife or ecosystem maintenance. However, the common law may indirectly require some streamflow, although not necessarily for fish and wildlife or ecosystem purposes. All riparian landowners are entitled to a reasonable use of water, and there obviously can be no reasonable use by a lower riparian if the upper riparian has removed all of the water. Presently, Illinois law does not specifically recognize fish and wildlife or ecosystem maintenance as riparian uses, but a lower riparian may want the water for something else that is clearly recognized as a riparian use. However, there may even be an exception here, and the upper riparian may be allowed to take everything if the upper riparian is taking all of the water for "natural" wants. (Natural wants are defined in Appendix A at A-6 to A-8.)

Regarding statutory law, the Illinois Rivers, Lakes, and Streams Act, provides directly for instream flow maintenance: "It shall be the duty of the Department ... to establish by regulations

water levels below which water cannot be drawn down behind dams from any stream or river within the State of Illinois, in order to retain enough water in such streams to preserve the fish and other aquatic life in the stream, and to safeguard the health of the community" (615 ILCS 5/23). Based on this language, four observations can be made:

First, this is a mandatory duty imposed on the department and not merely the granting of authority to the department to do it.

Second, the reference to preserving "the fish and other aquatic life" would appear to translate into ecosystem maintenance.

Third, it is unclear whether the reference to the "health of the community" refers to the biotic community or a community of people in proximity to the lake or stream. If the former, it merely reinforces what has already been said. If the latter, it would appear to encompass making sure that any waste products in a body of water get sufficiently diluted so as not to present a health threat to the community.

Fourth, the duty applies only to those streams or rivers that have dams and then only to the portion behind the dam. However, on the other hand, there does not appear to be any limitation that these streams be either navigable themselves or tributary to navigable streams. (The scope of obligations under the Act is discussed in more detail in Chapter VI).

The Illinois Flood Control Act of 1945 also contains direct authority for the Department of Transportation to act with respect to "the conservation of low water flows in the rivers and waters of Illinois" (615 ILCS 15/2), but it appears fairly clear that this Act contemplates building reservoirs from which water would be released during low-flow periods in order to augment the flow.

Because of the limited scope of the direct authority to establish instream flows, it is useful to inquire as to whether any Illinois legislation indirectly allows establishment of minimum or required streamflows. The Rivers, Lakes, and Streams Act gives jurisdiction to the Department of Transportation "over all of the rivers and lakes of the State of Illinois, wherein the State of Illinois or the people of the State have any rights or interests" (615 ILCS 5/5). With reference to those bodies of water, the department is "to jealously guard the same in order that the true and natural conditions thereof may not be wrongfully and improperly changed to the detriment and injury of the State of Illinois" (615 ILCS 5/7). Obviously, a strong argument can be made that the "true and natural conditions" language encompasses establishing minimum or required flows. The salient point, however, is that no regulations adopting minimum or required streamflows have been promulgated. Indirect authority is really useful only for the purpose of authorizing agency regulations.

Legal Options

The first option is to do nothing. That would leave the current situation as described above.

The second option is to seek legislation either that establishes minimum or required streamflows or that specifically authorizes an agency to establish such flows beyond the existing statutory law described above. The proposed legislation could stand on its own or it could be incorporated into a more comprehensive water resources management package. (The potential for more comprehensive legislation is discussed in Chapter VI.) A critical determination would be how much of Illinois' streams and lakes are not covered by the already existing duty described above. Numerous other states have enacted streamflow legislation. (See Survey of Eastern Water Law at 45-48 (listing such legislation in 21 eastern states other than Illinois). See also the Regulated Riparian Model Water Code, at 14-15 (listing 6 state statutes comparable to Section 1R-1-11 of the Model Code), 70-78 (listing 13 state statutes comparable to Section 3R-2-01 of the Model Code and 3 more limited state statutes; listing 13 state statutes comparable to Section 3R-2-02 of the Model Code; listing 1 state statute comparable to Section 3R-2-03 of the Model Code; listing 1 state statute comparable to Section 3R-2-04 of the Model Code; listing 1 state statute comparable to Section 3R-2-05 of the Model Code and 2 somewhat similar state statutes). Finally, for a thorough discussion of the numerous requirements of, and authorizations for, instream flow protection in the western United States, see Natural Resources Law Center, Instream Flow Protection in the West, ed. L. Mac Donnell and T. Rice, 2nd ed. (1993)).

The third option is to interpret other language in the Rivers, Lakes, and Streams Act as authorizing the agency to establish minimum or required instream flows through promulgation of regulations.

Discussion of the Second and Third Options

First, except as discussed under "Existing Law" above, under the Rivers, Lakes, and Streams Act, the agency has jurisdiction only over waters in which the state or the people of the state have rights or interests that while including all commercially navigable water, includes only some, not all, nonnavigable water. (This Act is discussed in Appendix A at A-15 to A-17.) Thus, using the third option would extend instream flow regulation to at most those waters currently covered by the Act. On the other hand, a new statute would set specifically the scope of coverage as to which streams and lakes within the state are to have minimum or required flows established for them.

It would likely be permissible for the legislation to go so far as to include all streams and lakes. There does not have to be a right of public access to a body of water in order for the state to be able to preserve its inherent value. The Supreme Court of the United States early on recognized the permissibility of state regulation to preserve common property. This arose initially in the context of owners of interests in a common oil or gas pool. Therefore, by analogy, to the extent that riparian landowners are viewed as having a property or property-related interest in the water, which is how most states would classify the right to make a

reasonable use of the water, the state has the authority to regulate that common ownership to protect the interests of all of the common owners. There is a strong argument that preserving fish and wildlife and the ecosystem is encompassed within the scope of that protection. Furthermore, it is also clear now that the state can regulate private property interests for the public's general welfare as long as the regulation does not discriminate invidiously or go so far as to constitute a "taking" of the property interest. In the 1990s, it is generally recognized that preserving ecosystems is in the general welfare. (Constitutional limits on regulation of property are discussed in Appendix A at A-31 to A-34.) On the other hand, it obviously would have to be determined how far it is practical to go in setting minimum or required flows in terms of data available and the expenditures of time and money that would be required in implementing broad legislation.

Consistent with the above analysis, the riparian right was described by the Illinois Supreme Court in *City of Kewanee v. Otley*, 204 Ill. 402, 417 (1903): "It is the right of every owner of land over which a stream of water flows, to have it flow in its natural state and with its quality unaffected. The right to a stream of water is as sacred as a right to the soil over which it flows. It is part of the freehold, of which the owner cannot be disseized except by due process of law, and the pollution of a stream constitutes the taking of property, which may not be done without compensation." (See also the *Clark* case noted in Appendix A at page A-33.)

If the second option is exercised, it would be necessary to develop in advance the goal or goals to be achieved by minimum or required streamflows, as several objectives might motivate such action. These goals should be spelled out clearly in any proposed legislation, and these goals, in turn, will inform the detail that is provided for in the balance of the proposed legislation. Thus, required or minimum flows can support (1) commercial navigation, (2) recreation, (3) fish and wildlife, and (4) riverine ecosystems. The literature on water management in Illinois suggests that environmental instream uses have four critical components: fish and wildlife habitat, unique and sensitive aquatic resources, waste assimilation, and streambed and bank stability. Considering the uses and their critical components may, in turn, necessitate classification of the bodies of water into various optimum use categories, with the level of minimum or required streamflows depending on the optimum uses. Thus, popularity for recreation could determine which streams to classify principally for recreational use. Further classification might depend on the needs of differing watercraft types. Finally, are there exceptionally scenic or otherwise ecologically significant streams to preserve as they are, that is, without allowing any human withdrawal of water? The focus group participants acknowledged the need to balance instream and offstream uses, but it should be asked whether every stream has to be balanced. Illinois' answer with respect to the case of Vermilion River (cited at a focus group meeting) at least appears to be no. Further, the State Water Plan Task Force recognized the technical challenges of determining minimum streamflows needed to protect aquatic resources (Illinois Instream Flow Protection Committee 1991). Seasonal requirements and natural variability of streamflow were two important challenges recognized. Recommendations offered at the focus group meetings were that the state (1) develop a policy regarding flow protection, (2) prepare a planning and research agenda on this issue, and (3) formulate a planning standard for instream flows.

It would also be necessary to develop in advance the interrelationship between the designated lead agency and other agencies whose actions could have an impact on the minimum or required streamflow. For example, the Illinois EPA (IEPA) determines what point source discharges can be made into a stream. Does IEPA rely on assimilative capacity of the stream? Is that discharge counted in the amount of water flowing in the stream? What if that discharge contains pollutants that a regular streamflow can assimilate but a drought flow cannot? Will IEPA restrict discharge during low flow to protect the stream? However, what if that discharge is counted on as part of the flow? Because IEPA has limited concern about nonpoint source pollution, who determines how much water is necessary to assimilate pollutants from nonpoint sources?

A primary concern in formulating a plan in this age of desire for less government interference is to keep the plan basic so that all who affect streamflow are always clear on their obligations. The public concern appears to be not so much with complexity as it is with clarity and need. The need for a particular regulatory element should always be explained in a statute or regulation clearly and in detail. In drawing the balance, the State Water Plan Task Force recommended incorporating the following criteria: (1) reasonable degree of environmental protection; (2) reasonable degree of cost-effective water supply development; (3) statewide applicability; and (4) sensitivity to time and area variability. This study indicates that there are numerous potential issues that should be specifically treated in any legislation. Any differences between minimum flows and optimum flows need to be clear. If "minimum" means minimum, that needs to be made clear. In other words, there are to be no exceptions; other users must cease their uses in order to maintain that minimum, including during drought. (Further discussion on drought planning and management is discussed in Chapter VI.) However, if "minimum" does not mean minimum, that too should be made clear, and the uses that would have priority over maintaining the minimum should be specified. Other issues to be answered are:

- X Should ranges be established from minimum to optimum, variable according to season and climate conditions?

- X Is a control on stream withdrawals also to include a control on withdrawal from conjunctive groundwater? Are permits to be conditional on obeying orders to cease or reduce withdrawal?

- X Is return flow counted and, therefore, required? What will be the control to assure return flow?

- X Will dam releases be required to assist in maintaining the flow?

- X How are those users who were using the water at the time the regulations are established to be treated? Are they grandfathered? Are they subject to the regulations only when their permits come up for renewal?

If the third option is chosen, many of the same issues raised in connection with drafting new legislation would have to be raised in promulgating regulations except that the maximum

number of water bodies reachable under the regulatory power would be limited to those identified in the Rivers, Lakes, and Streams Act. Thus, breadth of applicability will be an important aspect of the exercise of the regulatory power and would need to be spelled out clearly.

Someone might challenge the agency interpretation of the language in the Rivers, Lakes, and Streams Act on which the agency would base a decision to regulate instream flows, thus leading to the expense and time delay of litigation, at least potentially all the way up to the Illinois Supreme Court. For example, what is encompassed within the phraseology rivers and lakes in which "the State ... or the people of the State have any rights or interests"? (This question will be discussed in detail in Chapter VI.) It is, however, clear from language that has been in the Act since it was initially enacted in 1911 that the legislature expressed concern for fish and aquatic life (Sections 14, 22) and that the language to protect the "true and natural conditions" of streams has been there from the outset, as has clear jurisdiction over streams suitable for commerce. Language in the Act does not expressly limit this protection role to preventing obstructions; therefore, it should extend to preventing withdrawal of water as well. Furthermore, the language requiring establishment of minimum flows behind dams has been a part of the Act since 1941. Thus, a real issue would appear to exist only to the extent that the department would establish minimum or required flows for streams other than those that are navigable for commerce and those that have dams on them. To the extent it has authority to regulate surface water withdrawals, the department can specify conditions in withdrawal permits under which withdrawals would be reduced or prohibited in order to maintain minimum or required streamflows.

New legislation could make clear the agency's authority and eliminate any scope issue from any prospective litigation, but unless it also specifies the streams and their flow rates, new legislation cannot eliminate the issue of the agency's application of its authority to a particular body of water. Regardless of whether it is based on existing or new statutory authority, a challenge might be made to any specific flow requirement that is set. Therefore, it would be important for the agency to maintain a record of the data on which a flow is set so that it can be used to sustain the flow against any such court challenge. From time to time, political critics and citizen groups may demand similar information as well.

Table IV-1 provides a summary of the issues and options of instream flows. Summary tables for each issue will also be provided for the other issues and options discussions in this chapter and the two subsequent chapters.

WATER SUPPLY DEVELOPMENT: ISSUES

The issue of water supply development was not prominent in the literature regarding Illinois water management. However, it arose in several of the focus groups. The participants described the difficulties in developing new surface water supplies, especially reservoirs. Some

of these difficulties were traced to federal permits. Others originate with the limited authority and guidance given to local entities responsible for developing water supplies.

The focus group participants described water supply as primarily a local responsibility, with the state having a very limited role in water supply planning. Cities were described as having to fend for themselves but having no authority over neighboring communities. Some participants observed that in many areas of the state the fastest growth is occurring in areas with limited water supplies. Several participants stated that it is virtually impossible to site a new reservoir in Illinois due to public opposition and/or environmental impacts (e.g., 404 permits). Some participants indicated that local water supply agencies are authorized to develop water supplies, but many of these were formed with the primary intent of making money rather than meeting water needs. The participants suggested that local water authorities often have great difficulty in developing new reservoirs. The city of Marion was one example cited.

In the focus groups, several participants expressed that the rules regarding permits for pumping to side-channel reservoirs are unclear. Some participants indicated a need for standards, but they felt the standards must be flexible (i.e., guidelines rather than regulations).

Federal permits, such as those associated with Section 404 of the federal Water Pollution Control Act (i.e., the Clean Water Act) and the Endangered Species Act, were seen as particularly problematic by some focus group participants. However, the participants also recognized problems with state and local planning requirements. Some speculated that reservoirs are opposed by federal agencies, since they silt in so quickly in Illinois. Some of the participants observed that reservoirs reduce the riparian zone but suggested that a solution might be for development agencies to mitigate lost riparian lands with purchase and restoration of floodplain lands elsewhere along the river. Some participants noted that very few laws are absolute barriers to development of new water supply. However, they can be large hurdles that have to be cleared one after another. They observed that

TABLE IV-1
SUMMARY OF ISSUES AND LEGAL OPTIONS:
INSTREAM FLOWS

ISSUE DESCRIPTION	EXISTING LAW	OPTIONAL RESPONSES	COMMENTS
Competition for surface water resources among and between: • Offstream uses • Instream uses	**Common Law:** • Does not directly require minimum flows • May indirectly require flows under reasonable use, but not necessarily for fish and wildlife purposes **Statutory Law:** Rivers, Lakes, and Streams Act provides directly for flow maintenance in limited circumstances	**Do Nothing**	Status quo
		New Legislation Could: • Establish minimum flows • Authorize agency oversight	• Could include all lakes and streams without allowing public access • Flow regulation for fish and wildlife would probably be within state's authority to protect common interests of riparians or general welfare of the public • Any legislation would need to be clear on obligations of users
		Change Agency Regulations Could reinterpret Rivers, Lakes and Stream Act as authorizing requirement of minimum flows.	•Would be limited to waters covered by the Act •Would need to specify goals and agency roles in advance

opponents will try to exhaust developers with these hurdles. These social and political obstacles to new development can be critical constraints.

In the focus groups, the participants acknowledged that siltation of reservoirs is reducing storage capacity in the state's reservoirs. The restrictions on dredging sediments from reservoirs were characterized as excessive. The principal problem cited was disposal, since a large plot of land is needed nearby for dredge disposal.

Some of the focus group participants indicated that some surface water withdrawal permits for municipal water supply have unrealistic conditions. One example offered was the city of Joliet, which applied to IDNR for a permit to withdraw water from the Kankakee River. Permit conditions were discussed that would have limited withdrawals to periods when flows exceeded 200 cubic feet per second. It was estimated by the city that this condition could not be met for a ten-day period once every five years. Since Joliet has no existing or potential storage facility, the condition of the permit makes it impossible for the city to accept. Some participants suggested that permits should allow withdrawal at all times without restrictions for low-flow periods and return treated wastewater to the withdrawal point, assuming that the assimilative capacity of receiving waters is adequate (e.g., wastewater discharges to lakes can overwhelm them).

Some focus group participants felt that there is very little guidance for local water supply developers regarding conflicts between the various laws. Local water supply authorities are now asking the state for assistance in developing new water supplies. There was a suggestion that consideration should be given to having one state permit for reservoir construction to streamline the process.

Some members of the focus groups recommended that the state law should do what it can to reduce this bias. The cities that cannot develop groundwater due to rural resistance or some other reason are caught between conflicting state and federal regulations. Other cities like Springfield are unable to get a Section 404 permit to develop a reservoir without demonstrating that groundwater is not a viable alternative. State-led water conservation and more pro-active state policies were cited as opportunities for improvement.

WATER SUPPLY DEVELOPMENT: OPTIONAL RESPONSES

The issue of water supply development has two principal components: development of new supplies and conservation of existing supply. Turning first to the conservation of existing supply, there are several considerations. The first relates to siltation of reservoirs. To deal with this issue, it is necessary to have factual data available. How bad is the problem? Where is the siltation coming from? What can be done to prevent further siltation? Can the accumulated silt be removed, and if so, where can the resulting sludge be disposed of? The second relates to the withdrawal of water from streams for wastewater treatment and the failure to return the water to the stream after the treatment is completed. Again, data are necessary. How widespread is this? Why is the water not returned? Where does the water go instead?

Regarding development of new water supplies, it needs to be recognized that there are four principal sources to which communities look for new supplies, individually or in combination: (1) existing streams, (2) existing reservoirs, (3) new reservoirs, and/or (4) groundwater resources. When the resource is shared with another state, for example, the Fox, Kankakee, Mississippi, or Wabash rivers, or Lake Michigan, there are additional restraints, as most likely neither state will be entitled to the entire supply.

Existing Law

Public opposition to development of new water supplies exists for numerous reasons, including monetary and environmental. Monetary opposition is beyond the scope of this study; however, environmental opposition can be expected, particularly when the proposal is for a new reservoir. This opposition demonstrates both in Illinois and in other states that the proponents of developing a new water supply will help themselves the most by demonstrating a clear need for the new supply. This includes two important aspects: (1) that another less controversial source of supply is unavailable (simply no other site; cost prohibitive, etc.), and (2) that antiwaste measures are in place as to the use of the current supply (e.g., recycling to the extent practicable). A question was raised by the focus groups as to whether environmental values lost through the construction of a reservoir can be re-created elsewhere as a mitigation measure. Clearly, a water supply developer could blunt some criticism by including a mitigation measure in the plan from the beginning.

While, in general, the role of the federal government is beyond the scope of this study, the concerns raised by the focus groups should be noted. The principal concerns expressed relate to wetlands or to endangered species. There appears, however, to be some misunderstanding about the federal role. The Army Corps of Engineers (Corps) is the point agency for the federal Clean Water Act Section 404 wetlands program, while the U.S. Fish and Wildlife Service has primary responsibility for determining endangered species and their critical habitat. Once determined, however, all federal agencies must protect the endangered species and their critical habitat.

It needs to be understood that historically in the water context, the Corps has had three important roles to play. First, since the 1800s, the Corps has been in charge of the navigable streams of the United States for the purpose of ensuring the maintenance of commerce on those

streams. We are all familiar with dredging in the Mississippi. However, the Corps also has a veto power over any private or governmental action that would affect the navigability of a stream for commerce, whether, e.g., building a dock into the stream, putting a bridge over the stream, or withdrawing water. Federal law does not provide for state assumption of this role.

Second, since the 1800s, the Corps has had jurisdiction over the deposit of refuse material into the navigable waters of the U.S. For a long time, this was simply a refined aspect of the first role. However, in the 1972 Clean Water Act this second role was both expanded and limited by Congress. It was limited in that basic responsibility for pollution control was turned over to the U.S. Environmental Protection Agency. It was also expanded in that for the role the Corps retained, deposit of dredge and fill material, the definition of navigable waters was broadened to include all waters of the United States within the reach of federal power. Thus, for example, if waterfowl that travel interstate make significant use of a body of water, it is within the Corps jurisdiction to regulate the deposit of dredge or fill material into that body of water. With this expanded definition comes the Corps regulatory control over wetlands. The Corps has a veto power over the deposit of dredge and fill material into wetlands. However, federal law provides that a state may qualify to assume this regulatory role. To date, two states (Michigan and New Jersey) have done so.

Third, the Corps constructs and manages federal projects. Thus, if the Corps has constructed a federal water project within the state, federal law will determine management rules and who the manager of that project will be once it is completed. Thus, when, for example, a diving accident occurred on Lake Shelbyville, a federal flood control project constructed and managed by the Corps, the flood control law prevented the injured party from recovering against the U.S. government (*Fryman v. U.S.*, 901 F.2d 79 (7th Cir. 1990)). This contrasts with a similar diving accident in Devil's Kitchen Lake (Crab Orchard National Wildlife Refuge) where the diver was able to recover against the U.S. government because the prohibitions in the Flood Control Act did not apply (*Davis v. U.S.*, 716 F.2d 418 (7th Cir. 1983)).

While there might be apparent inconsistency between federal and state laws and regulations, there is no doubt about which law applies. If the federal government has jurisdiction, then under the Constitution its law is supreme; therefore, any inconsistent state law can be ignored. However, the contrast between the first two instances of Corps activity discussed above and the third instance may lead to a misunderstanding of the federal/state relationship.

In situations, like the first two, where the federal government merely has a veto power, and it decides not to exercise that veto power, that does not mean the project can or should now take place. All it means is that the Corps does not object to its taking place on the basis of the one aspect it is concerned with. The project would still have to comply with any other relevant law, state or federal. Thus, for example, if a town is going to create a water supply by developing a reservoir in a wetland, and the Corps says it won't object to the destruction of the wetland, the town still has to comply with the Illinois dam safety requirements in the construction of the dam and creation of the reservoir. Furthermore, if Illinois had any wetlands regulations, they too would apply. These veto power instances simply are not total regulatory

schemes, nor are they intended to be. The opposite comes closer to being true, however, when the federal government has constructed a project and continues to manage that project as discussed in the third instance above. Any room for state regulation there is much narrower.

Illinois cities and villages have express authority to contract for water supply (65 ILCS 5/11-124-1). Cities and villages also have express authority to construct wells, reservoirs, waterworks, and so forth necessary for providing the city or village with a water supply (65 ILCS 5/11-125-1 through -4). In developing water supplies, a city or village can purchase, lease, condemn, or otherwise acquire property, and it can do so "beyond its corporate limits" (65 ILCS 5/11-125-2); and there is no clear limit on this extraterritorial jurisdiction. The only limitation that is stated in the code is on preventing or punishing pollution of, or injury to, the stream or other source of water supply or to the waterworks themselves. This prevention and punishment jurisdiction "extends 20 miles beyond its corporate limits or so far as the waterworks may extend" (65 ILCS 5/11-125-2). Obviously, it is contemplated that the waterworks may extend beyond twenty miles outside the corporate limits. (The issue of developing groundwater for a municipal water supply will be dealt with in more detail in Chapter V.)

Under Illinois common law one needs to be riparian to a stream in order to be able to withdraw water therefrom, whether for direct use or for filling a reservoir. Rights of other riparians must be respected. However, the Rivers, Lakes, and Streams Act purports to give the department some authority to authorize nonriparians to withdraw water from public bodies of water. However, the department is not given any express authority to ignore the rights of riparians in the permitting.
Thus, these withdrawers would continue to be governed by reasonable use aspects of riparian law.

To the extent that the community plans to develop a reservoir as a source of supply by damming a stream, the permission of the department is required, and the dam must meet the requirements established by the Act and the department's regulations. It should not matter whether the storage facility is on or off the stream. However, other aspects of the Act may or may not apply depending on where the reservoir is located. For example, the duty to establish minimum streamflows behind dams would not apply if there is no stream behind the structure. The balance of the scope of the state's current role in water resource management is discussed in Chapter VI.

Legal Options

The first option is to do nothing. That would leave the current situation as described above.

A second option is for the state to create public information and guidance documents. For example, a brochure, Steps to a Water Supply Reservoir, could be produced. Major segments might include:

X Documenting Need
X Anticipating/ Mitigating Negative Impacts
X Local, State, and Federal Permission Required
X Obtaining State Permission
X Obtaining Federal Permission

A third option is for the state to seek enactment of a Water Supply Development Assistance Act. This Act could authorize one of several state roles: (1) providing technical and scientific expertise in identifying and developing water supply; (2) coordinating development statewide so that each local community does not have to "reinvent the wheel" and so that resources are not wasted by the construction of more projects than needed when a project could be shared by several communities; (3) assisting in forecasting community growth and anticipating future water demand, (4) resolving conflicts between different water users or potential water users that arise in the context of water supply development. Any of these options also could be included as part of a more comprehensive state role in water resource management. (Such a more comprehensive role is discussed in Chapter VI.)

A fourth option is for the state to qualify to take over administration of the federal Clean Water Act Section 404 wetlands program.

A fifth option is to seek repeal of any state law inconsistent with federal law.

A sixth option is to seek legislation that requires a local community to have the necessary water supply before growth is permitted. In turn, a local community could require that before a new subdivision or a major consumer of water is allowed, the developer of the subdivision or major consumer must secure an adequate water supply. This could be by contract, well development, purchase, or reservoir construction.

Discussion of the Options

Some focus group participants suggested that it is principally the responsibility of the local community to develop its water supply and that the most the state should do is provide technical and perhaps logistical support. If this view translates into political attitude within the state, that would seem to limit the state's role, and any larger role might put stress on local institutions.

The second option would require the expenditure of time and money by a state agency. The benefit might be to clarify differing governmental roles and to make the water supply development process run more smoothly. Based on some opinions expressed at the focus group meetings, this would appear to yield important benefits.

The third option would delineate a clear role for the state in local water supply development. It mainly involves a commitment of time and money and would leave principal

responsibility at the local level. It might be difficult to structure a conflict resolution scheme outside a more comprehensive approach to water management. However, serving as a facilitator for alternative dispute resolution, as contrasted with litigation, may be worth the effort. See, for example, Regulated Riparian Model Water Code, Ch. V, Part 2 on dispute resolution, which includes conciliation of and mediation.

As to the fourth option, the state of Illinois already has a wetlands protection statute covering state activity, which if effectively implemented and expanded to cover private land could go a long way to satisfying the criteria for assumption of the Section 404 program. A significant negative factor in assuming such a role is the potential for taking claims when private land is regulated for wetland protection, as the federal program has discovered. (Constitutional problems with regulation are discussed in Appendix A at A-31 to A-34.)

As to the fifth option, it is not clear that such law exists. If a federal law requires a deposit of dredge and fill permit, and Illinois law does not require one, that is not a conflict or inconsistency. The public's perceived conflict seems to be largely a matter of misunderstanding the respective state and federal roles. We will always have two governments, and it may be useful to explain to water management stakeholders what the respective roles are.

The sixth option would build on and reinforce the generally perceived obligation of local government by requiring that water supply be planned for sufficiently in advance of development so as not to stress institutions when growth occurs and additional need arises. This would be a need based on growth and expansion of use within the community and not because of drought or some other emergency.

Table IV-2 summarizes the issues and options for water supply development.

TABLE IV-2
SUMMARY OF ISSUES AND LEGAL OPTIONS:
WATER SUPPLY DEVELOPMENT

ISSUE DESCRIPTION	EXISTING LAW	OPTIONAL RESPONSES	COMMENTS
Difficulties in developing new water supplies, especially: • Public opposition to new reservoirs • Problems with federal permits Other considerations include reservoir siltation and water conservation	**Common Law:** Need to be riparian to withdraw from surface waters	**Do Nothing**	Status quo
	Statutory Law: • Municipalities have express authority to develop water supply • Under Rivers, Lakes, and Streams Act, the department can authorize specified nonriparians to withdraw from public bodies of water	**Create Public Information and Guidance Documents**	Could clarify governmental roles and smooth development process
		New Legislation Seek enactment of Water Supply Development Assistance Act	• Would leave responsibility at the local level • Could support conflict resolution
	Federal Law: Although outside the scope of this effort, federal law nevertheless affects reservoir development via: • Endangered Species Act • Section 404 wetlands	**Assume Section 404 Program**	• Wetlands protection statute for state activity could be expanded to private land • State could experience "taking" challenges
		Repeal State Laws that are Inconsistent with Federal Law	It is not clear that such law exists

	protection (Clean Water Act)	**New Legislation** Require local communities to have necessary water supply before growth is permitted	Would reinforce the generally perceived obligation of local government to plan for growth

V. GROUNDWATER ISSUES AND LEGAL OPTIONS

Although there are other issues of groundwater quantity, such as subsidence, saltwater intrusion, and impacts on stream baseflow, well interference is the principal groundwater quantity issue (Groundwater Quantity Committee 1989). Well interference occurs when one well impacts or "interferes" with the groundwater available to another well drawing from the same aquifer. The typical scenario is when a new well or new rate of withdrawal from an existing well causes an another existing well to produces less, or no, water. In this chapter, the issues and legal options of well interference will be explored.

WELL INTERFERENCE: ISSUES

Well interference is fundamentally about competition for finite groundwater resources. There are limits to the amount of water that can be withdrawn from a given aquifer over a certain time period. If groundwater pumping begins to stress an aquifer, wells can go dry if the water table drops below their well, or yields can decline as the hydraulic gradient is diminished. In the focus groups, some participants acknowledged that some aquifers in Illinois are overdeveloped and indicated that well interference had risen in some parts of the state as a result of extensive drawdown. Kankakee and Iroquois counties were mentioned as having significant groundwater conflicts during the drought of 1988, when groundwater supplies were low and water demand was high. As described below, there are four principal components of the issue of well interference: (1) current groundwater management as provided by the Water Use Act, (2) technical information regarding groundwater resources and the hydraulics of well interference, (3) political considerations of well interference, and (4) compensation for owners of wells experiencing interference from neighboring wells.

Groundwater Management under the Water Use Act

The Illinois General Assembly passed the Water Use Act (WUA) in 1983 to reduce the potential for groundwater conflict based on well interference. As described in Appendix A of this document, the WUA requires that county Soil and Water Conservation Districts and local governments be notified of planned large capacity wells. The Districts, with the technical support of the State Water Survey and State Geologic Survey, are responsible for reviewing the effects of the proposed withdrawals on other groundwater users.

The WUA does not provide for refusal or denial of permission to install a high capacity well, even if it may cause a negative impact on an existing well (Bowman 1991a). However, an

impacted well owner may file a complaint. If an investigation shows the complaint is valid and the impacted well meets guidelines, IDOA may restrict withdrawals on any wells affecting the aquifer. In the focus groups, it was explained that to have a valid complaint, the domestic well owners must have wells that meet state design standards, a fact that can be difficult for those with nonstandard wells to accept.

The groundwater management provided by the WUA is not without criticism. For instance,
some of the focus group participants suggested there is inadequate coordination of the use of groundwater for water supply under the WUA, citing a need for groundwater planning to control drawdown. They stated that there is currently no control over private wells and no restrictions on groundwater use during droughts, while surface water systems are often required to institute conservation measures. The water management literature also suggests that despite complaints engendered by drought and irrigation, no emergency restrictions other than voluntary have ever been imposed (Bowman 1991b).

As a general observation, the focus group participants suggested that the potential of the WUA has not been realized. Some felt that there is very little regulation of groundwater compared with surface water. Another observation raised by the participants was that the burden of proof should be on the permit applicant (developer) to establish that the well will not have an effect or that the developers will compensate those affected if it does. In addition, the focus group participants mentioned three concerns about the technical studies of the State Water Survey authorized by the WUA.

First, they indicated that due to funding inadequacies, all necessary impact studies are not being conducted. The studies were described as performed only for very high-profile conflicts. The participants suggested that the Survey has very limited resources for these studies and often pays for these studies using internal agency resources. In response, there was a suggestion that some type of user fees could provide supplemental resources for this purpose.

Second, the need for a faster turnaround time for the studies by the Survey was raised. Some of the focus group participants questioned the logic of the Survey studying the impacts of large wells after they have already been installed. They argued that the studies should be performed before the well is drilled, providing for more proactive management.

Third, some participants indicated that the studies do not result in limiting groundwater withdrawal. There were several suggestions that the state needs more statutory powers to limit groundwater withdrawals to balance water uses and ensure baseflows needed for fish and wildlife.

The ability to sell groundwater was a major legal issue raised by the focus group participants. Specifically, the questions were (1) whether a property owner can sell groundwater to another party and (2) whether a water authority can sell groundwater. Some participants felt that it was incongruous to allow commercial use for irrigation or livestock but not allow sale to others.

Some members of the focus groups felt that "one-stop shopping" is needed for groundwater permits. The Soil and Water Conservation Districts were suggested as a possible permit clearinghouse, but some members of the group indicated that the Districts' staff and mission were not compatible with this suggestion.

Some of the focus group participants stated there is a need for new Illinois water law, but they cautioned against overregulation, because each aquifer is unique. This uniqueness makes it difficult to write statewide regulations for groundwater management. There was a suggestion that any new law should give municipalities flexibility to develop solutions and be innovative to accommodate changing needs and technology. Another suggestion was to design the law to allow regulations to change without having to change the law.

Technical Considerations

Given the assets and liabilities of the WUA, well interference continues to be a major water management issue in some areas of Illinois. One of the linkages between surface water and groundwater management that arose in the focus groups regarded how siltation of water supply reservoirs forces water users to turn to groundwater for supplemental supplies. In the focus groups, there was a general recognition that additional groundwater technical studies are needed to understand changing patterns of groundwater demand and the extent and distribution of groundwater supplies.

In response to increasing numbers of well interference conflicts, the Groundwater Quantity Committee of the State Water Plan Task Force was formed in 1988. The committee prepared a report entitled Groundwater Quantity Issues, in 1989, and addressed this issue in a white paper included in this report entitled Well Interference/Conflict Resolution. The committee in its report recognized that "anytime a large capacity well is constructed, there is a potential for conflict with existing, adjacent wells." The committee felt that without new legislation, there would be very inconsistent management of groundwater conflicts.

In the focus groups, some of the participants recognized a need for technical information regarding (1) the amount of water being withdrawn by different users at specific locations, (2) the potential (sustainable) yield of groundwater resources at a particular location, and (3) the hydraulic effects of large withdrawals in a given aquifer. For large groundwater users, such as irrigators, it was cited as particularly important to know the amounts and timing of their withdrawals.

The Groundwater Quantity Committee reported that the technical challenges are surmountable. In the focus groups, determination of the sustainable yield of a given aquifer was described as more a question of funding for the appropriate studies rather than a technical challenge. In addition, estimating the drawdown associated with the cones of depression of proposed wells was characterized as fairly straightforward for a trained hydrogeologist.

If the technical challenges can be overcome, then conflicts over well interference can be approached from a different perspective, one that focuses on management rather than technical challenges. One management concern is whether the appropriate technical impact studies are being conducted. As described above, some water management stakeholders suggest this may not be happening (or be possible) under the management framework provided by the WUA. A second management concern raised in telephone contacts with water management stakeholders regarded how the results are being communicated to nearby landowners. The stakeholders indicated that acceptance of the results of technical studies and any compensation associated with anticipated well interference depends on effective communication of the technical information. In the telephone contacts, some water management stakeholders indicated that many groundwater conflicts are based on unjustified fears of landowners proximal to proposed high-capacity wells. This suggests that one or both of these concerns have not been addressed to the satisfaction of neighboring landowners.

Political Considerations

The literature on groundwater management and the discussions of the focus groups identified important political dimensions to well interference conflicts. There was a general concern about how politics increases the difficulty of developing groundwater resources. Some of these conflicts are disputes in rural areas between neighbors. For example, a large irrigation well may have seasonal well interference with nearby domestic wells. This is a scenario that appears to be increasing in frequency in Illinois, as the groundwater demands of irrigation continue to grow. It is also a scenario that exemplifies the localized nature of groundwater conflicts in Illinois. Irrigation is only common in the areas of Illinois with sandy soils, which have low water retention characteristics. In the discrete areas of the state with sandy soils, irrigation is common, and large irrigation withdrawals in some locations have placed substantial stress on local groundwater resources.

Urban/rural groundwater conflicts have more complex politics than the above conflicts between rural neighbors. The telephone contacts with water management stakeholders and the discussions of the focus groups indicate that urban centers are increasingly turning to rural groundwater resources as supplemental sources of water supply. When municipal water suppliers go outside of their political boundaries to tap the groundwater in rural areas, local residents often resist the proposed projects out of fear of well interference and concern about lost access to groundwater resources that may be needed in the future. The desire of municipal water suppliers to supplement their supplies is most acute during drought periods, a time when rural residents are particularly sensitive to water scarcity. Some rural stakeholders argue that rural groundwater resources need to be protected from extraction to distant urban centers. Some urban stakeholders maintain that there are too many obstacles for municipal water suppliers to supplement their water supplies with rural groundwater. The technical aspects of this well interference issue are often subordinate to urban/rural politics and debates of public/private resource management. As indicated in Appendix A, when statutory and institutional

mechanisms for resolving well interference conflicts are insufficient, the parties often end up in litigation.

One example of urban-rural conflict cited in the focus groups regarded the city of Danville. An investor-owned water company from Danville was seeking to tap groundwater resources in a nearby rural area. The company was denied access by local landowners for exploration. Since it was a regulated utility, the company appealed to the Illinois Commerce Commission for access easements. In response, the local residents formed a water authority to protect their groundwater resources. This authority can enact ordinances and require permits for groundwater withdrawal. The cited intent was protectionism, not water supply development.

The focus group participants also recognized conflicts between urban areas when two municipalities compete for the same rural groundwater resources. The case of Yorkville was cited as one such example. Its well field was outside of its boundaries, creating a conflict with a nearby town. This conflict was settled through negotiation, but the focus group participants felt that any new laws should provide for cooperative agreements. Some water authorities are formed to block urban groundwater withdrawals and control land use in rural areas. This is not consistent with the enabling legislation.

Some of the participants expressed that there is probably enough groundwater to meet demand, but that effective management is required to prevent competition from becoming conflict. Potential solutions to the issue of well interference also have political dimensions. The water management stakeholders in Illinois offer a variety of solutions to well interference conflicts. Some call for greater state powers; others call for greater local authority with technical support from state agencies. Clearly, such proposals for groundwater management have important implications for the balance of local and state powers in water management. These implications will be addressed in subsequent discussions of water management institutions in Illinois.

Compensation

Compensation for well interference arose frequently during the issue identification activities. In its report, the Groundwater Quantity Committee stated that "compensation to small users impacted by new large users should be part of any legislation." Many of the focus group participants felt that owners of wells affected by new wells should be compensated. One example offered was when municipal well fields in rural areas draw down the water table, interfering with residential wells. The focus group participants expressed that under these circumstances, the homeowners should be compensated, assuming that the domestic wells are up to standards. There was a recognized need for water law to address compensation to help get them water again, without additional payments for pain and suffering.

Compensation can be technically straightforward with respect to modifying the existing well or converting to another source of supply. However, the legal interpretation and associated

economics of compensation are much less clear. As a result, there is wide recognition that compensation is not necessarily a simple matter. Identified challenges of compensation are the determinations of who should pay compensation for well interference and how much should the compensation be. Three examples arose during the focus groups. First, in 1988, the Illinois Department of Agriculture asked irrigators to restrict their groundwater withdrawals in Kankakee County. Some focus group participants felt that these farmers should have been compensated. However, the group was uncertain regarding the legal basis for compensation as well as procedures to determine appropriate compensation. Second, some participants related that in 1988 Springfield wanted to use groundwater to augment streamflow for its surface water supply system by purchasing land and pumping it into a drainage ditch upstream of the system. Some participants felt that under such circumstances, the city should compensate affected local farmers, since the ditch water reduced the effectiveness of the drainage system. Third, some shallow limestone aquifer artesian flowing wells in northern Iroquois County were dried by nearby irrigation pumping, which lowered the water table slightly. However, their wells were not up to standard, and compensation would be difficult to justify.

In the focus groups, it was suggested that compensation for well interference is a very small part of the total expenditure to install a municipal wellfield. However, compensation is not addressed by Illinois water law. Some participants indicated that for a permit for municipal surface water withdrawal, the law requires the applicant to establish that there will be no adverse effects. However, this is not the case for groundwater withdrawals, although local water authorities can require this for their permits.

Some focus group participants were concerned about who gets the benefit of scientific doubt about well interference. An example provided was in South Ross Township where a water company wanted to explore for groundwater resources. Recognizing that under existing law their wells could be impacted, the rural landowners denied the company access. The recommendation offered was to clarify the law with respect to consent and compensation. The suggested approach was that the benefit of the doubt should go to those potentially effected.

At one of the focus groups, it was mentioned that there have been several abortive legislative attempts in the past to have owners of large wells compensate owners of small wells effected by drawdown. Some participants felt that the state agencies need additional groundwater management powers, but they must also have the funds to implement their mandates. The participants noted that the Governor's Water Resources and Land Use Priorities Task Force recommended water resources initiatives be funded by a water connection fee.

WELL INTERFERENCE: OPTIONAL RESPONSES

In order to understand what legal options exist for responding to the complaint of well interference, it is necessary to understand what causes the water to decline in the earlier well. There can be several possible causes. First, a powerful new well may have established a

substantial cone of depression that causes the gradient to fall below the bottoms of neighboring wells. Second, pumping may be causing the water table as a whole to be declining, either because the aquifer is being mined or because there is a decline in recharge, the decline having now reached the point where it has gone below someone's well bottom. All who have lower wells are causing the result. Third, the decline in the recharge rate, if that is the problem, could be either natural, such as drought, or unnatural, such as withdrawing water from a stream that discharges into an aquifer or catching surface water and channeling it past the recharge area. A secondary level of issues raises the question of why a new groundwater use is coming on line. Have surface supplies been depleted? Are surface supplies being wasted? (See the discussion in Chapter IV on water development issues.) The extent to which one should assess responsibility should at the very least be related to cause.

The multiplicity of possible causes demonstrates the need for factual data. What is the amount of water being withdrawn from the aquifer? What is the rate of recharge? What is the recharge area? Does drainage of surface water lower the recharge rate into aquifers? To what extent can the impact of a new well on an earlier well be predicted? What is interconnection to stream and stream flow? To the extent that these data are not available, regulatory options are limited. On the other hand, opinions were expressed during the focus group meetings that the real problem would be the unavailability of the funds needed to obtain the data. What sources of funding are available and at what levels of government: for example, connection fees, per gallon charges, property taxes?

While there seemed to be fairly general agreement in the focus groups that more management was needed, there was considerable difference of opinion on who should do it. In particular, how should urban/rural conflicts be resolved? Urban/urban conflicts over developing a particular rural resource? Big users versus little users? The Water Use Act of 1983 was viewed by many focus group participants as inadequate. Specific complaints are that there are limited resources for studies, studies are conducted after large wells have been sunk, and there is no authority to limit withdrawals. However, cautions were expressed about not stifling economic development with excessive regulation. Opinions differed: that management needs to be at the local level (particularly through groundwater authorities); that management needs to be regional in perspective; that there needs to be state management with local input. Sentiment was expressed for one-stop shopping for well permits. There were many complaints about the method(s), or lack thereof, for managing the groundwater resource, ranging all the way from too little management to excessive or improper management. These include exemption of irrigation wells from permits but no exemption for urban wells, too many overlapping entities, regulation taking place at too small a scale, although the uniqueness of each aquifer has to be considered, and so on. (The variety of local governments and the problems associated with that are discussed in Chapter VI.) Finally, there was some concern about the purpose and function of water authorities. It was suggested, for example, that they were formed to block municipal development of a water supply in a rural area, that they do not have a regional perspective, and that their authority extends too far beyond their borders.

Existing Law

Historically, the law relating to groundwater has been divided into two parts. Underground streams were covered by the law applied to their surface counterparts. All other groundwater was governed by a different regime. Although there is no specific case or statute in Illinois adopting this distinction, it was universal enough that it can be assumed that it was a part of Illinois law. Anyway, the balance of this discussion does not deal with underground streams.

Under current Illinois law, there are only three ways for a well owner whose earlier well is interfered with by a new well to seek possible relief. One is through a court action arguing that the new well violates the doctrine of reasonable use now applied to groundwater by the Water Use Act of 1983. A second is through the remedy provided for in the Act itself. A third is through a water authority, if one exists where the well is located. These will be discussed in the above order.

Under the reasonable use doctrine the complainant would have to prove that the plaintiff was making a reasonable use of the water and that the defendant has unreasonably interfered with that use. If the plaintiff is successful, the plaintiff may be able to obtain injunctive relief for the future and to recover damages for past injury. Under the reasonable use rule for groundwater "the overlying owner also could not divert the pumped groundwater away from the land overlying the aquifer of its source, unless no loss would result to other overlying land owners" Earl Murphy, Reasonable Use Rule, in Waters and Water Rights, § 23.01(b), at 299 (R. Beck ed. 1991)). There is some modern authority that attempts to make place of use merely one of the factors to consider. Illinois law is not clear on this point.

Prior to 1983, Illinois appears to have applied the absolute ownership rule to groundwater. (For a discussion of prior groundwater law in Illinois see Appendix A at A-22 to A-23.) Under the absolute ownership rule, subject only to malicious intent and, perhaps, an antiwaste limitation, a well owner could pump all the water that the well could pump. It is, of course, possible that a landowner still will challenge the Water Use Act and argue that the conversion from absolute ownership to reasonable use constitutes a taking of the landowner's property. (See generally the discussion of constitutional issues in Appendix A at A-31 to A-34.) However, courts in the west that have reviewed legislative changes, usually from reasonable use to prior appropriation, have found generally that as long as the person who is using water at the time of the change is protected in that use, there is no taking. Several courts have disagreed and as recently as 1990, the Supreme Court of Oklahoma found that there was a taking where the rule regarding the use of lakes and streams was changed from reasonable use to prior appropriation.

While the Water Use Act of 1983 provides for notice of planned large capacity wells and a review of the effect of such a well, the actual regulatory power under the Act is very limited, and, therefore, the remedy for well interference is very limited. (This Act is discussed in Appendix A at A-24 to A-26.) Indeed, construction of the well cannot even be delayed until the review has been completed. There are five principal considerations here. First, the well interference remedy applies only in a limited geographic portion of the state: (1) any county through which the Iroquois River flows and (2) any county with a population in excess of

100,000 through which the Mackinaw River flows. Second, assuming that one is located within the above limited area, the only withdrawal unit that can be restricted is one with a point of withdrawal capable of producing more than 100,000 gallons of water on any day. Such a point of withdrawal would be known, however, if the owner has complied with the requirement of the Act that the point be registered. Third, who can complain is limited. One can complain only (1) if one's well fails to furnish "its normal supply of water", (2) as the result of a "substantial lowering of the groundwater level in the area", and (3) if the affected point of withdrawal "conforms to the recommended guidelines of the District." These guidelines may well not have been in existence at the time the affected point of withdrawal was constructed. A question arises as to what the standards for the guidelines are. Without guidelines the question would be whether the affected point of withdrawal was reasonable. In other words, under the law of reasonable use, being first does not end the inquiry; the question is whether the earlier well constituted a reasonable method of extraction, and that would depend on a variety of factors. Fourth, there is no provision for compensation in the Act. Finally, any power that exists is exercised by the Department of Agriculture rather than a department with other water resource management powers.

Under the Water Authorities Act, if a water authority has been established, it can engage in regulating groundwater use within its jurisdiction and through that regulation have an impact on the effect of new wells on earlier wells. (This Act is discussed in Appendix A at A-19 through A-21.) Water authorities do have broad powers to regulate extraction and use of groundwater. They can:

(1) Inspect wells and acquire information about the supply, withdrawal, and use of the water.
(2) Require the registration of all wells.
(3) Require permits for all new wells and for enlarging, etc., existing wells.
(4) Require plugging and repair of wells to prevent loss of water or contamination of the water.
(5) "Reasonably" regulate the use of water.
(6) Establish limits on, or priorities for, the use of water "during any period of actual or threatened shortage."
(7) Supplement existing water supply.
(8) Impose a general tax on all taxable property within the corporate limits.
(9) Consult with and get information from state agencies.
(10) Go to court to restrain violations or threatened violations.
(11) Provide that violations of regulations constitute misdemeanors.

However, one severely limiting factor on their authority is that any diverter of water at the time that an authority is established is entitled to continue taking the quantity of water "which is the rated capacity of the equipment used to divert or obtain water." There is no provision for compensation to the injured well owner in the Act.

It can be speculated that the basis for granting or denying a permit under (3) above would be regulations issued under (5). The Water Authorities Act establishes guidelines to be used by

the authority in exercising the powers noted in (5) and (6) above. The general guidance is in the form that the authority is to "promote the common welfare by considering" a list of factors. These factors are

- X public interest,
- X average amount of present withdrawals,
- X relative benefits or importance of use,
- X economy or efficiency of use,
- X other reasonable differentiations,
- X previous reduction of volume consumed by a user, and
- X the user having used surface water to satisfy expanded needs.

Does the authority, in effect, decide what is reasonable use? Because enough courts nationwide adopted the preference for onsite use of groundwater, it would not seem unreasonable for an authority to promulgate such a regulation.

While as noted in the previous chapter's (IV) discussions on water supply, municipalities have authority to develop wells outside corporate boundaries, they are subject to observing property rights of others. They do, however, have the power of eminent domain whereby they can condemn property necessary for water supply development. It can be speculated that condemnable property would include rights to use water. It is unclear how an effort to exercise eminent domain power after denial of a permit by a water authority would play out.

Legal Options

The first option is to do nothing. That would leave the current situation as described above.

A second option is to seek legislation that would provide for compensation for well interference. There is no regulatory option for a state agency, as under current Illinois law there is no state agency that has authority to establish a regulatory system in these circumstances. While other details would have to be included, the legislation would principally need to: (1) propose a guideline or standard as to when compensation should be paid, (2) specify who would make the determination of whether compensation was due, (3) specify who would have to pay the compensation, and (4) specify a formula for determining the amount of compensation. Or should new wells be prohibited? Should a new well driller have the burden to prove there will be no effects? Should a new well owner compensate those affected? Should only municipalities compensate (small part of expense in developing a well field)? Should only homeowners receive compensation? Should those whose use of water is restricted during an emergency be compensated? Participants in the study did not suggest criteria but instead simply raised questions of fairness.

A third option is to seek legislation that would authorize regulation of groundwater wells more comprehensively than is currently allowed. This could be through proposed amendments to the present Water Use Act. A part of such general regulatory authority could include compensation for interference with existing wells under some circumstances. (The proposed expansion could be in the context of a comprehensive state water management proposal covering both groundwater and water in rivers, lakes, and streams. This option is explored in more detail in Chapter VI.)

A fourth option is to seek clarification of selected aspects of groundwater law: (1) the permissibility of using groundwater offsite and, if so, under what circumstances, (2) the relationship between a municipality and a water authority, (3) the definition and treatment of high-capacity wells, and (4) expanding water authority jurisdiction to cover an entire aquifer and giving them additional authority to protect recharge areas.

Discussion of the Options

The second option poses many difficult questions for which there are no easy answers. It is difficult to justify compensation to one whose use of well water is interfered with because that person did not dig the well deep enough in the first place. The first person who uses a particular common resource is simply not free under our legal system to dictate the rules for the use of that resource. Whether the person dug deeply enough in the first place will depend on all of the circumstances, knowledge, availability of information, etc. This, in turn, is simply a description of reasonable use, and this may explain why neither the Survey of Eastern Water Law nor the Regulated Riparian Model Water Code contains express provisions on compensation for well interference. In many western states, a new groundwater developer may be allowed to engage in unreasonable interference as long as compensation is provided. Often, this takes the form of drilling a deeper well for the earlier water user. However, one shortcoming in this western approach is that it does not compensate the earlier well user for the extra energy costs of operating a deeper well.

In evaluating the permissibility of one landowner withdrawing water to the injury of another landowner, it is permissible to consider the use that is being made of the water by the party doing the injuring. Historically, that has always been an element of reasonable use. It might save litigation time and expense if the legislature defined the elements noted in the fourth option. Large capacity wells are defined currently as those capable of producing more than 100,000 gallons of water on any day. Is that a rational definition for all purposes, or should large capacity wells be defined differently for different size aquifers?

Table V-1 summarizes the issues and optional legal responses for well interference.

TABLE V-1
SUMMARY OF ISSUES AND LEGAL OPTIONS:
WELL INTERFERENCE

ISSUE DESCRIPTION	EXISTING LAW	OPTIONAL RESPONSES	COMMENTS

Competition for Groundwater Resources

Well interference occurs when one well impacts or interferes with the groundwater available to another well drawing from the same aquifer. This issue includes:

• Technical determination of impacts
• Political aspects of competition among and between urban and rural groundwater users
• Compensation for affected parties
• The level of government that should manage groundwater resources

Statutory Law:
Statutory Law:

Water Use Act of 1983
• Applies reasonable use doctrine to groundwater
• Provides limited regulatory power for groundwater management and remedies for well interference

Water Authorities Act
• Provides water authorities broad powers to regulate groundwater use in their jurisdiction

Common Law:
• Water Use Act does not detail elements of reasonable use, therefore details be provided by common law

• Well owner whose well is	**Do Nothing**	Status quo

interfered with by a new well can seek relief through court action on the basis of reasonable use		**New Legislation** • Provide for compensation for well interference	Problematic due to: • Technical determination of effects • Definition of appropriate compensation • Use of withdrawn water by interfering well owner
		New Legislation • Authorize more comprehensive regulation of groundwater	• Could amend Water Use Act • Could include in comprehensive water resources scheme
		Seek Clarification of Selected Aspects of Groundwater Law • Offsite use of groundwater • Municipal/water authority relationship • Definition and treatment of high-capacity wells • Expanding water authority jurisdiction to cover an entire aquifer	Could save litigation time and expense if legislature clarified these elements of the Water Use Act
• Well owner whose well is	**Do Nothing**	Status quo	

interfered with by a new well can seek relief through court action on the basis of reasonable use		**New Legislation** • Provide for compensation for well interference	Problematic due to: • Technical determination of effects • Definition of appropriate compensation • Use of withdrawn water by interfering well owner
		New Legislation • Authorize more comprehensive regulation of groundwater	• Could amend Water Use Act • Could include in comprehensive water resources scheme
		Seek Clarification of Selected Aspects of Groundwater Law • Offsite use of groundwater • Municipal/water authority relationship • Definition and treatment of high-capacity wells • Expanding water authority jurisdiction to cover an entire aquifer	Could save litigation time and expense if legislature clarified these elements of the Water Use Act

VI. INSTITUTIONAL ISSUES AND LEGAL OPTIONS

Even though institutional issues are completely interwoven with the surface water and groundwater issues presented in the two preceding chapters, they have been placed in a separate category because of their critical role as linkage between Illinois water law and the actual water users (see Figure II-1). In this chapter, where institutional issues and legal options for Illinois water management will be explored, the wide-ranging discussions on them have been organized into two sections: (1) the state's roles in water management and (2) the roles of local water development entities.

THE STATE'S ROLES IN WATER MANAGEMENT: ISSUES

Underlying many of the issues of surface water and groundwater management are questions about the appropriate roles of state agencies in Illinois water management. The water management literature, contacts with water management stakeholders, and discussions of the focus groups surfaced many different perspectives about what roles are appropriate for the state in water management. The issue of state participation in surface water and groundwater management has been segregated from the previous management issues, since the state provides a critical connection between water management and Illinois water law. The issues of the state's roles in water management are discussed below beginning with a description of the state's statutory authority. This is followed by examination of (1) the importance of public waters in Illinois surface water management, (2) the regulation of riparian lands, (3) the state's drought and emergency powers, and (4) water conservation.

State Statutory Powers

The statutory powers of the state with respect to surface water and groundwater management are discussed in detail in Appendix A. The Rivers, Lakes and Streams Act gives IDNR the responsibility to protect the rights, interests, or uses of the public, or in the natural conditions thereof in any public body of water. This includes the protection of navigation, aquatic life, and other in-stream public uses. Under this Act, IDNR's powers with respect to water quantity management are primarily investigative and advisory. However, the Act authorizes IDNR to regulate construction in or along waters within its jurisdiction and to restrict withdrawal of water therefrom to prevent (1) obstruction of navigation, (2) encroachment on any public body of water, and (3) impairment of public uses.

As highlighted previously in this report, the state's participation in groundwater management is provided by the Water Use Act. In general, the role of the state is limited to technical support for well interference impacts of large capacity wells.

Some water management stakeholders suggested during the focus group meetings that the state's powers in water management are insufficient for either proactive water planning or reactive resolution of water conflicts. One of the principal components of the issue of the state's role in water management concerns the limitation of its management powers to public waters.

Public Waters

The Rivers, Lakes and Streams Act states that Illinois Department of Transportation shall "have full and complete jurisdiction of every public body of water in the State of Illinois" with *public* waters defined as "capable of being navigated by water craft...for commercial uses." The definition of public waters is very controversial in the Illinois water management community. There are two distinct dimensions of the controversy surrounding the definition of public waters: (1) the state's riparian jurisdiction and (2) recreation access.

Riparian Jurisdiction

In the telephone contacts and focus groups, the water management stakeholders provided a variety of legal interpretations of what *public* means in this Act and even more opinions about what *public* should mean with respect to water management in the state. Appendix A explores the definition of public waters currently used by the state (for additional discussion, see Barker 1992a). The Act puts at least some of the state's authority to regulate in the context of public waters, and the definition of public waters therefore is important in delineating the jurisdiction of the state in its regulation of the riparian zone. IDNR's authority to participate in water quantity management or regulate construction in nonpublic streams appears very limited under current statutes. From a management perspective, IDNR's use of commercial navigation to define public waters results limits this jurisdiction to about 8 percent of the total miles of streams in Illinois (2,503 miles of a statewide total of 33,000 stream miles). Many water management stakeholders expressed via telephone conversations and the focus groups that this jurisdiction is unacceptably small.

The definition of public waters was a very important issue to many of the focus group participants. Some participants felt that the Rivers, Lakes, and Streams Act has been misinterpreted by IDNR. There were arguments offered on both philosophical and technical grounds. As a philosophical point, the participants referred to the Act's statement that the natural conditions of the state's waterways should be "jealously guarded" and pointed to the Act's language to "vigorously protect the waters of Illinois." Some felt that IDNR's interpretation of public waters on the basis of commercial navigation was an abdication of state powers. They noted that the result is that drainage districts can channelize nonpublic streams in Illinois with

little state oversight. Some participants indicated that there are many federal and state environmental laws that register public valuation of environmental quality, but these are not reflected in Illinois water law. The participants recommended that either the Act be revised to broaden state powers over the waterways of Illinois or the definition of public waters be expanded.

Some focus group participants argued on technical grounds that the interpretation of *public* waters used by IDNR contradicts the intent of the Rivers, Lakes, and Streams Act. Several participants cited the Act's language including waters that *discharged* to public waters, arguing that this substantially broadens the state's jurisdiction. Another argument offered was that while commercial navigation at this time is limited to barge traffic, at the time the law was written, it included much smaller craft, such as canoes. An additional argument forwarded was that a canoe rental operation should satisfy the commercial navigation requirement of the Act. The Chicago River was cited as one waterway with such an operation. The participants noted that IEPA interprets *public waters* more broadly than IDNR. The written opinion of a former state Attorney General was also referenced as supporting a broader definition of public waters. Several participants noted that these waters are still subject to protection under Section 404 and various regulations of the EPA. However, others responded that this was insufficient for control of withdrawals and riparian development. The state's regulation of nonpublic waters for dam safety but not riparian environmental protection was felt to be contradictory.

Some participants in the focus groups felt that IDNR's interpretation of the Act is not contradictory, as it may first appear. It was explained that the term *discharged* in the definition refers to water from backwater channels of the Illinois River that were cut off and claimed as private by a hunting club. By using this term, the state was reasserting its authority in this particular area. The issue of the public waters definition was characterized as having been complicated by (1) court cases which have narrowed the definition of public waters and (2) the absence of a legislative reassertion of the legislative intent of the Act.

Recreational Access

The management literature and views expressed by water management stakeholders in the telephone contacts and focus groups indicate that many of the calls for broadening the interpretation of public waters (thereby expanding the scope of state powers in water management) are based on environmental concerns. Recreation interests have a somewhat different concern with the definition of public waters. Recreation interests expressed interest in access to some waterways that are currently nonpublic. The participants cited a need for the citizens of the state to have greater access to recreation opportunities. Illinois was described as ranking 48th among the states in recreation opportunities per capita. The state does not have mountains, but it does have streams and rivers for fishing and boating. According to the participants, many people are legally trespassing when they recreate on nonpublic waters. Access to the state's nonpublic lakes for recreation purposes is also important, as well as controversial.

In the focus groups, some water management stakeholders opposed a reinterpretation of public waters for the purpose of recreational access to the public, viewing it as a loss in the private property rights of landowners. As discussed in Appendix A, the rights of the public to recreate on nonpublic waters is a subject of dispute and legal ambiguity.

Some focus group participants argued that the jurisdictional and recreational aspects of the public waters issue are separate. Whether or not the two aspects can be separated under existing law was acknowledged by the focus group participants as uncertain. Some participants felt that state regulation of riparian lands for environmental purposes, particularly habitat, is the central component of the public waters issue. Some argued for public recreational access to nonpublic waters as the highest priority. Others felt that the two could be synergistic: riparian regulation can be used to protect scenic values of the state's waterways and thereby increase the quality of the recreational experience.

Riparian Authority

The Illinois State Water Plan Task Force has stated that Illinois' streams, lakes, wetlands, and their adjacent (riparian) lands provide critical fish and wildlife habitat. The Task Force has also recognized the continuing loss of Illinois' aquatic and riparian habitat. These determinations have received support in the telephone contacts with the Illinois water management stakeholders and in the focus groups. Some stakeholders indicated in the focus group meetings that the state's authority to preserve riparian habitat needs to be strengthened. They suggested that effective management of riparian lands must be more holistic, considering the full range of values, including environmental as well as economic, of Illinois' aquatic and riparian habitat.

Some focus group participants were particularly concerned that the state is not doing enough to protect its scenic rivers. One example offered was the lower Fox River, which is threatened by silica mining with some instances of mine spoil being pushed into the river. Floodplain regulations and other laws do not apply to bluffs over the river, which suggests a need for these laws to be strengthened and enforced. A state scenic rivers program was suggested as a possible solution. Some participants related that in the 1970s there was an unsuccessful effort to develop a state scenic rivers program. Regarding the federal scenic river program, only the middle fork of the Vermillion River has been designated as scenic.

Drought and Emergency Powers

As highlighted in Chapter II, droughts are a critical water management parameter. Droughts can magnify water use issues into conflicts in a very short period of time. The Illinois State Water Plan Task Force report stated that "Conflicts in Illinois over water use and

development generally do not become apparent until the occurrence of a prolonged drought event." The focus group participants supported this recognition of the importance of drought, indicating that the only time major problems arise is during droughts and describing these as limited to certain areas of the state with overtapped water resources.

The water management literature suggests that Illinois state agencies can help alleviate the impacts of drought impacts on water systems and ecosystems through measures that are proactive and reactive (State Water Plan Task Force 1983). Proactive measures imply planning. While the state can not require effective planning by water suppliers and users, they can encourage drought preparedness and provide technical support. For example, they can encourage careful design and operation of surface water supply systems, including (1) construction of sufficient storage capacity for drought events, (2) interconnection of water systems, (3) implementation of conservation measures, and (4) development of drought contingency plans. In the focus groups, there were discussions of groundwater use during drought. Some participants suggested that local planning of groundwater use would be most appropriate and recognized that state expertise would be helpful.

While the state encourages proactive measures, droughts often also require reactive measures. Since the state's emergency water management powers are limited, voluntary reactive measures are also encouraged by the state. In times of water shortage, domestic uses are given preference over all other uses. The remaining water is divided proportionally according to the respective requirements of the parties involved. During the 1988 drought, many public water supply systems sought supplemental sources, and many riparian landowners seeking irrigation water for crops, golf courses, and lawns started to make withdrawals from surface waterways (Brim et al. 1991). This led to many complaints to state agencies regarding stream withdrawals. In response to the drought, the governor of Illinois appointed a Drought Response Task Force (DRTF) composed of representatives of the state resource agencies, including the Illinois Departments of Transportation, Commerce and Community Affairs, Energy and Natural Resources, and Agriculture, as well as the Illinois Environmental Protection Agency, the Illinois Emergency Services and Disaster Agency (ISEDA), and the Office of the Governor. The DRTF had no regulatory power. It monitored the conditions of the state's water systems and provided technical support.

Under the Emergency Services and Disaster Agency Act of 1988 the governor has broad powers for thirty days to respond to emergencies, including suspension of statutes, rules, regulations, and the taking of real estate. These powers are triggered by requests from local governments when local resources and authority are insufficient to respond to the situation. Some stakeholders question whether this Act is sufficient for water management conflicts and crises that arise during droughts and suggest that the state needs more authority to respond to water emergencies. Others argue that information needed for state action is the same as needed by local government. They maintain that if arguments are not persuasive at the local level, they will not be at the state level. There is also the complication of the State Mandates Act, which requires that the state fully fund expenses incurred by local government due to state mandates. Nevertheless, following the drought of 1988, the State Water Plan Task Force had the following observations about state emergency powers for water management:

The single most important weakness of the DRTF was the lack of statutory authority to take any action to more directly alleviate water shortage problems. The DRTF served in an advisory role only and could not mandate action by either individuals or municipalities.

Based upon the experience with the drought of 1988, the State Water Plan Task Force recommended that "when regional imbalances of supplies and demands become apparent which cannot be rectified by local action, legislation may be required to use state emergency powers to manage and allocate water in such regions during the water shortage emergency." Many of the focus group participants also recommended that the state be given additional emergency powers to cope with droughts. Some thought that the state could do a great deal to provide leadership in preparation for droughts (proactive rather than reactive). The participants noted that since 1988, IDNR has endeavored to support drought preparedness. IDNR has identified areas with inadequate reserve capacity and specified augmentation for these areas via new storage capacity, system interconnection, or contingency plans. The participants stressed the differences between high and low flows. They indicated it would be fine for some municipalities to withdraw surface water during high flows and pump some of it to storage for times of drought. However, pumping the same amount during a drought should not be allowed. There was an additional recommendation that the state should require users to demonstrate the ability to withstand a 100-year drought (e.g., with a conservation plan or sufficient storage capacity) as a permit condition for any new withdrawal. In addition, the use of water surcharges during droughts was mentioned as a potential market-based emergency conservation measure.

Some of the focus group participants indicated that state agencies also need to expedite their water supply functions during droughts to respond to the water supply emergencies faced in some areas. This suggestion did not imply that state review of water supply developments be suspended during droughts but, instead, expressed a desire for the state to support rapid response to critical water supply situations during droughts. The participants felt that it is not acceptable for a user to come to the state during an emergency and expect a waiver of environmental laws. The IEPA was described as having the ability to waive certain environmental standards during emergencies. This was perceived by some participants as an incentive for users to avoid preparation for drought. Other suggestions were for the state to provide additional incentives for conservation and preparation of drought preparedness plans. There was a general hope that users would take more responsibility for downstream and instream users, but the focus group participants were cautious about establishing a plethora of new regulations.

Although it was recognized outside the scope of Illinois water law, there was some frustration expressed in the focus groups regarding the speed of Corps Section 404 permit reviews during droughts. There was a general recommendation for "one-stop shopping" for permits, including state and federal.

The focus group participants suggested that the public believes the state has more drought powers than it actually has. It was reported that during droughts people complain to the state about new surface water withdrawals, but the state has no authority to limit existing withdrawals or prohibit new ones.

Conflict Resolution Powers

Some of the water management stakeholders mentioned in the telephone contacts and in the focus groups that one critical aspect of the state's weakness in water management, especially during droughts or other emergencies, is its limited ability to arbitrate conflicts. They noted that the result is a flurry of water-based litigation during drought periods. The stakeholders maintain that this is consistent with the magnification of water issues during droughts and that the failure of proactive management leads to reactive dispute resolution, often in court. The water literature suggests that the reliance on litigation to settle disputes has two drawbacks: (1) it is not designed for this purpose (lack of technical resources and mandate), and (2) it is too slow a process for timely resolution of conflicts (Illinois Instream Flow Protection Committee 1991).

Water Conservation

Water conservation arose on numerous occasions in the focus groups. Some participants felt that conservation may be the best new source of water supply and that Illinois should institute water conservation regulations. Some current approaches for the conservation of Lake Michigan water were cited, but conservation efforts are needed statewide. Although the importance of water conservation was widely supported, the state was recognized as having no authority with this activity. Conservation was regarded as being done at the local level.

THE STATE'S ROLES IN WATER MANAGEMENT: OPTIONAL RESPONSES

Three aspects of the issue of the state's roles in water management were identified through the literature search and focus groups: (1) accessing and using water bodies for public recreation, (2) scope of surface water management, and (3) providing emergency (drought) planning. After examining these subissues, the potential for a more comprehensive state role in water resources management will be discussed.

Accessing and Using Water Bodies for Public Recreation

Complaints have been expressed by some water management stakeholders that the public does not have access to enough bodies of water. It is based largely on the definition of *public waters*, since that terminology is used both in the Illinois Rivers, Lakes, and Streams Act and in

state agency regulations and policy. There appears to be substantial confusion (and disagreement) over the meaning of the term.

Existing Law

Under current law there are basically only three types of bodies of water open to the public for recreation. They are (1) bodies of water that are defined as public in the sense of use or usability for commerce, (2) meandered lakes, and (3) bodies of water that have been created by public entities and opened to public recreation, such as Crab Orchard Lake or Rend Lake.

Under the Illinois common law, there exists a "public easement of navigation" in bodies of water that are "navigable-in-fact." (Illinois common law in general in this context is discussed in Appendix A at A-10 to A-12.) In an 1870 case involving Big Creek, a tributary of the Cache River, the Illinois Supreme Court rejected the argument that it should adopt the log-floating test that had been adopted in several states. Instead, the court focused on the water being "generally useful to some purpose of trade or agriculture" and concluded that because the stream is dry for ten months there is no general or common utility (*Hubbard v. Bell*, 54 Ill. 110 (1870)). Over the next fifty years, the court refined its commercial use or usability test. The observation that "a stream may be navigable for one class of boats but not for another" (eastern channel of the Mississippi) translated into a test "to hold all parts of the river navigable which may be navigated by any class of vessels habitually in use on the river." In another case (Healy Slough): "That light-draft vessels did make trips ... is proven, but that it was ever navigable for the usual vessels in any carrying trade is not proved." And in another case: "there is not in this entire record a well authenticated instance in which a boat engaged in commerce navigated the waters of the Des Plaines River." In addition to usage, the court did look at the natural conditions of the stream and the human alterations such as dams and bridges, but overall it is quite clear that the courts had in view the transportation of goods, or possibly people, from point A to point B. Thus, recreation does not appear to have been included in the creation of the common-law navigation concept in Illinois, and indeed, the courts early on specifically noted that navigation did not implicate hunting and fishing, two aspects of recreation. Neither, however, was specifically rejected.

On the other hand, the courts early on recognized that the legislature could expand the category of navigable waters (*Parker v. People*, 111 Ill. 581, 588 (1884) (Fox River)). The Fox River "is not a navigable stream in the sense it may be used to any profitable extent for commercial purposes" but because of an 1840 Act the "river had become public in its use, [and] the general public could not afterward be prohibited or curtailed in the use of the water of the same by private owners of riparian rights who desired to make use of the water of the same for their pecuniary gain, in propelling machinery" (*City of Elgin v. Elgin Hydraulic Co.*, 85 Ill. App. 182, 193 (1899)). However, the court also has cautioned that "such [legislative] declaration could not have the effect of depriving appellee of vested rights as riparian proprietors, if such rights exist" (*People v. Economy Power Co.*, 241 Ill. 290, 330 (1909)). Thus, compensation would have to be paid if private property had been taken or damaged in the process (*id.* 241 Ill.

at 324-25). The court has adopted the principle that a body of water once navigable is always navigable (*Du Pont v. Miller*, 310 Ill. 140 (1923)).

Although Illinois courts have neither accepted nor rejected custom as a separate source of a public right to use the surface of a water body, custom, that is the extent of public usage of a particular body of water, clearly has played an important role in determining whether a particular body of water was navigable. In *Hubbard v. Bell*, 54 Ill. 110 (1870), one of the leading cases in Illinois on navigability, the court noted in distinguishing another case that "the streams ... had been used for rafting and floating for years.... This record is barren of any facts of this kind" (p. 119). The only doctrines other than navigability that the court explored in Hubbard were prescription and dedication, noting as to prescription that "no usage was shown extending beyond ten years" (p. 122). Thus, these concepts may serve under appropriate circumstances as establishing public rights in Illinois to the use of the surface of bodies of water. The recent treatise on water law, Waters and Water Rights, devotes a specific section to prescription (Dunning, Sources of the Public Right, in Waters and Water Rights, Sec. 30.06(c) (R. Beck ed. 1991)). In other states custom and dedication are recognized as a source of public rights relating to use of water, particularly shoreland associated with water, assuming that the activity has taken place openly, consistently and for a long time by a large enough number to represent "the public." For Illinois dedication cases finding access to the public waters as contrasted with the right to use the water itself (see *Godfrey v. City of Alton*, 12 Ill. 29 (1850); *Village of Brooklyn v. Smith*, 104 Ill. 429 (1882); and *Chicago and R.I. and P. Ry. v. People*, 222 Ill. 427, 78 N.E. 790 (1906) and compare with *City of Chicago v. Van Ingen*, 152 Ill. 624, 38 N.E. 894 (1894)). (See also Appendix A at A-14, note 64).

The Rivers, Lakes, and Streams Act gives jurisdiction to IDOT "over all of the rivers and lakes of the State of Illinois, wherein the State of Illinois or the people of the State have any rights or interests" (615 ILCS 5/5). Currently, the Act provides that the department is to list by counties all of the waters in Illinois showing which are navigable and which nonnavigable and which are meandered and which are not. The agency in turn has identified and published a list of the navigable bodies at 92 Illinois Administrative Code 704 App. A (listing 48 bodies of water). This covers 2,503 miles of a statewide total of 33,000 miles. The way that navigation is used in the Act makes it clear that it contemplates "trade, both of commerce and passenger" (Section 5/12). Because the scope of the department's jurisdiction under the Rivers, Lakes, and Streams Act is central to many of the management problems raised during this study, it will be explored in detail at this point and then this exposition will be referred to in other sections of this report.

Other phrases used in the Act are "any public waters of the State of Illinois in which the state has any property rights or property interests" (5/7), "public bodies of water of the State" (5/8)(5/9)(5/11)(5/16)(5/18), "any navigable body of water" (5/10), "with reference to the navigability of any of the public bodies of water of the State" (5/11), and "every body of water, both river and lake, in the State" (5/13). These usages in their contexts suggest that bodies of water of the state in which the people have an interest can be either navigable or nonnavigable. This seems to be confirmed by the definition of public waters currently provided in the Act: "Wherever the terms public waters or public bodies of water are used or referred to in this Act, they mean all open public streams and lakes capable of being navigated by water craft, in whole

or in part, for commercial uses and purposes, and all lakes, rivers, and streams which in their natural condition were capable of being improved and made navigable, or that are connected with or discharged their waters into navigable lakes or rivers within, or upon the borders of the State of Illinois, together with all bayous, sloughs, backwaters, and submerged lands that are open to the main channel or body of water and directly accessible thereto" (5/18). At first glance, the language "all lakes, rivers, and streams ... that are connected with ... navigable lakes or rivers" would seem to include the nonnavigable tributaries of navigable bodies of water as "public waters." The language certainly is all-inclusive enough to do that. However, because at least in places the Act seems to say that the public are intended to have access to public waters and because at no other point does the Act seem to recognize any public access to nonnavigable bodies of water, there is an apparent confusion that needs to be cleared up to the extent that it is possible to clear it up.

A plausible explanation for the confusion arises from a review of the history of the Act. When the Act was first passed in 1911 it seems fairly clear from the Act itself that what the legislature was seeking to do was to create a governmental body (the Rivers and Lakes Commission) that would zealously guard the public's right to navigate in those bodies of water defined as navigable for this purpose by the Illinois Supreme Court. In 1911, the legislature used the phrase *public waters* to refer to those waters to which the public had access for navigation. They were those bodies of water that were suitable for commercial use and meandered lakes. But what is also clear from the Act itself is that the legislature provided the newly created commission with jurisdiction that extended to other waters in Illinois besides those to which the public had access for navigation. First, the legislature provided the commission with a role to protect fish and wildlife, fishing and hunting having already been ruled by the Illinois Supreme Court as not necessarily related to navigation. (See *Schulte v. Warren*, discussed in Appendix A at A-13 to A-14.) Second, activity on nonnavigable bodies of water that were tributary to navigable bodies of water could affect the navigable bodies of water. Thus diversions of water or obstructions to water flow in the nonnavigable tributaries could have deprived navigable bodies of water of their navigable capacity. To fail to extend the commission's jurisdiction to cover preventing those acts would not have allowed that commission to zealously protect the public's right in navigable bodies of water. Indeed, such legislation would have been illusory. Therefore, the 1911 Act is replete with references to generic bodies of water, and provides that the commission's general jurisdiction extends "over all of the rivers and lakes of the State of Illinois, wherein the State of Illinois or the people of the State have any rights or interests." Waters to which the public have access (public waters) is only one type of the foregoing. Had the state intended to limit the new commission's jurisdiction to public waters it would have been simple to say so at the place where the language just quoted is located. The point is simple, the legislature was distinguishing bodies of water to which the public had access from the larger number of bodies of water over which the new commission had regulatory jurisdiction. No definition of any of the terms was included in the 1911 Act.

To see the clarity of this point one need only compare sections 7, 8, 9, and 10 of the 1911 Act. Under Section 7, the commission is to inquire into "each and every encroachment upon the shores or waters of any stream or lake of the State," and if they find that encroachment exists and that it is on a stream or lake "in which the State of Illinois has an interest then they are

to take action. Under Section 8, however, the commission is to deal with alleged encroachments on "public bodies of water" or on a citizens right to use or enjoy any "public waters." Finally Section 9 deals with alleged interferences with navigation of public bodies of water and Section 10 with interfering with ingress and egress to navigable waters. This simply is not a careless choice of terminology by the legislature but rather a comprehensive regulatory scheme which provides different authorizations for different types of bodies of water. There is no indication in this scheme that the legislature was seeking to give the public a right to navigate on more streams than the common law recognized that they had a right to navigate on but with reference to lakes it was clear that meandered lakes were to be viewed as public lakes.

When the legislature added a definition to the Act in 1913, that definition provided: "wherever the terms public waters, public bodies of waters or public streams are used or referred to in this section they shall be construed to mean all open public streams and lakes capable of being navigated by water craft for commercial uses and purposes, together with all bayous, sloughs, backwaters and submerged lands that are open to the main channel or body of water and directly accessible in their natural state by such water craft" (1913 Ill. Laws, p. 124). This definition is consistent with the discussion of the 1911 Act in the preceding paragraph. Here in 1913 the legislature is only defining the public waters phase of the Act, that is those waters to which the public have access. There is no definition of the larger category of waters over which the commission had regulatory jurisdiction. The definition of public waters is consistent with the Illinois Supreme Court's definition of waters to which the public have access including its 1905 decision in *Schulte v. Warren*, 218 Ill. 108, 75 N.E. 783 (1905), that public access extends to bayous and backwaters, etc., even if only temporary during a flood.

This is how matters stood until 1919 when the legislature revised the definition. The new definition provided "wherever the terms public waters, public bodies of water, or streams and lakes are used or referred to in this Act, they shall be construed to mean all open public streams (except as to any sanitary district channel now constructed or being constructed) and lakes capable of being navigated by water craft, in whole or in part, for commercial uses and purposes, and all lakes, rivers, and streams which in their natural condition were capable of being improved and made navigable, or that are connected with or discharge their waters into navigable lakes or rivers within, or upon the borders of the State of Illinois, together with all bayous, sloughs, backwaters, and submerged lands that are open to the main channel or body of water and directly accessible thereto" (1919 Ill. Laws, p. 973). There are two possible interpretations of this new definition. The first is that the legislature intended the word "public" to be read in front of "streams" and in front of "lakes," as part of a series, so that it would read "wherever the terms public waters, public bodies of water, or [public] streams and [public] lakes." The second interpretation is that the definition is intended to be a comprehensive generic definition and is, therefore, intended to include not only waters to which the public have access but also waters over which the Department of Public Works and Buildings would have regulatory jurisdiction. (The switch from the Rivers and Lakes Commission to the Department of Public Works and Buildings had occurred in 1919, the change from Public Works and Buildings to Department of Transportation occurred in Public Act 77-161 (7/2/1971), effective January 1, 1972.) That the latter would seem to be the appropriate reading is determined from the inclusion of the third part of the definition, "all lakes, rivers, and streams ... that are connected with or discharge their waters into navigable lakes and streams." The foregoing

language includes nonnavigable tributaries of navigable bodies of water and there is no indication elsewhere in the Act that the legislature was intending to open up to public access waters not so treated by the Illinois Supreme Court. Thus the only jurisdiction that could extend over nonnavigable tributaries would be regulatory jurisdiction, showing that the definition was generic including both public waters (those to which the public had access) and any additional waters to which regulatory jurisdiction extended. However, the scope of the regulatory jurisdiction over the nonnavigable waters was in part unclear. That the regulatory jurisdiction extended to activity in or on nonnavigable bodies of water where the activity would affect public access to or use of navigable bodies of water was clear. See, for example, *Gottschall v. Zipple*, 308 Ill. 428, 434 (1923), where the 1919 definition is interpreted. The question was whether the drainage plan, including construction of drainage works, should have been submitted to the Department of Public Works and Buildings for approval. The Illinois Supreme Court concludes no because "[t]he portion of Long lake into which it is proposed to pump the waters from this sub-district is not within the meaning of section 29a. It is not a stream, nor is it navigable, nor in its natural condition capable of being made navigable. After it emerges from the high banks immediately beyond the head levee it spreads over a lot of low swamp lands and loses its identity as a body of water." The court, as can clearly be seen from the forgoing quotation, did not limit its inquiry to whether the water in question was navigable. It considered whether it was a stream at all.

What is less clear is whether regulatory jurisdiction extended to activity in or on nonnavigable bodies of water in order to protect fish and wildlife unrelated to affect on navigable bodies of water or to maintain natural conditions on nonnavigable streams unrelated to affect on navigable waters.

The 1919 definition apparently stood until 1985 when the legislature again changed the definition. (However, in 1967 Ill. Laws 4253, 4256 (S.B. 1794) the word "discharge" appears as "discharged." However, there is no statement of purpose in the legislative history of S.B. 1794 to make this amendment to the Act.) The only change noted in the 1985 legislation is to strike the words "or streams and lakes" from the first part of the definition. Thus it becomes: "Wherever the terms public waters or public bodies of water, are used or referred to in this Act." (1985 Ill. Laws, at p. 1339). Had the words "all lakes, rivers, and streams ... that are connected with or discharge[d] their waters into navigable lakes and streams" been stricken as well, the definition would have been back basically to what it was in 1913. But those words were not stricken, so now what do they mean? Apparently the reason the legislature struck the reference to streams and lakes was to make it clear that before construction could take place in *any stream* regardless of whether the stream met the definition of public waters, a permit was required from the department. At the same time, however, the legislature provided its own special limitation on this permitting requirement relative to the size of the geographic area and the type of construction that was to take place. In effect the legislature was treating the words streams and lakes where unaccompanied by the public waters appellation as undefined in the Act after the 1985 amendment. In effect then the legislature contemplated a return to the 1913 situation and with the 1985 amendment the definition of public waters was no longer to be treated as generic covering both public access to water and the department’s regulatory power. Under this approach the only significant question that remains is whether the language "all lakes, rivers, and

streams ... that are connected with or discharge[d] their waters into navigable lakes and streams" is intended to give the public access to waters that were not at least at one time commercially usable. No intent of the legislature to so extend public access appears to exist.

Another interesting question in interpreting the Act is: As of what date is the body of water to be navigable for purposes of the Act? In 1818 when Illinois became a state? In 1911 when the Act was first passed? In 1996 when a specific issue comes up? One line of argument would be that like the U.S. Constitution where Congress was given the power to regulate commerce in 1789 and it is clear that Congress can regulate air traffic under that power even though airplanes were unknown in 1789 when the Constitution was adopted, the Rivers, Lakes, and Streams Act applies to subsequent commercial development. While recreational navigation may not have been commercially important in 1911, it certainly is so now. The opposing argument would point out that the airplane situation is unlike the situation concerning rivers and lakes in that in the latter we have riparian interests that have developed over the years without being limited on the basis of a public interest in commercial recreational navigation. Thus, the ownership rights become a moving target for further regulations with subsequent developments. In 1911 when the Act passed, the waters would not have been treated as public but instead would then have been treated as private and private ownership interests would have been developed on the strength of that circumstance; now the subsequent commercialization of recreational navigation would deprive some of the private "owners" of at least a part of their property interest through diluting it. What clearly is allowed by analogy to the U.S. Supreme Court's argument is recreational usage on those waters established as navigable under the traditional use or usability for commerce test. The consideration of recreational commerce is consistent with the developing federal law on defining commercial usability of water. In *State of Alaska v. Ahtna*, Inc., 891 F.2d 1401, 1404-05 (9th Cir. 1989), cert. denied 495 U.S. 919 (1990), the federal Ninth Circuit Court of Appeals said about commercial usability:

> A river's use "need not be without difficulty, extensive, or long and continuous" for the river to be a highway for commerce. Riverfront Protection, 672 F.2d at 795 (portion of the McKenzie River found navigable when used to transport "thousands of logs," even though shallow areas and sand bars made the transport difficult). It is not essential that the river be used for the transportation of water-borne freight by a carrier whose purpose is to make money from the transportation. *Utah v. United States*, 403 U.S. 9, 11 ... (1971) (ranchers transporting own cattle from mainland to islands used the river as a highway). Indeed, it is not even necessary that commerce be in fact conducted: "The question of ... susceptibility in the ordinary conditions of the rivers, rather than of the mere manner or extent of actual use, is the crucial question.... The extent of existing commerce is not the test." *United States v. Utah*, 283 U.S. at 82 ....
>
> *Ahtna* and amicus argue that the principal uses of the Gulkana have always been recreational, and that recreational uses do not support a finding of navigability. This argument is unpersuasive. The test is whether the river was susceptible of being used as a highway for commerce at statehood, not whether it was actually so used.

> Under the facts of this case, we think the present use of the lower Gulkana is commercial and provides conclusive evidence of the lower Gulkana's susceptibility for commercial use at statehood. The parties agree that in 1970 guided fishing and sightseeing trips began to be conducted with watercraft customary for that time period. A substantial industry of such transportation for profit emerged in the lower Gulkana, which industry today employs approximately 400 people. To deny that this use of the River is commercial because it relates to the recreation industry is to employ too narrow a view of commercial activity. "Navigability is a flexible concept and '[e]ach application of the [Daniel Ball test] ... is apt to uncover variations and refinements which require further elaboration.'" *Alaska v. United States*, 754 F.2d 851, 854 (9th Cir. 1985) (quoting *United States v. Appalachian Elec. Power Co.*, 311 U.S. 377, 406 ... (1940).

Other details about the scope of the recreational use that was taking place are described in the court's opinion at pages 1402-03. While the above discussion took place in the context of bed ownership litigation, rather than public access or even jurisdiction for exercising regulatory power, the discussion would seem relevant to the scope of public access because navigability for bed ownership purposes turns title of the bed over to the state rather than to the abutting land owner and therefore seems more extreme. Navigability for public access only allows the public to navigate over the bed and does not turn ownership of the bed over to the public as well. Furthermore, had federal bed ownership cases been applied in Illinois, as they should have been, to determine bed ownership, the state would have owned the beds of these rivers in trust for the public's right to navigate and fish making most of this discussion unnecessary. (See discussions regarding public and private rights in recreation activities in Appendix A at A-13, notes 56-59. For additional discussion of the role of federal law in water management in Illinois, see Appendix A at A-26 to A-27 and Barker 1991b.)

Another aspect of public confusion appears to be the fact that state legislation defines water pollution jurisdiction for the Illinois EPA much more broadly than it defines waters under the control of IDNR. The relevant definition for IEPA is: "'Waters' means all accumulations of water, surface and underground, natural, and artificial, public and private, or parts thereof, which are wholly or partially within, flow through, or border upon this State" (415 ILCS 5/3.56.) Thus, with different statutory bases and definitions, it is not necessarily the fault of the agencies that they view the waters subject to their jurisdiction differently.

This study does not deal with artificially created bodies of water and the scope of public access to those bodies. In general, unless the artificial body is created on or out of one to which the public already had access, developers control public access and one would expect that access to be consistent with the reason for which the body of water was created. A small lake in a private subdivision of homes probably would be limited to homeowners and their guests. A large flood control lake like Lake Shelbyville probably would be open to recreation to the extent it did not interfere with flood control management of the lake. A municipal water supply reservoir would allow recreation to the extent consistent with maintaining a wholesome water supply.

Legal Options

The first option is to do nothing. That would leave the current situation as described above.

A second option is to argue to the Illinois courts to change the common law definition of navigability.

A third option is to seek legislative clarification or change of the definition of what waters are open to the public for recreational navigation. This could be included as an element in a general state water resources management approach to be discussed later in this chapter.

A fourth option is for the agency to change its interpretation of the scope of public waters under the River, Lakes, and Streams Act to which the public have access for recreation, making clear that it exercises different types of jurisdiction over different types of public waters. First, and most extreme, the agency could determine that under the Act as now written some test broader than commercial usability should be used. Second, the agency could refocus the definition of commercial usability under the Act, treating activity such as resort use, boat and canoe rental, and pleasure cruises as commercial uses.

Discussion of the Second Through Fourth Options

The second option has been both successful and unsuccessful in other states. Unfortunately for proponents of this option, the Illinois courts have provided a track record of opposing change as noted above. Similarly, in another area of Illinois water law, when the Illinois Appellate Court was asked to substitute a reasonable use doctrine for the absolute ownership doctrine in the management of groundwater, it specifically refused to do so. However, documenting the changes in other states might help persuade the Illinois courts to change. While neither the Survey of Eastern Water Law nor the Regulated Riparian Model Water Code deal with this aspect of water, the 1991 treatise, Waters and Water Rights, contains a specific section devoted to the "pleasure boat test" (Dunning, Waters Subject to the Public Right, Waters and Water Rights, Sec. 32.03 (R. Beck ed. 1991)).

The pros of this approach are that it is the common law definition that is the source of the limited access of the public to the waters of Illinois. The cons of this approach are that litigation is piece-meal and requires a substantial expenditure of time and money. Furthermore, there is no guarantee of success. Indeed, the likelihood, based on the previous track record, is that the attempt would be unsuccessful.

In 1984, in the Chain O Lakes-Fox River Waterway Management Agency Act (615 ILCS 90/1 to 90/12) the legislature created the opportunity for creating the Chain O Lakes-Fox River recreational waterway for general recreational purposes. The actual creative force would have to

be a vote of the people in the member counties. This is a clear precedent that the legislature is willing to consider recreational needs and respond favorably. As noted earlier in this report, the Fox River was not considered navigable under the traditional test of commercial usability. So, perhaps the legislature would consider favorably a general effort to clarify the reach of the navigability concept in Illinois.

As to the third option, it is a mandatory duty under the Act for the agency to identify the public waters of the state. The departure from commercial usability would be radical and therefore perhaps more appropriate for the legislature. However, the second approach has been used elsewhere. In *Arkansas v. McIlroy*, 595 S.W.2d 659 (Ark. 1980), for example: "a river is legally navigable if actually navigable and actually navigable if commercially valuable." The court concluded that the Mulberry River was navigable because commercially valuable for recreation. "The Mulberry had been used by the public for recreational purposes for many years. It has long been used for fishing and swimming and is today also popular among canoeists." While early Illinois decisions may have focused on transporting goods and/or people from point A to point B, there simply is no decision that requires confining commercial use to such activity. Hunting and fishing for which the Illinois Supreme Court failed to see a necessary connection to navigation do not represent the full scope of recreational enterprises. For example, in the *Ahtna* case discussed earlier in this report sight-seeing cruises constituted an important commercial element and in relation to canoeing, hunting and fishing are rarely integral parts.

A summary of the issues and legal options regarding recreational access to water bodies is presented in Table VI-1.

Scope of Surface Water Management

Some water management stakeholders expressed concern about the scope of the state's management of surface waters. Many felt that the state needs a more holistic management perspective, including the regulation of surface water withdrawals as well as riparian activities. Specifically, the stakeholders' concerns include: (1) a lack of focus on fish and wildlife (perhaps stream ecology in general), (2) discriminatory regulation under which some withdrawers are regulated more than other withdrawers (e.g., municipal more than irrigation), (3) the placement of burdensome conditions on withdrawal permits, and (4) a failure to protect the scenic rivers (and their bluffs) of the state.

Existing Law

Much of the existing law is discussed in Chapter IV's consideration of instream flows and in this chapter's consideration of recreation, and any basic duty that exists as to preserving the stream resource is developed there. This is particularly true as to the distinction between public access to a body of water and the department's regulatory jurisdiction over that body of water. The discussions regarding minimum and optimum instream flows are particularly relevant to stakeholder calls for more holistic management. The principal focus here will be on regulation

of surface water withdrawals. To the extent that the department is under a duty to maintain some instream flow, it clearly can control withdrawals of water from a stream either by denying such withdrawals altogether or by placing restrictions on withdrawals that it allows.

While the Rivers, Lakes, and Streams Act does contain some provision for exempting certain users or uses from certain regulatory aspects of the Act (for example, 5/18 exempts duck blinds from permits for working in public bodies of water; 5/29a exempts certain uses from a construction permit otherwise required for construction in any stream), but in general the exemptions are very limited.

The authority over withdrawals generally is for the same purpose as the authority over obstructions - to preserve the public interest in, or the public useability of, the water. It is not for the purpose of allocating use. The prime responsibility of the department is to maintain the useability of a public body of water for the public. All other department activity must be consistent with this goal. Additionally, there are responsibilities for protecting the "natural conditions" of lakes and streams and the fish and wildlife therein.

In the one place where the Act appears to authorize the establishment of a nonriparian right to withdraw and use water from a public body of water, the usage is limited to "industrial manufacturing or public utility purposes" (5/18). Obviously, therefore, this provision excludes nonriparian agricultural withdrawal and use.

TABLE VI-1
SUMMARY OF ISSUES AND LEGAL OPTIONS:
RECREATIONAL ACCESS TO WATER BODIES

ISSUE DESCRIPTION	EXISTING LAW	OPTIONAL RESPONSES	COMMENTS
Sufficiency of access to the state's waterways for recreation purposes	**Statutory Law:** Rivers, Lakes, and Streams Act • The scope of IDNR's jurisdiction, based upon commercial navigation, is uncertain and controversial • The waters tributary to navigable waters appears to be included in "public waters" • State interest under the Act may extend beyond commercially navigable waters • At what time should commercial navigation be judged — past or present? **Common Law:** • The case law is ambiguous in that recreation was neither specifically included nor excluded from the commercial navigability concept • Cases also allow for the legislature to expand the category of navigable waters subject to a takings analysis	**Do Nothing**	Status quo
		Argue to the Courts to Change the Definition of Navigability	• Mixed success in other states • Illinois courts have history of opposing change
		Seek Legislative Clarification or Change the Definition of What Waters Are Open to Recreation	• There is precedent in Illinois that the legislature is willing to consider recreation needs and respond favorably • Could be included as an element of a state water resources management scheme
		Change Agency Interpretation of the Scope of Public Waters under the Act	• The departure from commercial usability would be radical and perhaps more appropriate for the legislature • However, there is no case decision that requires confining commercial use to transporting goods or people

While the state has chosen to protect the Middle Fork of the Vermilion River, it is as a state-managed component of the federal Wild and Scenic Rivers System rather than as part of a state system. See also the Chain O Lakes-Fox River Waterway in the recreation discussions above. Other streams receive some other types of federal protection, such as the Cache River where it is a part of a National Wildlife Refuge.

Legal Options

The first option is to do nothing. That would leave the current situation as described above.

A second option is to clarify the agency role in surface water management. This could be done either by seeking legislative clarification or regulatory clarification.

A third option is to include this element in a general state water resources management scheme to be discussed later in this chapter.

Discussion of Option Two

The subject dealt with here is related integrally to the instream flow topic discussed in Chapter IV of this report to such an extent that any options developed for action should treat these aspects simultaneously. Furthermore, wetlands protection under the Interagency Wetlands Protection Act could be integrated into this package.

In a variety of legislation some of which relates directly to the water resources, the state of Illinois has recognized the importance of various aspects of ecosystems and legislated for their strengthening and preservation. The statute establishing the work of the Illinois Environmental Protection Agency and the Illinois Endangered Species Act are two prime examples. However, in the Act providing for the study of instream flows and in the Interagency Wetlands Act, the legislature obviously recognized these two elements as important parts of water-based ecosystems in Illinois. Thus, the base would seem to be there for seeking further legislative action or for justifying an interpretation by the agency of the Rivers, Lakes, and Streams Act as an early ecosystem protection act and applying it accordingly.

A summary of the issues and legal options associated with the scope of surface water management is presented in Table VI-2.

TABLE VI-2
SUMMARY OF ISSUES AND LEGAL OPTIONS:
SCOPE OF SURFACE WATER MANAGEMENT

ISSUE DESCRIPTION	EXISTING LAW	OPTIONAL RESPONSES	COMMENTS
Scope of surface water management has four components: • Perceived lack of consideration for fish and wildlife • Perceived discrimination in regulation of different uses • Burdensome permit conditions for water users • Failure to protect scenic rivers	**Statutory Law:** Rivers, Lakes, and Streams Act • The authority over withdrawals is for the purpose of preserving public interest in and usability of water, not in allocating use	**Do Nothing**	Status quo
		Clarify Agency Role in Surface Water Management	• Could be legislative or regulatory clarification • The state has recognized the importance of ecosystems in a variety of legislation that could be a base for further legislative action to protect water-based ecosystems
		Include in General State Water Management Scheme	• See discussions later in this chapter

Providing Emergency (Drought) Planning

Some water management stakeholders have criticized the state for insufficient responses to droughts, particularly state leadership during these emergencies. Stakeholder viewpoints included (1) planning should prepare for 100-year events; (2) emergency waivers during drought facilitate the notion that drought planning is unnecessary; (3) we simply declare an emergency and act accordingly; and (4) we should be cautious about new regulations.

Existing Law

Under the common law of reasonable use applied to lakes and rivers and now applied by statute to groundwater also, natural wants have preference over artificial wants and, therefore, would take precedence during a period of drought. (For a discussion of this distinction and the difficulty with defining natural wants, see the discussion in Appendix A at A-6 to A-9.) In a competition between artificial users during a period of drought it is unclear whether a new determination of what is reasonable under the circumstances would be made or whether a court would simply apply a pro rata sharing. Pro rata sharing, however, is not necessarily fair because one user may already be putting water to much more efficient use than another user (and the latter still would have been "reasonable" under predrought conditions), so that a pro rata cutback would affect the more efficient user much harder than it would affect the less efficient user.

See Appendix A at A-28 for a discussion of the Illinois Emergency Management Agency Act and the Flood Control Act of 1945. To the extent that the former Act relates to drought, it basically provides for authority to act in an emergency with very little by way of specific guidelines. Furthermore, to the extent that the department has a duty to protect ecosystems in waters over which it has jurisdiction, it can plan for and react to drought conditions. (See the discussions in Chapter IV on instream flow and the earlier discussion on the scope of surface water management in this chapter.)

Local agencies do have authority to plan for, and react, in droughts. (See for example the listing of the powers of a water authority in Chapter V of this report.)

Legal Options

The first option is to do nothing. That would leave the current situation as described above.

A second option is to seek a directive from the Governor to the department to prepare a drought response plan that would become a part of "a comprehensive plan and program for the emergency management of the State."

A third option is to seek legislation that would mandate advance planning for drought conditions. One suboption is to do the planning at the state level. A second suboption is to supervise the planning at the state level but require it to be done at the local level. The appropriate local level may be the water supply agency, or it may be some governmental body with more general powers. This approach could require such a plan within a given period of time and provide that if none is forthcoming, the state would do it. In addition, under this type of legislation it would be determined in advance what emergency conservation measures would come into play, and what alternative sources, if any, of water supply are at hand. Furthermore, any necessary agreements or preconditions for tapping into the emergency supply could be entered into or taken care of in advance.

A fourth option is to seek more comprehensive legislation that would give a state water management agency authority to (1) declare the existence of a drought emergency, (2) issue conservation and antiwaste measures that would apply during the emergency, and (3) expedite the location of, and access to, additional temporary supplies during the emergency. The statute could authorize general regulatory measures that would apply at times other than emergencies for areas that experience frequent drought problems. Instead of providing for power in a state agency to react, the legislature could authorize the creation of a regional entity for the purpose of dealing with water- related emergencies in the geographic area, although this would be practical only for an area with fairly frequent drought experience. While the Rivers, Lakes, and Streams Act, which is as close as Illinois comes to a statewide water management statute, does not contain provision for either drought planning or drought management as such, the state already has considerable experience under the Level of Lake Michigan Act, 615 ILCS 50/1 to 50/14, with emergencies (50/6) and conservation measures (50/5). The Department of Transportation has promulgated extensive regulations on the subjects (92 IAC 730.305 [emergencies]; 730.307 [conservation practices and other permit conditions]). As to drought management strategies contained in the Regulated Riparian Model Water Code, see 2R-2-09, 4R-2-02, and Chapter VII, part 3, on restrictions during water shortages. Water conservation is noted in 1R-1-10. The Survey of Eastern Water Law did not deal with drought as such, but it did discuss a targeted approach to regulation and in that context discusses "stressed" areas, which might be stressed either because of chronic overdraft or because of drought.

The final option is to include drought planning and emergency response in a general state water resources management scheme to be discussed later in this chapter. Further discussion of the respective roles of the state and local governments occurs later in that context.

Discussion of the Options

Clearly, the Governor has authority under the Illinois Emergency Management Act for preparing the comprehensive plan. This authority would include requiring the participation of state agencies.

The pros of seeking new legislation is that it would establish clear lines of authority and responsibility for water needs during drought, resulting in accountability both for action and inaction. The cons of any plan are that both time and money would have to be expended in the effort to establish the system in the first place, and then to activate it at the appropriate time. Assuming some time lapse between droughts, would the system be kept up-to-date and actually activated during a drought?

The Instream Flow Protection Committee in its report indicated that the development of contingency plans for drought periods would be particularly helpful at a time when instream flows are particularly low. Preparedness measures would include identifying risk areas, seeking supplemental sources of supply, reducing sedimentation in reservoirs, maintaining raised reservoir pool levels, establishing interconnected systems, leakage detection programs, and other conservation measures.

A summary of the issues and legal options of drought planning and response is presented in Table VI-3.

Comprehensive State Role in Water Resources Management

There are two aspects that inform the question of the comprehensiveness of the state's water resources management program. The first relates to the interconnectedness of the resources and the second relates to the management functions of different levels of government. These are discussed below.

Regarding the first aspect, many stakeholders have expressed the view that all surface water and groundwater resources in a given watershed are connected physically via the hydrologic cycle. Consequently, water uses are intertwined, and management problems cannot be disassociated from each other. One user affects another. Drainage impacts on supply. Pollution impacts on supply. Flooding impacts on supply. Mass hog operations may pollute groundwater. Channelization destroys aquatic habitat. Erosion and sedimentation reduce reservoir capacities. Some of the focus group participants felt that the state should be more aggressive in resolving competition between different water uses. One recurrent theme was that different uses (e.g., municipal and agricultural) are not regulated by the state to the same extent. There were many expressions in favor of consistency in the law for all withdrawals.

Regarding the second aspect, which problems should be dealt with at the state level and which at the local level? The water management stakeholders have diverse views on management responsibilities. Some desire state management; others favor local control; some seek watershed-based management. Where is expertise? Who is familiar with the people? Who is familiar with the problems? Who knows what is practical in view of the local politics, mores, etc.? Secondarily, the issue is what is the appropriate local level? Should it be existing political boundaries such as cities and counties? Specially created boundaries? If so, what is the rationale

for the particular boundary? Should it be the watershed? What would that mean for aquifers: the overlying area? the recharge area? Shouldn't recharge contributors be entitled to share?

TABLE VI-3
SUMMARY OF ISSUES AND LEGAL OPTIONS:
DROUGHT PLANNING AND RESPONSE

ISSUE DESCRIPTION	EXISTING LAW	OPTIONAL RESPONSES	COMMENTS
The state's role in drought preparedness and response: •100-year drought planning should be the standard • Emergency waivers during droughts discourage planning • The emphasis should be on proactive preparedness, not reactive response • However, caution about new regulations is warranted	**Common Law:** • Unclear whether a new determination of reasonableness would be made to resolve competition during droughts • Pro rata sharing may not be fair, as more efficient users could be unfairly impacted **Statutory Law:** Illinois Emergency Management Act • This Act provides authority to act during emergencies but gives very little guidance Rivers, Lakes, and Streams Act • To the extent that the department has authority to protect aquatic ecosystems in its jurisdiction, it can plan and respond to droughts.	**Do Nothing**	Status quo
		New Legislation That Mandates Drought Planning • Could be state-level planning • Could be local-level planning	• Clear lines of authority and responsibility • Requires time and resources • Would need to be maintained during nondrought periods
		New Comprehensive Legislative Giving State Authority to: • Declare drought emergency • Require response measures • Expedite location of and access to emergency supplies	(Same as above)
		Include Drought Planning and Response in a Comprehensive State Water Management Scheme	• See discussions later in this chapter

In general, the discrete elements that have been discussed so far in this report have generally concerned appropriate elements for action at the state level. Because there are numerous such elements, it is useful to consider whether they should be incorporated into a more general state water resources management scheme.

Existing Law

There is no general statute in Illinois at present allowing comprehensive water resource management at the state level. However, with reference to Lake Michigan water, under the Level of Lake Michigan Act, 615 ILCS 50/1 to 50/14, the state approaches as near to comprehensiveness as it gets.

Village of Riverwoods v. Department of Transportation, 77 Ill. 2d 130, 395 N.E.2d 555 (1979), is an important case decided by the Illinois Supreme Court generally upholding the Department of Transportation's exercise of its regulatory power under the Level of Lake Michigan Act. Several challenges were made to this exercise of power, and all were rejected except in the instance where the department failed to allocate any water to the village of Lincolnshire despite accepting the projected growth figures offered by the village. The Lincolnshire matter was remanded for reconsideration.

The department's allocation was alleged to deny due process because it failed to accord priority to claimed riparian and prescriptive rights of several municipalities. The court however brushed this issue aside on the basis that independent of any water concerns, municipalities were not entitled to due process as against the state. This, of course, would not be true of private water users.

Several municipalities challenged the regulatory action on the basis that the Act failed to provide adequate standards to guide the department in the exercise of its power. The court found the provision stating "the Department shall be guided by population, business and economic projections and requirements" to be a sufficient standard (p. 558). The court noted that the state was constricted in its choices as "the total amount of water which could be diverted had already been fixed by the 1967 [U.S.] Supreme Court decree" (p. 559). The court looked specifically at the classification of water users in the department's regulations and noted the procedure for modification of the allocation.

Legal Options

The first option is to do nothing. That would leave the current situation as described above.

The limited authority that the state now has would not allow promulgation of a comprehensive scheme by regulation. Therefore, the only option available other than doing nothing is to see legislative enactment of authority for such a scheme. However, a review of the elements noted heretofore in this report suggests two possible focal points for a state scheme.

The first, and more limited, option would be for the state to package together selected options relating to the specific problem areas discussed in the preceding pages of this report. The result could be a combination of public interest issues (instream flow; recreation access; riparian regulation) and local assistance issues (water supply development data, guidance, assistance; drought planning). Groundwater regulation could have either focus.

A second approach would be for the state to prepare a comprehensive water resource management program including not only the aspects noted in the first approach, but also including the affirmative allocation of water use to applicants seeking to use water for whatever purpose, perhaps through a permit system.

Discussion of the Options

The first approach toward new legislation would leave the department approaching the water resource substantially in the same way that it approaches the water resource now. Except in the Lake Michigan watershed, basically the department exercises a veto power over (1) certain activities in the water (primarily construction) and (2) withdrawal of water, both with a view to protecting the public rights in particular bodies of water. The legislation in this approach, depending on which of the options are chosen for the package, could either provide new focal points for the public interest or expand its scope, but its implementation would remain largely the same. For example, if setting minimum instream flows was included in the package, approved, and implemented, the department would manage the water resource for those minimum flows by vetoing or preventing activity in the particular body of water that would jeopardize maintaining that minimum instream flow.

Under the second approach the department would have a role that goes beyond protecting the public interest or public rights in a particular body of water and could be determining, for example, as between two applicants for use of water, which one should get the use when there is not enough to supply both users. One way to view this approach would be to consider it as extending the department's role in the Lake Michigan watershed statewide.

If a comprehensive management scheme is proposed, it is important for the proponent to (1) review any act borrowed from another state or the Model Code, making sure every provision is understood and believed to be important or useful to Illinois, (2) determine the level of funding necessary to implement the legislation and the prospects for obtaining that funding, and (3) provide discretion to the department to develop a phased implementation based on availability of funding and to determine which aspects to implement and in what sequence to do so. The federal failure to do the latter in various federal environmental laws has led to the courts

determining the agencies' priorities and agendas. In addition, the agencies have suffered the time and monetary costs of participating in the litigation.

A summary of the issues and legal options regarding a new state comprehensive water resources management scheme is presented in Table VI-4.

THE ROLES OF LOCAL WATER DEVELOPMENT ENTITIES: ISSUES

In the literature reviewed for this study, as well in the telephone contacts and focus groups, there has been recurrent discussion of the roles of local water authorities in managing Illinois' surface water and groundwater resources. There are at least two components to this issue: (1) the level of government that is best suited for water management and (2) the current statutes in Illinois providing for formation of various local water management entities.

Types of Local Water Development Entities

The literature on water management in Illinois indicates that there are a dozen (or more) statutory provisions for the formation of different types of water supply entities in Illinois (Foran 1994). There are indications that the efficiency and effectiveness of water management in the state is inhibited by the overlapping authority of these entities and their operational autonomy. The public and private entities with some type of water development authority include municipalities, counties, public utilities, public water districts, water authorities, water service districts, water commissions, water and wastewater commissions, and river conservancy districts. The many water development statutes have led to the creation of 1,870 community water systems (Center for Regulatory Studies 1994). Some of these organizations can be established by as few as 50 voters. Approximately 1,500 of these systems serve fewer than 3,500 people.

The fact that these systems are small does not necessarily create a problem for water management. However, the authorities provided to the different entities under the various statutes are much more problematic. Despite the similarity of purpose behind most of these authorities, each is created under separate statutes that provide them with different and sometimes overlapping and conflicting powers (Foran 1995).

In addition to the overlapping authority of the different water development entities, the autonomy of these organizations may also present a problem for efficient and effective water management. There are few provisions in the authorizing statutes for state regulation of these systems with respect to their effects on water supplies or users. There are also few requirements for the viability or efficiency of the organization, financial or technical, in providing water service. In addition, these small water systems are virtually autonomous with respect to pricing,

ratemaking, conditions of service, such as water conservation, and the state has no statutory authority to intervene in water conflicts between these entities.

State vs. Local Management

Through the telephone contacts and focus groups, many different perspectives were offered on the subject of the appropriate scale of water management institutions in Illinois. Philosophical and practical arguments were made for state management, local management, and, to a lesser extent,

TABLE VI-4
SUMMARY OF ISSUES AND LEGAL OPTIONS:
COMPREHENSIVE STATE WATER RESOURCES MANAGEMENT

ISSUE DESCRIPTION	EXISTING LAW	OPTIONAL RESPONSES	COMMENTS
Comprehensive state water management program: • Interconnectedness of water resources in a given watershed • Management functions of different levels of government	**Statutory Law:** • There is no general statute allowing comprehensive state water resources management **Common Law:** *Village of Redwoods vs. IDOT* • Upheld state's regulatory power under the Level of Lake Michigan Act	**Do Nothing**	Status quo
		New Legislation That Gives the State Comprehensive Water Resources Management Authority • Could provide planning and assistance to local entities and clarify (and expand) the role that the state plays in vetoing activity that is inconsistent with public rights and interests • Could provide a comprehensive statute that would include the foregoing but also provide for allocating water use among applicants	• If borrowing the act from another state or using a Model Code, be sure that every provision is understood in the context of Illinois • Estimate the level of funding to implement • Provide for phased implementation

county management that would provide the most efficient and effective management of the state's surface water and groundwater resources. Although the arguments apply to all water quantity management, the discussions focused on groundwater resources rather than surface water resources. The pros and cons of local vs. state water management are outlined below.

Those who favor local institutions for water resources management maintain that local institutions are most familiar with the resources and the pattern of demands placed upon them. This familiarity makes them the most appropriate institution to develop (groundwater) management plans for their jurisdiction. In addition to the familiarity with the resource supply and demand, local institutions are familiar with the local users. When a conflict arises, the local institution is therefore well suited to resolve it. Those who favored local control of water resources also argue that there is no financing for state research, especially for groundwater resources, and future funding has the uncertainty associated with the budgetary process of the General Assembly. They recommend that there should be local funding for special studies paid for using permit fees, as is the case for some water authorities in Illinois. Some focus group participants suggested that permit fees could also pay for state research, but other participants responded that local research efforts are primarily paid for by the property taxes levied by local water authorities.

Other water management stakeholders noted several problems associated with local water development entities. They pointed to the regional scales of surface water and groundwater resources and identified a trend toward regionalization of water supply. Many concluded that state oversight of water resources would be most effective and efficient in managing the resources and resolving conflicts. They maintain that state management would seek local input to water management decisions. Among the problems raised regarding local water management institutions: (1) local water authorities do not have the regional perspective needed for surface water or groundwater management; (2) irrigation wells have agricultural exemptions from local groundwater withdrawal permits, yet urban water supply wells do not; (3) the many different types of local water development entities have overlapping powers (see above discussions); and (4) their authority extends well beyond reasonable limits (e.g., municipal entities have permit authority up to twenty miles beyond their border. They also argued that if water management authority is at the local level, the perspective will be short term in both process and horizon and can become entangled in local politics. They also maintain that the state is the only institution with the technical expertise for effective management.

Those who support local management counter these assertions, arguing that the state could provide technical support to local institutions. They also offer recommendations for improving the ability of local institutions to manage the state's water resources. One suggestion was that the Water Authorities Act needs to be changed to allow water authorities to cover entire counties without a referendum. Another suggestion was to give water authorities the ability to develop a management plan to apply to all users within that area. Presently, there are exemptions for certain users and certain times (e.g., agriculture).

Some focus group participants supported an intermediate position consisting of a state oversight board for management policy with local regulation of water use. The participants

recognized the linkages between groundwater and surface water and felt that, in general, they should be managed conjunctively via management partnerships.

Other Management Scales and Approaches

During the focus groups, a variety of institutional scales and approaches were raised. Within the context of local water management, the need for watershed management was cited due to the frequent nonconformance of political boundaries and drainage districts with watershed boundaries. Some of the participants stressed the uniqueness of watersheds and suggested that statewide management standards are impossible. They felt that the uniqueness of watersheds argues for local management of water resources.

As the scales of water management were discussed, the participants recognized the different definitions associated with *local* and *watershed*. For example: Does *local* imply municipal scale? Does it include the county scale? Does *watershed* refer to river basins? Subbasins? Tributary streams?

The role of county government arose on several occasions in the focus groups. One groundwater management proposal in the focus groups was to establish county-level groundwater regulations for drought periods. There was also a suggestion that some parts of the state should be included in groundwater management areas with state and county oversight

There was some discussion of the potential for development of new surface water management institutions similar to irrigation districts in the western states to manage surface water resources. These could be used to manage all surface water use in a given area. However, some of the participants were cautious about proposing new institutions. They cited the need for funding along with mandates and pointed to past examples of unfunded mandates in state water management (e.g., Water Use Act). There was also concern expressed that the state should not choke economic development with new water regulation. In particular, agriculture was suggested as being particularly dependent on water.

The focus group participants also discussed the feasibility of using market forces to manage water resources within a given area. Withdrawal permits could be issued to all parties in the area with a market (i.e., auction) for the permits. The stated intention was not to create a new layer of government but to manage all water resources in the area efficiently and equitably. The problem of uncertainty regarding quantities of groundwater was cited as being particularly difficult. One of the positive aspects of a market approach that was raised was the inclusion of all water users (i.e., no agricultural exemptions). The need for management of all groundwater uses was identified by many of the participants as important.

THE ROLES OF LOCAL WATER DEVELOPMENT ENTITIES: OPTIONAL RESPONSES

In the discussion of the roles of local water development entities two major issues surfaced. These deal with (1) the multiplicity of local institutions having a water resources management role and (2) the appropriate geographic level of management. The latter aspect has been explored in the previous section of this report on the state's role in water management. There is a multiplicity of local institutions with authority to participate in the use and/or management of water resources. Many of the focus group participants noted a lack of clarity as to what roles different units of government play in water management, and particularly, how they relate to each other.

Existing Law

For a listing of some of the local entities, see Appendix A at A-19. See also the discussion of the authority of municipalities in Chapter IV on water supply development and the discussion of the authority of water authorities in Chapter V on groundwater issues. Many of these entities have jurisdiction to act beyond their corporate limits which adds to the public's confusion.

Legal Options

The first option is to do nothing. That would leave the current situation as described above.

If a decision is made not to seek comprehensive water resources management at the state level of the sort noted in the above discussions, then a second option would be to seek clarification of the role of local entities in water resources management. This would of necessity entail a two-step process. Step 1 would be a comprehensive study of all local entities who have any authority with reference to water resources management to delineate the scope of their authority and their interrelationship with other such entities.

Once specific problems have been identified through the Step 1 study, Step 2 would entail the development of clarifying legislation. This legislation might take either the form of harmonizing existing entities or creating a new local entity with general powers that could override other local entities but give them the option of becoming a part of the new entity. However, in all likelihood, authority for municipalities to develop and control water supplies would continue. The principal restructuring would focus on the special purpose government districts and clarifying their relationship to and control over municipal water supplies. (See in particular the provisions in Chapter IV, part 4, of the Regulated Riparian Model Water Code.)

Discussion of the Second Option

Whatever the level of management, the two primary focal points have to be on protecting the public's rights and interests in the water resources and on "assuring a water supply." The former is explored significantly throughout the report. There are several clear elements to the latter: (1) conserving existing supply, (2) providing for essential uses, (3) developing new supplies at least cost but consistent with fairness and equity, and (4) providing for transfer of uses from one person or entity to another.

A summary of the issues and legal options associated with the roles of local governments in water management is presented in Table VI-5.

TABLE VI-5
SUMMARY OF ISSUES AND LEGAL OPTIONS:
LOCAL WATER RESOURCES MANAGEMENT

ISSUE DESCRIPTION	EXISTING LAW	OPTIONAL RESPONSES	COMMENTS
Local water resources management: • Multiplicity of local water institutions • Appropriate geographic level of management	**Statutory Law:** • There are a variety of statutes authorizing establishment of local water management entities	**Do Nothing**	Status quo
		Seek Clarification of the Roles of Local Entities in Water Management • Would need a comprehensive study of all local water entities • Would need to develop clarifying legislation	• Whatever the level of management, the two primary focal points are to protect the public's rights and interests and to assure water supply
		New Comprehensive State Water Management Scheme	• Could specify the water management roles of state and local entities

VII. CONCLUSIONS

This assessment of Illinois water quantity law has focused on ways in which water management in the state can be improved through changes in the legal and institutional framework. The analysis was issue-driven, concentrating on issues and conflicts in surface water and groundwater management that suggest inadequacies in the state's water law. Many of the management issues and conflicts that surfaced in this investigation can be traced to elements of the law that are either outdated, confusing, misinterpreted, or not aligned technically with contemporary water management. This report contains optional legal and institutional responses to address these problem areas and improve the efficiency and effectiveness of water management in Illinois.

The water management problems and opportunities identified in this report are offered as an independent assessment of Illinois water law, outside the realm or influence of any particular government agency or interest group. This neutral analysis was specifically recommended by the Governor's Water Resources and Land Use Priorities Task Force and Illinois Department of Natural Resources to get an unbiased view of Illinois water law as a precursor to consideration of a comprehensive state water management act. While it is indeed an independent assessment, the analysis has built upon the ideas and perspectives that have been documented in the literature or that were provided through the four focus groups of water management stakeholders. The focus groups, in particular, provided an in-depth perspective of the issues that the participants felt were most important to water management in the state.

The issue-driven methodology of this assessment has resulted in the combination of technical and legal analyses in this report. The technical information, provided by the literature and focus groups, has preceded the legal analyses. The legal analyses consist of the thorough survey of Illinois water quantity law found in Appendix A and the optional legal responses to surface water, groundwater, and institutional issues in Chapters IV through VI, respectively. The responses are designed to offer a menu of options ranging from no action to new legislation.

This report can serve as a foundation for developing a vision of Illinois water management in the twenty-first century. Whether the state decides to pursue a comprehensive water resources act or other management measures to mitigate the water issues and conflicts identified in this report would involve social, economic, and political considerations, and legal ones as legal. Clearly, there is a great deal of interest in mapping the future of water management in the state. For this report, this interest translated into the invaluable direct and indirect support of water management stakeholders.

In considering how this effort might lead to a comprehensive water resources act, it may be helpful to explore the following short- and long-term activities:

(1) In the short term, it is likely that some water management stakeholders will want to review and comment on this independent assessment of Illinois water law. This could be very helpful if it leads to greater understanding of the water management issues and legal options, and if it stimulates communication between the various stakeholders. This could be accomplished through a variety of approaches ranging from individual review to a more structured group process.

(2) Next, it may be necessary to more closely examine the roles of local water entities in Illinois water management. This could include a comprehensive study of all local entities with water management authority to delineate the scope of their authority and determine their interrelationships with other local entities.

(3) The development of a comprehensive water management scheme in Illinois, regardless of the responsibilities of various institutions, could draw upon this document, as well as the Survey of Eastern Water Law and the Regulated Riparian Model Water Code. The model code could serve as a useful template for such a scheme, but it would need to customized to the management needs and institutional setting of Illinois. This report could serve as a starting point for this customization. However, additional economic, legal, and institutional analyses would be required to examine the implications of implementation, including the costs, benefits, and feasibility of all of the elements within a proposed comprehensive management statute. Again, the synergy between technical and stakeholder guidance could be very useful in this process.

APPENDIX A

SURVEY OF ILLINOIS WATER LAW

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I. INTRODUCTION

This study includes a summary of the pertinent case law, statutes, and regulations relating to water **quantity** issues in Illinois. In general, the basic system in Illinois is governed by reasonable use principles. For well over a century, Illinois courts have applied a rule of reasonable use to surface waters. The doctrine provides that "natural" users of water are given preference over "artificial" users. In other words, domestic users, who withdraw water for purposes such as drinking, bathing, cooking, and the like, are given preference over nondomestic users, such as manufacturers, irrigation farmers, and the like.

Interestingly, groundwater law in Illinois developed along different lines. Although some debate existed on the subject, Illinois was generally classified as an "absolute ownership" state with respect to ground water withdrawals.[1] Under the absolute ownership rule, landowners possessed an absolute right to use percolating water below their lands regardless of the affect on adjoining landowners. In 1983, the Illinois General Assembly abolished the absolute ownership rule and adopted reasonable use for all groundwater withdrawals in the state. The statute has since been interpreted to bring Illinois groundwater law in line with the significant body of existing case law relating to surface waters.

Chapter II analyzes the water quantity case law and statutes that have developed over the years. A number of conflicts are identified in Chapter III, including problems relating to definitions developed in the 1800s, ambiguity regarding the state's authority to regulate certain waters, and the substantial uncertainty with regard to public rights to engage in recreational activities in various waters within the state. Concluding remarks are found in Chapter IV.

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[1]*See generally*, Wolff, *The Need For A Reform Of Water Use In Illinois*, 53 Chi. Kent L. Rev. 22 (1976); Cribbet, *Water As A Species: The Illinois View*, 47 Ill. Bar J. 448 (1959); *Illinois Legislative Council*, Pub. No. 88, Control of Groundwater (1948).

II. ILLINOIS WATER LAW

SURFACE WATERS—CASE LAW

Illinois has long followed the rule of "reasonable use" for surface waters. Although a significant body of law has developed over the years, the cases continue to rely on the definitions articulated by the Illinois Supreme Court in the 1842 case of *Evans v. Merriweather*. Because of the significance of *Evans*, any discussion of Illinois reasonable use principles must begin with a detailed analysis of the case. First, however, a brief discussion of the basis for reasonable use is in order. Put simply, "natural" uses of water are given preference over "artificial" uses.

The Basis for Reasonable Use: Natural Uses Prevail over Artificial Uses

The rule of reasonable use is based on the presumption that natural uses of water (drinking, bathing, cooking, etc.) should be given priority over artificial uses (manufacturing, irrigation, etc.). Generally, a natural user will always prevail over an artificial user. The more difficult questions involve situations where natural users compete with natural users, or where artificial users compete with artificial users. Under these circumstances, the answer is always one of reasonableness. Each user is entitled to a fair share of the available water source.

Evans v. Merriweather—*The Foundation of Reasonable Use*

For well over a century, Illinois has applied the doctrine of reasonable use to surface waters.[2] The rule was first articulated by the Illinois Supreme Court in the 1842 landmark

[2] *See Evans v. Merriweather*, 4 Ill. 492 (1842). The doctrine also applies to underground water flowing in well-defined channels. *Id.*

case of *Evans v. Merriweather*.[3] In *Evans*, both the plaintiff and the defendant owned and operated steam mills located on the same stream. After a drought in the fall of 1837, the defendant, owner of the upper mill, allowed his employees to divert all of the water from the stream for use in his mill.[4] As a result, the flow to the plaintiff's mill dried up, thereby preventing him from operating his business.[5] In affirming a judgment for the plaintiff, the supreme court determined that "[e]ach riparian proprietor is bound to make such a use of running water, as to do as little injury to those below him, as is consistent with a valuable benefit to himself."[6]

The court then addressed the question of what uses are reasonable in relation to other uses. In doing so, the court articulated several uses that are considered "natural" and several that are considered "artificial." The court explained:

> [T]he wants of man in regard to the element of water . . . are either natural or artificial. Natural are such as are absolutely necessary to be supplied, in order to his existence. Artificial, such only, as by supplying them, his comfort and prosperity are increased. To quench thirst, and for household purposes, water is absolutely indispensable. . . . [W]ater for cattle is also necessary. These wants must be supplied, or both man and beast will perish.
>
> The supply of man's artificial wants is not essential to his existence; it is not indispensable; he could live if water was not employed in irrigating lands, or in propelling his machinery. . . . So of manufacturers, they promote the prosperity and comfort of mankind, but cannot be considered absolutely necessary to his existence; nor may the machinery which he employs be set in motion by steam.[7]

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[3] 4 Ill. 492 (1842). Nearly all subsequent Illinois cases on the subject have cited *Evans*, and it is considered the foremost opinion on the surface water reasonable use doctrine.

[4] *Id.* at 493.

[5] *Id.*

[6] *Id.* at 495.

[7] *Id.* at 495-96.

Put more succinctly, under *Evans*, natural wants are "absolutely necessary" to one's existence and include drinking, household uses, and watering cattle. Artificial wants, on the other hand, are nonessential and include such uses as irrigation and manufacturing.

The *Evans* court concluded that a person may use an entire stream to satisfy natural wants, and in cases involving both a natural user and an artificial user, the natural user will prevail.[8] When there is a dispute between two artificial users, each user has a right to a reasonable proportion of the water, and it will be a question for the jury whether one party has used more than his fair share.[9] In general, the *Evans* approach involves balancing "the reasonableness of the use, together with the absence of unreasonable effect upon others."[10]

Disputes between Competing Artificial Users or Competing Natural Users

In *Bliss v. Kennedy*,[11] the Illinois Supreme Court resolved a surface water dispute between two factory owners. The plaintiff had constructed his factory prior to the defendant, and claimed that he should have the exclusive right to the water. The court rejected this by examining the *Evans* rule, and held that it was a question for the jury as to what was reasonable.[12] Thus, in the case of a dispute between competing artificial users, it does not matter who used the water first, but only whether the use of the water is reasonable. Any question of reasonableness is typically determined by a jury.

With respect to the issue of competing natural users, *Evans* provides only that a domestic user has an absolute right to take water for "natural wants."[13] While the court offered an extensive discussion of a domestic user's rights in relation to an artificial user, there was no discussion of the rights of a

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[8] *Id.* at 496.

[9] *Id.*

[10] *Bouris v. Largent*, 94 Ill. App. 2d 251, 254, 236 N.E.2d 15, 17 (1968).

[11] 43 Ill. 67 (1867).

[12] *Id.* at 73-76.

[13] *Id.*

domestic user in relation to another domestic user. Thus, it is not entirely clear what will happen if a dispute arises between two riparian neighbors who each are withdrawing water only for domestic uses.[14] The logical result is to apply the same rule that is applied to disputes between artificial users; the question of reasonableness is for a jury to determine. Some states, however, have ruled that the upper riparian should generally prevail.

On the other hand, if the dispute involves a natural user versus an artificial user, the issue is likely a question of law for the judge. Since under *Evans* a domestic user has an absolute right to use water for natural wants,[15] and the artificial user's right is secondary to that of the domestic user, there is no question of reasonableness for a jury to determine. If the artificial user's withdrawal interferes with the domestic user's absolute right, the artificial use is unreasonable as a matter of law.

Problem Areas: "Natural Wants" vs. "Artificial Wants"—A Fact-Based Approach

There is significant uncertainty under current Illinois law regarding the application of "natural wants" vs. "artificial wants." Much of the uncertainty relates to the antiquated definitions outlined in *Evans*.[16] For example, according to *Evans,* "watering cattle" falls in the category of a natural want. Although such a definition may have made sense in the mid-nineteenth century, it hardly applies to today's modern society. Under the *Evans* approach, a dairy farmer or feed lot operator could conceivably argue that the use of water for cattle should be given preference as a "natural" use. It is unlikely, however, that a modern court would accept such an interpretation. In the *Evans* era, watering cattle was necessary

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[14]As a practical matter, the possibility of this occurring may be remote. Since domestic users are generally confined to using water for household purposes such as drinking, bathing, and cooking, it is unlikely that a major decrease in flow to a neighboring domestic user will occur. However, in a dispute involving a city or town, this is more likely.

[15]*Id*. at 496.

[16]As the authors of the Survey of Eastern Water Law observed, reasonable use in Illinois is based on "the nebulous and dated distinctions between 'natural' and 'artificial' wants first established in Illinois over 150 years ago in the *Evans* case."

for sustenance in the household. Obviously, the same cannot be said for modern-day dairy farmers and feed lot operations. The better answer is that the definition of "natural wants" vs. "artificial wants" is one that necessarily must evolve over time.

Another problem area is in defining to what extent public uses of water should be deemed "natural wants" as opposed to "artificial wants." Obviously, municipalities use water for numerous purposes, both domestic and artificial. While the *Evans* approach arguably provides a usable definition of "artificial" and "natural" wants in the context of private users of water, it is apparent that many disputes arise not between two private users but rather between a private user and a public entity. With the increased dependency on both surface waters and groundwater by cities and towns, the likelihood of disputes between public entities and neighboring landowners is readily apparent. Thus, a crucial question is whether a city's use of water constitutes a "natural" want or an "artificial" want.

Several Illinois surface water cases illustrate the distinction in the context of public entities. For example, in *City of Elgin v. Elgin Hydraulic Works*,[17] a case decided in 1899, the city of Elgin withdrew water from the Fox River for domestic, fire, and sanitary purposes. The withdrawal resulted in a decreased flow of water to the plaintiff's downstream power dam, thereby resulting in a substantial loss of power production. The court first determined that the plaintiff was not a proper party to the suit, as he was not a riparian owner but only the maintainer of the dam.[18] The court nevertheless concluded that even if the case were decided on the merits the plaintiff could not recover.[19] Because the defendant city was taking water for domestic, sanitary and fire purposes, its right would be "paramount to the right of the owners of water power to use the [water] for the purpose of propelling the machinery of their mills."[20] The court cited *Evans* for the distinction

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[17]85 Ill. App. 182 (2d Dist. 1899), *aff'd*, 194 Ill. 476, 62 N.E. 929 (1902).

[18]*Id*. at 191.

[19]*Id*. at 191. The court's discussion appears to be dicta, as the court had already determined that the plaintiff was not a proper party to the suit. The supreme court, in affirming, did not address the case on the merits but only on the issue of whether the plaintiff was the proper party to sue. *See Elgin Hydraulic Co. v. City of Elgin*, 194 Ill. 476, 62 N.E. 929 (1902).

[20]*Id*. at 194. The court explained:

between "natural" and "artificial" wants, evidently implying that the city's use of the water was "natural."[21] Despite the dicta, the issue of whether a city is even a riparian is a question largely unresolved in Illinois; some courts in other jurisdictions have treated cities differently than private riparian landowners.

A 1966 case dealt with the rights of a public university in relation to a private landowner. In *Fink v. Board of Trustees*,[22] the plaintiff brought suit to enjoin a university from building a dam which would result in a decreased flow of water across the plaintiff's property.[23] The trial court refused to grant the injunction, and the appellate court affirmed. In ruling for the university, the court emphasized that the plaintiff was not using the water for drinking or household purposes.[24] The court also observed that "[t]he loss, if any, to the plaintiffs by any decrease in flow [was] minimal. On the other hand, the benefits to defendant from construction of the dam [were] substantial."[25]

From *Elgin*, one might argue that a city that withdraws water solely for domestic purposes has an absolute right to withdraw water (subject only to limits based on the effect on other natural users). Any interference by an artificial user would result in an injunction or damages in favor of the city. The problem with this analysis is that most cities provide water for manufacturing and other businesses that clearly would not be considered "natural" uses. Clearly, the cases do not provide comprehensive guidelines for determining whether a public use is considered "natural" or "artificial." For example, in *Bridgman*

Health is of more importance than wealth, and cleanliness is next to godliness; and we hold that the right of the people to an abundant supply of pure water, by which their health and cleanliness may be secured, is paramount to the right of mill owners to have the water for propelling their machinery, and that to the extent that the two rights conflict, the latter must yield.

Id. at 193-94 (*quoting City of Auburn v. Union Water Power Co*., 90 Me. 576 (1890).

[21]*Id.* at 193.

[22]71 Ill. App. 2d 276, 218 N.E.2d 240 (1966).

[23]The plaintiff also brought suit to enjoin the university from discharging sewage into the stream. The trial court granted an injunction, and the appellate court affirmed. *Id.* at 282, 218 N.E.2d at 244. This portion of the opinion did not concern the water rights of riparian owners but rather a question of whether the discharge of sewage constituted a nuisance.

[24]*Id.* at 278, 218 N.E.2d at 242.

[25]*Id.* Thus, the court in effect applied a balancing test where the university's artificial uses were compared to the non-domestic landowner's uses.

v. Sanitary District of Decatur,[26] a case discussed later in connection with groundwater, the court declined to address the question of whether a sanitary district's use of water constituted a natural want. The court noted:

> One of the questions which must be answered is whether the sanitary district's use of the subsurface water is for "natural wants" or "artificial wants," and whether this use constitutes waste. The question of whether the use of water for a sanitary sewer constitutes a 'natural want' or an 'artificial want' was not specifically addressed in *Merriweather*, or any other reported Illinois decision.[27]

Of course, the court could have looked to the discussion in *City of Elgin v. Elgin Hydraulic Works*,[28] wherein the court, albeit in dicta, noted that the city's withdrawal for domestic, *sanitary,* and fire purposes may well have been "natural" uses. Under this approach, the *Bridgman* court arguably could have concluded that both the plaintiff's use and the sanitary district's use were for natural wants, and therefore, a balancing test should be applied to determine the rights of the parties.

Another case involving a public entity was *Lee v. City of Pontiac*,[29] one of three groundwater absolute ownership cases discussed later. Although this case was decided prior to the adoption of reasonable use for groundwater withdrawals, it is interesting in that it involved a public user vs. a private user. In *Lee*, the city constructed a drainage ditch that resulted in the plaintiff's well going dry.[30] While it is not clear from the opinion whether this was a natural use, one could argue that the ditch was constructed to aid the domestic uses of the residents of Pontiac.[31] Conversely, the plaintiff's use in *Lee* was clearly artificial. The "water from the plaintiff's well was used for purposes incidental to a trucking business

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[26]164 Ill. App. 3d 287, 517 N.E.2d 309 (4th Dist. 1987).

[27]*Id.* at 295, 517 N.E.2d at 314.

[28]85 Ill. App. 182 (2d Dist. 1899).

[29]99 Ill. App. 3d 982, 426 N.E.2d 300 (1981).

[30]99 Ill. App. 3d at 983, 426 N.E.2d at 301.

[31]The court did note that "presumably the action by the City [was] taken to benefit all of the inhabitants of Pontiac." *Id.* at 985, 426 N.E.2d at 302.

that was largely off the premises."[32] Thus, applying the *Evans* test might have resulted in a judgment for Pontiac; the city's absolute right to withdraw water for domestic uses would have prevailed over the plaintiff's artificial use. On the other hand, if the city's use was deemed "artificial," the court would have been required to balance the artificial uses to determine if the city's use was reasonable.

These cases illustrate the substantial uncertainty involved with resolving disputes through the *Evans* analysis. Although a significant body of law has developed with respect to surface water reasonable use, most of the primary cases were decided in the 1800s. For this and other reasons, a number of interpretive problems remain. Part of the problem rests with the judicial process itself. Appellate courts typically answer only those questions that are necessary to resolve the specific dispute at issue. As a result, many questions remain unanswered until years later when the issues finally make their way through the courts. Even then, the results are based largely on the specific facts of the particular dispute at issue. A slight change in the facts might lead to a different result (particularly since the issue of what is "reasonable" is generally a jury question). Not only does such an approach lead to conflicting decisions, but it provides little guidance to existing users of water.

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[32] *Id.*

Surface Waters—Riparian Rights

In connection with the basic right of reasonable use, Illinois courts have focused on a number of riparian issues in the context of surface water disputes. These issues—questions relating to bed ownership, alluvion, wharfing out, hunting, fishing and recreational rights, and the like—have been the subjects of numerous court decisions. There is currently some uncertainty in the law relating to these issues, particularly in the areas of bed ownership and public rights to fishing and recreational activities in certain areas. Much of the uncertainty relates to a potential conflict between the early court decisions and later statutes enacted by the Illinois General Assembly. These issues will be discussed in more detail later.

The surface water cases typically distinguish between (1) streams and (2) lakes and ponds. The major difference between the two classifications (under the case law) is that the riparian owns the bed underlying a stream, whereas the riparian does not own the bed underlying meandered or navigable-in-fact lakes and ponds.[33] Even so, in light of later legislation passed by the General Assembly, there is considerable ambiguity regarding whether any reasonable distinction remains.

Bed Ownership

In the vast majority of jurisdictions, the state owns the beds underlying all navigable streams.[34] Early on, however, Illinois adopted the minority approach that allows private ownership of the beds underlying virtually all streams in the state. In *Middleton v. Pritchard,*[35] the Illinois Supreme Court adopted the common-law ebb-and-flow-of-the-tide test and held that the Mississippi River was nonnavigable for purposes of bed ownership.[36] Under *Middleton*, all riparians along streams own the underlying bed to the "thread of the stream."[37] Later, after

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[33]See R. Beck, *Illinois National Resources Law: Coal, Oil and Gas and Water*, § I(A), at 330 (1985).

[34]See 78 Am. Jur. 2d *Waters*, § 381.

[35]4 Ill. (3 Scam.) 510 (1842)

[36]*Id.* at 521.

[37]*Middleton v. Pritchard*, 4 Ill. (3 Scam.) 510 (1842); *Buttenuth v. St. Louis Bridge Co.*, 123 Ill. 535, 17 N.E. 439 (1888) (middle of Mississippi is same as "middle of the main channel").

the United States Supreme Court held that the test did not apply to rivers,[38] the Illinois Supreme Court revisited the issue but concluded that the doctrine was too settled to be overruled in Illinois.[39]

A different rule developed with respect to lakes and ponds. In 1860, the Illinois Supreme Court rejected the rule it had previously applied to streams. In *Seaman v. Smith,*[40] the court reasoned that since there is no current in a lake, it would be impossible to decide where the boundary would be or what shape it would assume.[41] As a result, the basic rule is that the state owns the beds underlying all lakes that are meandered or navigable-in-fact. On the other hand, in cases involving nonnavigable and nonmeandering lakes and ponds, bed ownership is divided between the riparian owners.[42]

The Illinois Supreme Court's recent decision in *Beacham v. Lake Zurich Prop. Owners Ass'n,*[43] defines the rights of bed owners of private, nonnavigable lakes. *Zurich* clearly establishes that bed ownership does not necessarily entitle riparians to exclude other riparians from the reasonable use of the surface area above the riparian's bed. In *Zurich*, the court adopted the civil-law rule and held:

> [W]here there are multiple owners of the bed of a private, nonnavigable lake, such owners and their licensees have the right to the reasonable use and enjoyment of the surface waters of the entire lake provided they do not unduly interfere with the reasonable use of the waters by other owners and their licensees.[44]

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[38]*See Railroad Co. v. Schurmeir*, 74 U.S. 272 (1868).

[39]*Braxon v. Bressler*, 64 Ill. 488 (1872).

[40]24 Ill. 521 (1860)

[41]*Id.* at 524.

[42]*Fuller v. Shedd*, 161 Ill. 462, 489, 44 N.E. 286, 295 (1886).

[43]123 Ill. 2d 227, 526 N.E.2d 154 (1988)

[44]Id. at 232, 526 N.E.2d at 157; *cf. Leonard v. Pearce*, 348 Ill. 518, 181 N.E. 399 (1932) (riparians on nonnavigable lake can prevent nonriparian members of general public from using lake).

Of course, the owner of the underlying bed typically has the right to recover from trespassers who trespass on the riparian's bed. *See, e.g., Sikes v. Moline Consumers Co.*, 293 Ill. 112, 127 N.E. 342 (1920) (sand remover); *Washington Ice Co. v. Shortall*, 101 Ill. 46 (1881) (ice remover).

Other Riparian Rights—Wharfing Out and Alluvion Deposits

The issue of whether a riparian has the right to "wharf out" depends on whether the riparian owns the underlying bed. The early cases suggest that bed ownership entitles the riparian to wharf out provided that it does not infringe on the public right of navigation. Thus, under the early cases, a riparian along a stream has the right to construct a private wharf out to the low water mark and to make reasonable charges for its use.[45] Nonbed owners, on the other hand, do not possess the right to wharf out.[46]

Alluvion deposits are discussed briefly because of the effect water levels have on such deposits. Alluvion is "the addition made to land by the washing of the sea ... whenever the increase is so gradual that it can not be perceived in any one moment of time."[47] In Illinois "[i]f the river is the boundary, the alluvion, as fast as it forms, becomes the property of the owner of the adjacent land to which it is attached."[48] The same rule applies to lakes and ponds. Although a riparian along a meandered or navigable lake does not own the underlying bed, the riparian nevertheless owns the alluvion formed by accretion.[49]

Hunting, Fishing, and Recreational Activities—Public Rights vs. Private Rights

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[45]*Ensminger v. People,* 47 Ill. 384 (1868).

[46]*Revell,* 177 Ill. at 489-91. As noted later, this area is now extensively regulated by the Illinois General Assembly under the Rivers, Lakes, and Streams Act.

[47]*Lovingston v. St. Clair County.,* 64 Ill. 56, 58 (1872), *aff'd,* 85 U.S. 623 (1873).

[48]*Id. See also Kehr v. Snyder,* 114 Ill. 313, 2 N.E. 68 (1885) (outlining proper method for dividing alluvion among riparians).

[49]*See Revell v. People,* 177 Ill. 468, 484 (1898).

Of course, riparian rights have always been limited to an extent by public rights. Among other things, private rights are limited by the public right of navigation in all bodies of water that are navigable-in-fact.[50] A number of older cases have addressed the issue of whether a particular body of water is navigable-in-fact,[51] while other cases have considered what constitutes an interference with the public right of navigation.[52] (For further discussion of this issue, see pages 59 to 66 of the main text.

A more difficult question relates to the public's right to engage in hunting, fishing, and recreational activities. At least with respect to riparians along nonmeandered, nonnavigable lakes and ponds (private lakes), it is clear that riparians possess the exclusive right to fish and hunt over their property.[53] However, the bed owner's "exclusive" right to fish and hunt is limited by the rights of other riparians. As noted earlier, riparian owners of the underlying bed of a private, nonnavigable lake cannot prevent other riparians from making a reasonable use of the surface area, which presumably includes fishing and hunting.[54] It is not clear, however, that the same rule should apply to streams and rivers. In *Beacham,* the court decided to apply the civil-law rule in part because of the "difficulties presented by attempts to establish and obey definite property lines," a problem that does not generally exist with streams and rivers.[55]

With respect to meandered and navigable-in-fact lakes and ponds, because the state owns the beds underlying these bodies of water, the riparian does not possess the exclusive fishing and hunting rights. Rather, it appears that such a riparian possesses only those fishing and hunting rights generally held by the public.[56]

Illinois also has also adopted the public trust doctrine. As noted earlier, under the common law, the state owns the beds

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[50]*See Middleton v. Pritchard,* 4 Ill. (3 Scam.) 510, 520 (1882).

[51]*See, e.g., People v. Economy Power Co.,* 241 Ill. 290, 89 N.E. 760 (1909) (Des Plaines River not navigable-in-fact)

[52]*See, e.g., Illinois River Packet Co. v. Peoria Bridge Ass'n,* 38 Ill. 467 (1865) (interference by bridge).

[53]*Cf. Leonard v. Pearce,* 348 Ill. 518, 181 N.E. 399 (1932) (riparians on nonnavigable lake can prevent nonriparian members of general public from using lake).

[54]*Cf. Beacham,* 123 Ill. 2d at 232, 526 N.E.2d at 157.

[55]*Id.*

[56]*Cf. Schulte,* 218 Ill. 108, 117, 75 N.E. 783, 784 (state owns beds in trust for beneficial use by public).

underlying all meandered and navigable-in-fact lakes and ponds. The general assembly later codified the common law by providing that "[t]itle to the bed of Lake Michigan and all other meandered lakes in Illinois . . . is held in trust for the benefit of the People of the State of Illinois."[57] Put another way, bed ownership "is in the state in trust for all the people for the purposes of fishing, boating and the like."[58] As such, the state cannot use the underlying beds for anything other than public purposes.[59]

A more difficult question exists with respect to streams. The early Illinois cases followed the common-law rule that the right to fish and hunt belongs exclusively to the owner of the underlying bed.[60] Nonetheless, the older cases typically involved disputes between private landowners as opposed to specifically dealing with the rights of the public to engage in recreational activities. Moreover, although the early cases suggest that riparians along streams might possess the exclusive right to hunt and fish (because of bed ownership), the General Assembly has granted considerable jurisdiction over all public streams to the state. (See also pages 59 to 66 of the main text.) In connection with this issue, it is worthy of note that a riparian's right is not absolute, as there can be no absolute property right until an animal is actually captured.[61]

Since the older cases provide that riparians own the beds underlying virtually all streams in Illinois, some commentators have suggested that public rights in these areas might be limited.[62] As one author put it, "[a]part from boating, it appears that no other recreational uses on navigable waterways are expressly allowed by the Illinois cases. No mention of swimming or waterskiing is made, and, if the stream bed is privately owned, hunting and fishing are not allowed without the consent of the bed owner. Because most river and stream beds in

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[57]615 ILCS 5/24.

[58]*Schulte v. Warren*, 218 Ill. 108, 117, 75 N.E. 783, 784 (1905). *See also Illinois Central R.R. v. Illinois*, 146 U.S. 387 (1892) (public trust doctrine includes fishing rights).

[59]*See People ex rel. Scott v. Chicago Park Dist.*, 66 Ill. 2d 65, 360 N.E.2d 773 (1976) (grant of Lake Michigan bed to steel corporation violated public trust doctrine).

[60]*Schulte v. Warren*, 218 Ill. 108, 123, 75 N.E. 783 (1905); *Beckman v. Kreamer*, 43 Ill. 447, 448 (1867); *Parker v. People*, 111 Ill. 581, 589 (1884).

[61]*Schulte*, 218 Ill. at 122. *Cf. Parker*, 111 Ill. at 589 (no right to prevent passage of fish or wantonly destroy fish as they are the common property of the people until captured).

[62]*See generally* Livingston, *Public Recreational Rights in Illinois Rivers and Streams*, 29 DePaul L. Rev. 353 (1980).

Illinois are privately owned, there is little opportunity for the public to hunt and fish waterways."[63]

There are few cases addressing these issues. In fact, with respect to issues relating to bed ownership, no case has yet considered the apparent conflict between the older cases and more recent statutes that arguably permit broader public rights in the area of water-based recreation, fishing, and the like. Despite the older cases, it is unlikely that an Illinois court today would limit the rights of the public to engage in recreational activities on public, navigable streams. As a matter of custom and practice, the public has routinely engaged in these activities in navigable streams of Illinois.[64]

It should also be noted that a 1937 statute provides that the state of Illinois reasserts ownership of submerged lands in the state. Specifically, the statute provides as follows:

> The State of Illinois for the benefit of the People of the State and in pursuance of protecting the trust wherein the State holds certain lands for the People, hereby elects and determines to assert and reclaim the title to lands of the State of Illinois now submerged.[65]

Commentators have observed that it is unclear whether the statute does anything other than codify the common law. As one author put it,

> This wording could be interpreted two ways. The legislature may have intended to reassert title only over those submerged lands to which it retained formal title after Illinois' admission to the Union. These lands include the beds of most navigable or meandered lakes. On the other hand, the General Assembly may have wanted to reclaim the state's title to all submerged lands to which it gained ownership upon Illinois' admission to the Union. This category of

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[63] *Id.* at 367.

[64] It is also worthy of note that one commentator has observed that "recreational activities are not incompatible with the notion of private bed ownership. . . . They are logically concomitant with the public navigational easement if that easement is interpreted to include recreational boating. Inclusion of hunting, fishing, and swimming rights in the definition of public rights in navigable waterways will not seriously interfere with private expectations nor impair the private owner's exclusive right to remove sand, gravel, and minerals from the stream bed." Livingston, *Public Recreational Rights in Illinois Rivers and Streams*, 29 DePaul L. Rev. 353, 363-65, n.64. See also discussion of custom and prescription in Chapter IV of main text.

[65] 5 ILCS 605/1 (1994).

> submerged lands is much larger than the first and would include not only the beds of navigable or meandered lakes but also the beds of navigable rivers and streams having passed into private ownership.[66]

The public's right to engage in water-based recreational activities has been the subject of numerous debates over the years. As noted above, there is considerable ambiguity under current Illinois law in this area.

[66]Livingston, *Public Recreational Rights in Illinois Rivers and Streams*, 29 DePaul L. Rev. 353, 364 (1980).

STATUTES AND REGULATIONS

There are a number of statutes that provide authority to various agencies in Illinois to regulate surface waters. This section concentrates on the principal statutes relating to water "quantity" issues. There are, of course, numerous statutes dealing with pollution, environmental protection and the like (both state and federal). Since these statutes relate largely to water "quality" issues, they are not discussed here.

The primary statute governing regulation of surface waters is the Rivers, Lakes, and Streams Act of 1911.[67] The Act grants substantial authority to the Illinois Department of Transportation to regulate certain "public" streams and lakes in Illinois. Unfortunately, very few cases have interpreted the Act to date (although the original statute has been on the books since 1911). As a result, a number of interpretive questions remain unanswered.

There are also a considerable number of statutory provisions dealing with public water supplies. These statutes confer authority on various local public entities such as water districts, municipalities, public utilities, and the like, to withdraw and distribute water.

Rivers, Lakes, and Streams Act

Basic Provisions and Regulations

The Rivers, Lakes, and Streams Act provides various regulatory powers to the Illinois Department of Transportation with respect to any "public bodies of water." The Act defines public waters as,

> [a]ll open public streams and lakes capable of being navigated by watercraft, in whole or in part, for commercial uses and purposes, in all lakes, rivers, and streams which in their natural condition were capable of being improved and made navigable, or that

[67] 615 ILCS 5 *et seq*. 1994.

> are connected with or discharged their waters into navigable lakes or streams within, or upon the borders of the State of Illinois, together with all bayous, sloughs, backwaters, and submerged lands that are open to the main channel or body of water and directly accessible thereto.[68]

To a large extent the definition of public waters simply tracks the common-law definition of navigable waters. It is notable, however, that the definition includes various nonnavigable parts of a navigable water such as bayous, sloughs, backwaters, and other bodies of water connected to the main channel.

Pursuant to the Act, the department is authorized to make a list of all public waters in the state, both navigable and nonnavigable.[69] The department maintains records on all public waters in the state, and a complete list is contained in the Illinois Administrative Code.[70]

The Act provides the Department of Transportation with regulatory authority over all public bodies of water in the state. Specifically, the Act provides that the department,

> shall, for the purpose of protecting the rights and interests of the State of Illinois, or the citizens of the State of Illinois, have full and complete jurisdiction of every public body of water in the State of Illinois, subject only to the paramount authority of the government of the United States with reference to the navigation of such stream or streams, and the laws of Illinois, . . . and the jurisdiction of said Department of Transportation shall be deemed to be for the purpose of protecting the rights of the people of the state in the full and free enjoyment of all such bodies of water, and for the purpose of preventing unlawful and improper encroachment on the same, or impairment of the rights of the people with reference thereto, and every proper use which the people may make of the public rivers and streams and lakes of the State of Illinois shall be aided,

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[68] 615 ILCS 5/18.

[69] *Id.* ¶ 5/5; 92 Ill. Adm. Code § 704.40.

[70] 92 Ill. Adm. Code § 704, Appendix: Public Bodies of Water.

assisted, incurred and protected by the Department of Transportation.[71]

(Note: A detailed discussion of the provisions defining public waters is contained in pages 59 to 66 of the main text.)

The Act and corresponding regulations adopted by the department require permits for construction in any public body of water.[72] The department is authorized to grant permits for the construction of dams and modification and removal of existing dams;[73] the construction in floodways of rivers, lakes, and streams;[74] construction activities in public waters;[75] and floodway construction in northeastern Illinois.[76] The Act and regulations also provide for hearings and administrative review of any final action taken by the department.[77] The Act does not, however, contain any specific language conferring direct authority to regulate withdrawals of water. Nonetheless, given the broad public purpose of the Act it is reasonable to interpret the Act as granting indirect authority for the state to regulate withdrawals to protect instream flows and to preserve public rights. (For further discussion on this point, see pages 27 and 28 of the main text.)

Problem Areas and Ambiguities

There are a number of ambiguities regarding the statute. First, the definition of "public waters" raises various issues regarding the state's regulatory authority over what have historically been considered private waters. Many of these issues were addressed in an opinion issued by the attorney general in 1987. Second, since the Act does not specifically confer authority to regulate "withdrawals" of water, it appears that the department has limited authority under current regulations to manage water quantity issues under the Act.

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[71] 615 ILCS 5/26 (1994).

[72] 92 Ill. Adm. Code §§ 704.30 and 704.50.

[73] 92 Ill. Adm. Code § 702.

[74] *Id*. at 700.

[75] 615 ILCS 5/29a92; Ill. Adm. Code 704.

[76] 92 Ill.Adm. Code § 708.

[77] 615 ILCS 5/26a thru 5/26c; 92 Ill. Adm. Code § 704.150.

The attorney general's opinion addresses various issues relating to the state's power to regulate "public waters or public bodies of water."[78] The attorney general determined that the purpose of the Act is not limited to protecting the public's right to use navigable waters for commercial purposes. Looking to the specific language of the Act, the attorney general concluded that it was the intent of the general assembly to include some non-navigable waters within the ambient of public waters or public bodies of water.[79] (The Attorney General's Opinion is included as an attachment to this appendix.)

According to the department's figures, only approximately 8 percent of the total stream miles in Illinois are estimated to fall within the definition of public bodies of water. Thus, under present law, the department's regulatory powers are limited to only a small portion of streams in the state. Since current regulatory authority under the Act is generally limited to investigating and resolving encroachments on public bodies of water, the department's authority to manage water quantity issues is somewhat limited under current Illinois law. Some commentators have also questioned whether the Act confers any authority on the department to protect or improve waterways for recreational purposes.[80] Given the purpose of the Act, it is questionable whether such an interpretation is reasonable. (See also discussions on page 68 of the main text ["The prime responsibility of the department is to maintain useability of a public body of water for the public."]).

Other Miscellaneous Statutes and Regulations

There are numerous other statutes and regulations relating to surface waters in Illinois. Most of these statutes do not confer direct authority to regulate water quantity issues. In fact, with the exception of various provisions relating to Lake Michigan, there are few statutes that confer specific authority to regulate withdrawals of water in Illinois. Of course, there is extensive regulation of Lake Michigan pursuant to statute and a mandate of the United States Supreme Court. The Level of Lake

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[78]Atty. Gen. Op, 87-006, Aug. 10, 1987.

[79]*Id.*

[80]Livingston, *Public Recreational Rights in Illinois Rivers and Streams*, 29 DePaul L. Rev. 353, 368 n.92.

Michigan Act[81] and corresponding regulations[82] require permits and regulation of the allocation and use of Lake Michigan water.[83]

It should be noted that the Lake Michigan watershed is generally beyond the scope of this study. Generally speaking, the supply of Lake Michigan water is governed by forces beyond the control of the state of Illinois. Although the state certainly plays a major role in deciding how the overall allocation is distributed (through the Level of Lake Michigan Act), the state is constricted in its choices, since the total amount of water that can be diverted is governed by a decree of the United States Supreme Court.[84] (For further discussion, see discussions on page 76 of the main text.)

Regulation of withdrawals in areas other than Lake Michigan is limited under current statutes and regulations. While there is some limited regulatory authority with respect to groundwater,[85] the only other provision directly permitting restrictions on withdrawals (although there are some emergency powers discussed later) is in the area of the Kaskaskia River watershed. The Kaskaskia River Watershed Basin Act,[86] confers regulatory authority to the Department of Transportation to "restrict[] use or withdrawal of water from the Kaskaskia River below Carlyle Dam or providing replenishment of withdrawn water."[87] (Note: There are, however, provisions allowing some local entities, such as water authorities, to specifically limit withdrawals [see discussions of water authorites, on pages 81 to 83 of the main text].)

Illinois has also enacted a wetlands statute. The Interagency Wetland Policy Act of 1989 establishes a state goal "that there be no overall net loss of the State's existing wetland acres or their functional value due to state supported

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[81] 615 ILCS 50

[82] 92 Ill. Adm. Code § 730

[83] Withdrawals from Lake Michigan are governed by the United States Supreme Court's decision in *Wisconsin v. Illinois*, 388 U.S. 426 (1967). Although Lake Michigan provides water for a large portion of the population of Illinois, the law relating to Lake Michigan withdrawals is not a primary emphasis of this study.

[84] *Wisconsin v. Illinois*, 388 U.S. 426 (1967); *Village of Riverwoods v. Dep't of Transportation*, 77 Ill. 2d, 395 N.E.2d 555 (1979).

[85] *See infra* § C(3).

[86] 615 ILCS 75

[87] *Id.*

activities."[88] The Act, by definition, limits the scope of wetlands protection only to state-sponsored activities.[89]

Numerous other statutes provide authority to local public entities to withdraw and distribute water to residents. Of course, municipalities and counties are granted broad powers to develop public water supply systems. These powers include, among others, the right of eminent domain; the authority to constuct, acquire, and operate waterworks; and provisions dealing with groundwater and wellhead protection.[90] (For further discussions, see pages 48 to 49 of the main text.) Other statutes permit public water supplies to be developed by public utilities regulated by the Illinois Commerce Commission.[91] Various other statutory provisions provide for the creation of special water districts, including public water districts, water service districts, water commissions, and water and waste- water commissions.[92] Additional local bodies possessing some authority to affect water resources issues include soil and water conservation districts,[93] port district authorities,[94] drainage districts,[95] sanitary districts,[96] forest preserve districts,[97] park districts,[98] and surface water protection districts.[99] An excellent summary and discussion of these various statutes is contained in Paul Foran's recent report to the Illinois Department of Energy and Natural Resources in March of 1994.[100]

The Water Authorities Act[101] provides that "any area of contiguous territory may be incorporated as a water authority."[102] Water authorities are formed by filing a petition

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[88]20 ILCS 830/1-1 *et seq*.

[89]*Waters and Water Rights*, § 61.01 (1991 and Supp. 1995).

[90]65 ILCS 5/11-124-1 et seq, (1994).

[91]65 ILCS 5/1-101 et seq, (1994).

[92]70 ILCS 3705-3720,(1994).

[93]70 ILCS 405/1,(1994).

[94]70 ILCS 1810/1,(1994).

[95]70 ILCS 605/1-1,(1994).

[96]70 ILCS 2205/17.1,(1994).

[97]70 ILCS 805.1,(1994).

[98]70 ILCS 1205/11-1,(1994).

[99]70 ILCS 3405/1,(1994).

[100]Foran, *A Survey Of Legal And Regulatory Influences on the Development and Uses of Water Resources in Illinois in a Context of Global Climate Change, 37-54.*

[101] 70 ILCS 3715*/0.01 et seq*.

[102] *Id*. at 3715/1.

in the circuit court containing signatures of not less than five hundred legal voters of the territory.[103] The Act provides for a hearing process to determine the location and boundaries of the water district.[104]

[103] *Id.*

[104] *Id.*

The Act provides that each water authority "shall be governed by a board of three trustees."[105] The Act grants the board extremely broad powers, including (among others) the following:

(1.) To make inspections of wells or other withdrawal facilities and to acquire information and data from the owners or operators thereof concerning the supply, withdrawal and use of water;

(2.) To require the registration with them of all wells or other withdrawal facilities in accordance with such form or forms as they deem advisable;

(3.) To require permits from them for all additional wells or withdrawal facilities or for the deepening, extending or enlarging existing wells or withdrawal facilities;

(4.) To require the plugging of abandoned wells or the repair of any well for withdrawal facilities to prevent loss of water or contamination of supply;

(5.) To reasonably regulate the use of water and during any period of actual or threatened shortage to establish limits upon or priorities as to the use of water; and

(6.) To supplement the existing water supply or provide additional water supply by such means as may be practicable or feasible. They may acquire property or property rights either within or without the boundaries of the authority by purchase, lease, condemnation proceedings or otherwise, and they may construct, maintain and operate wells, reservoirs, pumping stations, etc.[106]

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[105] *Id.* at 3715/3.

[106] *Id.* at 3715/6.

Perhaps the most significant aspect of the Act is that it grants water authorities the explicit power to regulate withdrawals of water during any period of actual or threatened shortage. In determining whether restrictions are appropriate, the board is required to adhere to the following guidelines:

> In issuing any such regulation, limitation, or priority, such board shall seek to promote the common welfare by considering the public interest, the average amount of present withdrawals, relative benefits or importance of use, economy or efficiency of use and any other reasonable differentiation. Appropriate consideration shall also be given to any user, who has theretofore reduced the volume of groundwater previously consumed by such user or who has taken care of increased requirements by installing and using equipment and facilities permitting the use of surface water by such user.[107]

It is worthy of note that the Act grants considerable powers to relatively small groups of citizens. Indeed, the Act permits a group of as few as five hundred legal voters to establish a water authority that possesses broad powers, including powers of condemnation, the right to sell water outside of their boundaries, the power to levy taxes, and explicit authority to regulate withdrawals of water within the territory.

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[107] *Id.* at 3715/6.

GROUNDWATER LAW

Introduction

Illinois groundwater law is currently based on the same reasonable use principles as surface waters. It is important to note, however, that the common law relating to groundwater is not historically based on reasonable use principles. Rather, Illinois originally followed the English "absolute ownership rule" for groundwater withdrawals.[108] According to the English rule, landowners possess an absolute right to use the percolating water below their lands, regardless of the effect on adjoining landowners.[109]

In an effort to bring Illinois groundwater law in line with surface water reasonable use principles, the Illinois General Assembly passed the Water Use Act of 1983. The Act, discussed in more detail below, resulted in a drastic change in the area of groundwater law. Among other things, the Act specifically adopted the rule of reasonable use for groundwater withdrawals in Illinois.[110] The statute defines reasonable use as "the use of water to meet natural wants and a fair share for artificial wants."[111] By utilizing the terms "natural wants" and "artificial wants," the General Assembly obviously intended to bring Illinois groundwater law in line with the surface water reasonable use principles originally enunciated in *Evans*.[112]

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[108] *See Edwards v. Haeger*, 180 Ill. 99, 100, 54 N.E. 176, 176 (1899); *Lee v. City of Pontiac*, 99 Ill. App. 3d 982, 984, 426 N.E.2d 300, 302 (1981).

[109] *Edwards*, 180 Ill. at 100, 54 N.E. at 176.

[110] *See* 525 ILCS 45/4(g) (1994).

[111] *Id.*

[112] *Bridgman v. Sanitary District of Decatur*, 164 Ill. App. 3d 287, 517 N.E.2d 309 (4th Dist. 1987).

Historical Background—Case Law Prior to the Water Use Act

A brief history of Illinois groundwater law is important for a number of reasons. First, the shift from "absolute ownership" to "reasonable use" is arguably the most significant change in the history of Illinois water law. To date, the statute has been interpreted by only one court. As a result, a number of important questions remain unanswered. Second, any future changes in the area of Illinois water law must be analyzed from a constitutional standpoint. Since the ultimate purpose of this study is to propose alternatives for modification of existing water laws, the legality of any changes must be considered. The Water Use Act presents a good background for this discussion. Third, Illinois courts have decided only four cases relating to groundwater quantity issues. Three of these cases were decided prior to the Water Use Act, and a thorough discussion is necessary to understand the shift from absolute ownership to reasonable use.

Prior to the Water Use Act, only three Illinois cases existed on the issue of groundwater.[113] In 1899, the Illinois Supreme Court in *Edwards v. Haeger*[114] for the first and only time addressed the issue of groundwater rights in Illinois. The case involved a dispute between a dairy farmer (plaintiff) and a mill owner (defendant) who owned adjacent property. Both parties received their land from a common grantor, subject to an easement that allowed the defendant's predecessor to maintain a ditch on a portion of the plaintiff's land for the purpose of diverting water to run his mills.[115] The plaintiff later sunk a well on his own land, and constructed a tile under the defendant's ditch to supply water to his dairy barn.[116] The defendant claimed that this practice diverted water from the land covered by the easement and severed the pipe leading to the well.[117] The court, in holding for the plaintiff, stated:

> Water which is the result of natural and ordinary percolation through the soil is part of the land

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[113] *Edwards v. Haeger*, 180 Ill. 99, 54 N.E. 176 (1899); *Behrens v. Scharringhausen*, 22 Ill. App. 2d 326, 161 N.E.2d 44 (1st Dist. 1959); *Lee v. City of Pontiac*, 99 Ill. App. 3d 982, 426 N.E.2d 300 (4th Dist. 1981).

[114] 180 Ill. 99, 54 N.E. 176 (1899).

[115] *Id.* at 100, 54 N.E. at 176.

[116] *Id.*

[117] *Id.*

> itself and belongs absolutely to the owner of the land, and, in the absence of any grant, he may intercept or impede such underground percolations, though the result be to interfere with the source of supply of springs or wells on adjoining premises.[118]

Although *Edwards* seemingly adopted the English absolute ownership rule, numerous scholars contended that the above language was mere dicta.[119] As one commentator put it, "[s]ince the defendant took his rights to any percolating water only by terms of the reservation in the grant, the court's discussion of the relative rights of adjoining land owners and its language as to the absolute ownership of percolating waters appear to be dicta."[120]

Over a half of century later, in *Behrens v. Scharringhausen*,[121] an Illinois appellate court resolved a dispute between the owners of a farm (plaintiffs), and the owners of an adjacent gravel pit (defendants). The defendants had used large pumps to remove excess water from the pit to assist their gravel operations.[122] As a consequence, the water table lowered resulting in a decreased flow to the plaintiffs' wells.[123] The plaintiffs sued, seeking injunctive relief, but the suit was dismissed because the plaintiffs could not show irreparable injury.[124] Since the plaintiffs could sink deeper wells to obtain water, they could not show that their injury was irreparable, a requirement for injunctive relief.[125] The court questioned whether *Edwards* in fact adopted the absolute ownership rule and concluded that the result would have been the same regardless of whether the court applied the English rule or the rule of reasonable use.[126]

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[118] *Id.*

[119] R. Beck, *Illinois Natural Resources Law: Coal, Oil and Gas, and Water* 352 (1985) ("preference ... for the absolute-ownership rule expressed in the opinion could be considered dictum"); Wolff, *supra* note 1, at 32 ("court's discussion of the relative rights of adjoining land owners and its language as to the absolute ownership of percolating waters appear to be dicta"); Cribbet, *supra* note 1, at 456 ("conclusion that Illinois follows the English rule is based more on what the court said than on what they actually held").

[120] Wolff, *supra* note 1, at 32.

[121] 22 Ill. App. 2d 326, 161 N.E.2d 44 (1959).

[122] *Id.* at 327-28, 161 N.E.2d at 44.

[123] *Id.*

[124] *Id.*

[125] *Id.*

[126] *Id.* at 329, 161 N.E.2d at 46.

Later, in 1981, an Illinois appellate court specifically concluded that *Edwards* adopted the absolute ownership rule.[127] In *Lee v. City of Pontiac*, the plaintiff's well went dry when the city of Pontiac widened and deepened a drainage ditch east of the plaintiff's property. The court, in holding for the city, clearly showed deference to the rule laid down in *Edwards*. The court specifically rejected the suggestion made in *Behrens* that *Edwards* may not have placed Illinois under the English rule.[128] As the court put it, "[i]t is obviously beyond our constitutional power to ignore or overrule a decision of the supreme court and we do not agree that *Edwards* lends such slight aid to the English rule. . . . In our judgment, *Edwards* stands forthrightly upon the English rule."[129]

While it is certainly debatable whether *Edwards* adopted the English rule, there is no question that *Lee* supports the notion that Illinois followed the English rule of absolute ownership. Thus, the adoption of the Water Use Act posed a drastic change in the law of groundwater in Illinois.

The Water Use Act of 1983—Case Law and Specific Provisions

The Water Use Act of 1983 abolished the absolute ownership rule and adopted the doctrine of reasonable use for groundwater withdrawals in Illinois. The Act (and later amendments) provides for the registration of new and existing points of withdrawal of 100,000 gallons or more. As discussed below, the Act also provides limited regulatory powers to deal with emergencies in certain counties in Illinois.

Case Law Interpreting the Act

To date, only one court has interpreted the Illinois Water Use Act. In *Bridgman v. Sanitary District of Decatur*,[130] the plaintiff, a residential well owner, sued two defendants who were responsible for the design and construction of a ditch that

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[127] *Lee v. City of Pontiac*, 99 Ill. App. 3d 982, 426 N.E.2d 300 (4th Dist. 1981).

[128] *Id.* at 984, 426 N.E.2d at 302.

[129] *Id.*

[130] 164 Ill. App. 3d 287, 517 N.E.2d 309 (4th Dist. 1987).

allegedly dewatered the plaintiff's well.[131] The trial court dismissed the complaint, but the plaintiff appealed, contending that the Water Use Act provided a cause of action against the sanitary district and the designer of the ditch.[132] The appellate court agreed, concluding that the Act explicitly supplanted the absolute ownership rule.[133]

In light of the specific language in the Act adopting reasonable use, the court reached the only logical conclusion.[134] The more important aspect of the case is the court's discussion of the definition of "reasonable use." The court reasoned that "[b]y using the terms 'natural wants' and 'artificial wants' in the definition of reasonable use, . . . the legislature adopted the same standards for groundwater withdrawals as that which applied to surface water withdrawals."[135] In fact, prior to *Bridgman*, two commentators had reached precisely the same conclusion.[136] Thus, groundwater disputes in Illinois should be resolved by applying the significant body of case law that has developed for surface waters.

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[131]*Id.* at 289-90, 517 N.E.2d at 310-11.

[132]Plaintiff's complaint involved four counts naming a total of three defendants. The *Bridgman* court dealt only with counts one and two, which were directed at the Sanitary District of Decatur (the owner of the ditch), and Bainbridge, Gee, Milanski & Associates (the designer of the ditch). Counts three and four were directed at the contractor responsible for construction of the ditch. Both counts were dismissed at trial, and the plaintiff did not dispute the dismissal on appeal. *Id.* at 298, 517 N.E.2d at 316.

[133]*Id.* at 294, 517 N.E.2d at 314.

[134]The defendants argued that the Water Use Act did not change the absolute ownership rule. The defendants relied on a provision in the Act which provides:

> This Act shall not be construed to regulate or restrict groundwater withdrawals and the requirements of Section 5 of this Act shall not apply to the region governed by the provisions of "An Act in relation to the regulation and maintenance of the levels in Lake Michigan and to the Diversion and apportionment of water from the Lake Michigan watershed."

Ill. Rev. Stat. ch. 5, para. 1603 (1985).

The court appropriately determined that this provision applied only to the Lake Michigan Watershed area. Any other interpretation would render the reasonable use provision of the Act meaningless. *Bridgman*, 164 Ill. App. 3d at 294, 517 N.E.2d at 314. In any event, the Illinois General Assembly resolved any ambiguity by amending the Act and deleting the provision stating that the "Act shall not be construed to regulate or restrict groundwater withdrawals." Ill. Rev. Stat. ch. 5, para. 1603 (1987).

[135]*Bridgman*, 164 Ill. App. 3d at 293, 517 N.E.2d at 313.

[136]*See* Beck, at 354; Clark, *Illinois Groundwater Law: The Law of Reasonable Use* 20 (Illinois Department of Transportation, Division of Water Resources, September 18, 1985). The *Bridgman* court also noted that two commentators had reached this conclusion. The court cited the Clark article as one source but mistakenly cited the other source as an article written twenty years prior to the Water Use Act. *Bridgman*, 164 Ill. App. 3d at 293-94, 517 N.E.2d at 313. Apparently the court meant to cite to Professor Beck.

Regulatory Authority under the Act

In addition to the reasonable use provision, the statute requires any land occupier or person who proposes to develop a new point of withdrawal, in which withdrawal is expected to exceed 100,000 gallons of water on any day, to notify the applicable Soil and Water Conservation District. The District is required to "notify other local units of government with water systems who may be impacted by the proposed withdrawal." The District then reviews (with the assistance of the Illinois State Water Survey and the State Geological Survey) the proposed point of withdrawal's effect upon other users of water.[137]

While the original text of the Act did not grant regulatory powers to Soil and Water Conservation Districts,[138] later amendments now allow Districts located "within any county in Illinois through which the Iroquois River flows, and each District within any county in Illinois with a population in excess of 100,000 through which the Mackinaw River flows," to recommend to the Department of Agriculture restrictions on groundwater withdrawal."[139] When a District determines that restriction of the withdrawal of water is necessary to preserve an adequate water supply for residents in the District, it may recommend restrictions on the quantity of water that may be extracted from points of withdrawal capable of producing more than 100,000 gallons of water on any day.[140] If the department agrees with the District's recommendations, then the restrictions may apply to one or more points of withdrawal within the District.[141] The Act also provides for review of these decisions under the Illinois Administrative Procedure Act.[142] Any person violating the act is guilty of a petty offense, and anyone who commits a second or subsequent violation is guilty of a Class C misdemeanor.[143]

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[137] 525 ILCS 45/5 (1994).

[138] In fact, the old version specifically stated: "This Act shall not be construed to regulate or restrict groundwater withdrawals." Ill. Rev. Stat. ch. 5, para. 1603(b) (1985).

[139] 525 ILCS 45/5.1 (1994).

[140] *Id.* 45/5.1(d).

[141] *Id.* 45/5.1(c), 45/5.1(d).

[142] *Id.* 45/5.1 (d).

[143] The original act contained only the petty offense penalty. The amended version now provides: "Any person who is convicted of a second or subsequent offense shall be guilty of a Class C misdemeanor." *Id.* 45/5(e).

Since regulatory powers appear to be limited to Districts in counties where the Iroquois River flows and certain counties where the Mackinaw River flows, it appears that the Districts in other counties do not have the power to restrict excessive withdrawals. At least one author has suggested that the reasonable use provision was intended to deal with any other excessive withdrawals.[144]

Problem Areas

The primary problem with the Act is that it confers only limited authority to regulate groundwater withdrawals. The effect is that disputes between competing users will continue to be resolved through the courts using the reasonable use principles outlined over 150 years ago in *Evans*. The same problems identified earlier will likewise create substantial uncertainty in the area of groundwater law. (It should be noted that some local entities also possess authority to regulate withdrawals of water [see, e.g., discussion of Water Authorities Act, on pages 48 and 49 of the main text].)

FEDERAL CONTROL OF WATER IN ILLINOIS

Federal law impacts water issues in Illinois in a number of respects. As noted earlier, allocation of Lake Michigan water has largely been dictated by the United States Supreme Court since 1930.[145] There is also extensive control under various environmental statutes, including the Clean Water Act,[146] the Safe Drinking Water Act,[147] the National Environmental Policy Act,[148] the Endangered Species Act,[149] the Wild or Scenic Rivers Act, [150] the Comprehensive Environmental Response, Compensation

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[144]Prior to the recent amendments, Professor Beck suggested that the reasonable use provision may have been intended to deal with any excessive withdrawals. Beck, *supra* note 17, at 354.

[145]*See Wisconsin v. Illinois*, 281 U.S. 179 (1930); *Wisconsin v. Illinois*, 388 U.S. 426 (1967); *Wisconsin v. Illinois*, 449 U.S. 48 (1980).

[146]33 U.S.C. § 1251 *et seq.*

[147]42 U.S.C. § 300h(b)(1).

[148]*Id*. at 4321 *et seq.*

[149]16 U.S.C. § 1531 *et seq.*

[150]*Id*. at 1271 *et seq.*

and Liability Act,[151] and the Resource Conservation and Recovery Act.[152] Congress' power to regulate in these areas derives primarily from the Commerce Clause of the United States Constitution.[153]

Of course, the Army Corps of Engineers possesses broad authority to regulate a myriad of activities in navigable waters throughout the United States. The Rivers and Harbors Act provides extensive authority to the Corps to regulate in areas such as river and harbor improvement projects, construction activities, alterations and modifications in navigable waters, flood control, and the like.[154] Although the Corps originally interpreted its authority as extending only to navigable waters, more recently the Corps role has significantly expanded to also include the following:

> All other waters such as intrastate lakes, rivers, streams, (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, playa lakes or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce.[155]

The inclusion of wetlands adjacent to navigable waters likewise results in a significant expansion of Corps jurisdiction.[156] (For further discussion of the role of the Corps, see pages 35 and 36 of the main text.)

In addition, pursuant to the Federal Power Act there is pervasive federal control over waters relating to hydroelectric projects. The Act provides jurisdiction over reservoirs, nonfederal dams, and other waters and projects incidental to hydroelectric projects on or related to navigable waters.[157]

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[151] 42 U.S.C. § 9601 *et seq.*

[152] *Id*. at 6901 *et seq.*

[153] *See, e.g., United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121 (1985) (regulation of wetlands); *Sporase v. Nebraska*, 458 U.S. 941 (1982) (regulation of groundwater); *Cappaert v. United States*, 426 U.S. 128 (1976) (federal regulation of groundwater authorized by both commerce clause and property clause).

[154] *See generally Waters and Water Rights*, vol. IV, § 35.02(b) (1991 and 1995 Supp.).

[155] 33 C.F.R. 328.3(a)(3); *Waters and Water Rights*, vol. V, § 61.03(c)(2).

[156] 33 C.F.R. § 328.3(a)(7); *Waters and Water Rights*, vol. V, § 61.03(c)(2).

[157] *See generally Waters and Water Rights*, vol. V, ch. 40 (1991 and 1995 Supp.).

REGULATORY POWERS IN EMERGENCIES

There are a number of Illinois statutes that provide regulatory powers during emergencies. The primary statute is the Illinois Emergency Management Agency Act,[158] which grants broad regulatory powers to the Governor during emergencies. The Act defines a "disaster" as "an occurrence or threat of widespread or severe damage, injury or loss of life or property resulting from any natural or technological cause including but not limited to . . . **flood**, . . . extended periods of inclimate weather, **drought**."[159] The Act provides that the state and its political subdivisions may take such acts "as may be necessary or proper to prevent, minimize, repair, and alleviate injury and damages resulting from any natural or technological causes. These functions include . . . engineering, . . . temporary restoration of public utility services and other functions related to civilian protection."[160]

In addition, the Flood Control Act of 1945 provides for extensive regulation by the Department of Transportation during emergencies.[161] The Act provides as follows:

> An emergency shall be deemed to exist when flood control works, private or public property and human life are threatened with impairment or destruction or have been impaired, damaged, or destroyed by reason of floods or high river stages. Whenever the Governor of the State of Illinois shall declare that such emergency exists, the Department . . . is authorized to make expenditures . . . for the purpose of flood relief, for the reconstruction, repair or maintenance of flood control work on any of the rivers and waters of Illinois.[162]

DRAINAGE LAW

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[158] 20 ILCS 3305

[159] *Id.* 3305/4

[160] *Id.*

[161] *See* Flood Control Act of 1945, 615 ILCS 15/1 *et seq.* (1994).

[162] 615 ILCS 15/8 (1994).

There are numerous Illinois cases dealing with drainage. Although these cases do not specifically deal with water quantity issues per se, drainage law obviously has some impact on water quantity law. As a result, this section briefly outlines the general cases and relevant statutory provisions. Generally, the drainage cases follow a modified version of the natural-flow rule. There are also various statutory provisions located in the Illinois Drainage Code.[163]

Illinois long ago rejected the common enemy rule and adopted the natural-flow rule.[164] The rule was later modified to allow for a "good husbandry" exception, thereby permitting an upper landowner to interfere with natural drainage provided that the interference was incidental to the reasonable development of the land for agricultural purposes.[165] More recent cases have expanded this exception by eliminating the agricultural usage requirement.[166] Current law focuses on "whether the increased flow of surface waters from the land of the [upper landowner] ... [is] beyond a range consistent with the policy of reasonableness of use which led initially to the good-husbandry exception."[167]

Since *Templeton* involved the construction of a subdivision by an upper landowner, it appears that all alterations of the natural flow by an upper landowner will be subject to a reasonable use rule. The rule requires the application of a balancing test whereby the benefit to the dominant estate is balanced against the harm done to the servient estate.[168]

Conversely, Illinois has refused to apply a reasonable use exception when a lower landowner interferes with the natural

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[163]70 ILCS 605/2-1 to 605/2-13 (1992) (dealing with private and mutual drains and the creation of drainage districts).

[164]*See Gillham v. Madison*, 49 Ill. 484 (1869).

[165]*See Peck v. Harrington*, 109 Ill. 611, 619 (1884).

[166]*See Templeton v. Huss*, 57 Ill. 2d 134, 311 N.E.2d 141 (1974) (increased flow resulting from creation of subdivision).

[167]*Id.* at 141, 311 N.E.2d at 146.

[168]*Dovin v. Winfield Twp.*, 164 Ill. App. 3d 326, 339, 517 N.E.2d 1119 (1987), *overruled on other grounds; Gerill v. Jack L. Hargrove Bldrs.*, 128 Ill. 2d 179, 538 N.E.2d 530 (1989). *Cf Zimmer v. Village of Willowbrook*, 242 Ill. App. 3d 437, 610 N.E.2d 709 (2d Dist. 1993) (issue of fact as to whether construction of pond and culverts, which altered natural flow, unreasonably increased the volume and flow of water onto servient estate); *Meyers v. Kissner*, 149 Ill.2d 1, 594 N.E.2d 336 (1992) (levees constructed by upstream landowners altered natural flow resulting in nuisance to downstream landowner due to increased erosion, washing, and scouring of downstream owner's farmland).

drainage from the upper land.[169] Two reasons have been given for the distinction. First, the Illinois Drainage Code, while providing for the "good husbandry" exception for alterations by the upper landowner, speaks in absolute terms that a "landowner shall not ... interfere with any ditches or natural drains which cross his land."[170] Second, "a dominant owner usually has no way to drain off water without sending it through the servient estate, while sometimes a servient owner can divert excess water from a dominant estate."[171]

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[169]*See, e.g., Dessen v. Jones,* 194 Ill. App. 3d 869, 551 N.E.2d 782 (1990); *Berry v. Snyder*, 27 Ill. App. 3d 274, 327 N.E.2d 143 (1975).

[170]*Dessen,* 194 Ill. App. 3d at 877, 551 N.E.2d at 787, *citing* 70 ILCS 605/2-1, 605/2-12.

[171]*Id.*

III. CHANGES TO ILLINOIS WATER LAWS: PROBLEMS AND CONSTITUTIONAL CONSIDERATIONS

Any discussion of substantive changes in the area of Illinois water law must necessarily take into consideration the possibility of a constitutional challenge. This is particularly true in cases where "vested" rights are potentially affected by changes in the law. For example, at least one noted expert has raised the issue of whether the Water Use Act can constitutionally be applied to landowners with prior vested interests.[172] Since the Act has not constitutionally been challenged, there remains some uncertainty in this area. Fortunately, there is less cause for concern in the area of surface waters, since riparians have always been limited by "reasonable use" principles. The purpose of this section is to outline the basic constitutional provisions involved and to generally discuss their applicability to any optional responses that may be developed through this study.

A number of constitutional provisions are applicable. The first "is the confinement of a state's police power to the promotion and protection of the public health, safety and welfare of its citizens."[173] A second is the restriction against the taking of property without due process of law found in both the Fourteenth Amendment to the United States Constitution,[174] and article I, section 2 of the Illinois Constitution.[175]

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[172]*See* Beck, *supra* at 354.

[173]*See* Wolff, *supra* note 1, at 50. *See also Pacesetter Homes, Inc. v. South Holland*, 18 Ill 2d 247, 163 N.E.2d 464 (1959); *People v. Caroline Products Co*., 345 Ill. 166, 171, 177 N.E. 698, 700 (1931); *California-Oregon Power Co. v. Beaver Portland Cement Co*., 73 F.2d 555, 567 (9th Cir. 1934), *aff'd*, 295 U.S. 142 (1935).

[174]U.S. Const. amend. XIV.

[175]Ill. Const. art. I, sec. 2 (1970).

Modification of Illinois water law obviously serves a legitimate public purpose. The Water Use Act, for example, clearly serves a public purpose. The statute specifically "declares it to be in the public interest to better manage and conserve water, to establish a mechanism for restricting withdrawals of groundwater in emergencies, and to provide for public notice of planned substantial withdrawals of water."[176] It is generally accepted that it is within a state's police power to change its system of water rights for the public benefit.[177] Thus, the General Assembly clearly has the authority to modify Illinois water law. The only legitimate constitutional challenge relates to the effect of the proposed changes on existing users with "vested" interests.

The more difficult question is whether any proposed new restrictions will result in a "taking" of vested property rights. To a certain degree this question depends upon the nature and extent of the prior right. As one author put it, "[i]n order to ascertain whether a statute regulating water use unconstitutionally interferes with a landowner's usufructuary or property rights, it is first necessary to determine the extent of those rights and then to examine the precise manner and extent to which those rights have been affected."[178]

Courts in other jurisdictions have dealt with these issues in a number of contexts. For example, in *Town of Chino Valley v. City of Prescott*,[179] the court dealt with an attack on the Arizona Groundwater Management Act of 1980.[180] The Act provided for the establishment of "active management areas" to restrict groundwater withdrawals in areas where groundwater supplies are imperiled.[181] The town of Chino Valley argued that the restrictions violated the Fifth and Fourteenth Amendments by taking private property without due process of law.[182] The court rejected the challenge, concluding that the restrictions were a

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[176]Ill. Rev. Stat. ch. 5, para. 1602 (1987).

[177]*See, e.g.*, *United States v. Rio Grande Dam & Irrigation Co.*, 174 U.S. 690, 702-03 (1899); W*illiams v. City of Wichita*, 279 F.2d 375, 377 (10th Cir. 1960); *Baumann v. Smrha*, 145 F. Supp. 617, 624 (S.D.N.Y.), *aff'd*, 352 U.S. 863 (1956); *Town of Chino Valley v. City of Prescott*, 131 Ariz. 78, 83, 638 P.2d 1324, 1329 (1982); *Village of Tequesta v. Jupiter Inlet Corps.*, 371 So. 2d 663 (Fla. 1962), *cert. denied*, 444 U.S. 965 (1979); *Knight v. Grimes*, 127 N.W.2d 708, 711 (S.D. 1964).

[178]Wolff, *supra* note 1, at 49.

[179]131 Ariz. 78, 638 P.2d 1324 (1981) (en banc).

[180]Ariz. Rev. Stat. Ann. § 45-411 (1987).

[181]*Id.*

[182]131 Ariz. at 82, 638 P.2d at 1328.

valid exercise of police powers, as they furthered the legitimate state interest of preserving groundwater supplies.[183]

It is important to note, however, that the statute in *Town of Chino Valley* specifically contained a provision exempting persons who were legally withdrawing water prior to the establishment of an active management area.[184] Thus, in adopting the Groundwater Management Act, the Arizona legislature recognized that vested interests should be protected.

The notion that vested interests must be protected is further illustrated by the Kansas Supreme Court's decision in *Williams v. Wichita*.[185] In *Williams*, the court dealt with a statute that replaced riparian rights with the doctrine of prior appropriation. The court determined that the new rule applied "only to such water as was not being beneficially used at the time of the passage of the Act, that is, to undeveloped and consequently unused water resources."[186] The statute did not apply to the "superior vested right of [prior] users to continue their [previous] uses in the same amounts and at the same rate of diversion that were then in effect."[187]

Most jurisdictions have concluded that the right to withdraw percolating groundwater vests when water is actually withdrawn.[188] For example, in *Knight v. Grimes*, [189] the South Dakota Supreme Court dealt with a statute that replaced the absolute ownership rule with the doctrine of prior appropriation. The statute specifically exempted "vested"

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[183]*Id.* at 83, 638 P.2d at 1329.

[184]Ariz. Rev. Stat. Ann. § 45-462 (1987).

[185]374 P.2d 578 (1962) (en banc).

[186]*Id.* at 591.

[187]*Id.* Note, however, that the statute specifically provided for a procedure for determining the extent of the prior right. Kan. Stat. Ann. § 82a-704 (1949).

[188]*Baumann v. Smrha*, 145 F. Supp. 617, 624-25 (S.D.N.Y.) ("We do not regard a landowner as having a vested right in underground waters underlying his land which he has not appropriated and applied to beneficial use."), *aff'd*, 352 U.S. 863 (1956); *In re Chumstick Creek Drainage Basin*, 103 Wash. 2d 698, 705, 694 P.2d 1065, 1069 (1985) ("It cannot be denied that property owners have a vested interest in their water rights to the extent that the water is beneficially used on the land."); *Town of Chino Valley v. City of Prescott*, 131 Ariz. 78, 82, 638 P.2d 1324, 1328 (1981) (en banc); *Baeth v. Hoisveen*, 157 N.W.2d 728, 732 (N.D. 1968) ("A landowner of premises overlying ground water, be it percolating or in a more or less well-defined stream, acquires a vested right following withdrawal and application of said ground water to a beneficial use."); *Knight v. Grimes*, 127 N.W.2d 708, 711 (S.D. 1964).

[189]127 N.W.2d 708 (S.D. 1964).

interests,[190] and the question arose as to when the rights became vested.[191] The court held that a landowner does not have a vested property interest until water is actually withdrawn.[192]

Illinois reached a similar conclusion with respect to riparian rights. In *Clark v. Lindsay Light Co.*,[193] the Illinois Supreme Court held that a property owner does not have a property right in a stream but only a usufruct right to withdraw water from the stream.[194] A landowner "has, as an incident to his ownership of land, a property right in the flow of the water at that place for all beneficial uses that may result from it."[195]

Although courts have typically upheld the constitutionality of statutes modifying water rights, many have recognized that vested interests must be protected.[196] Since the Water Use Act contains no provision exempting vested rights, there is arguably a question as to whether the Act can constitutionally be applied to a landowner who withdrew water prior to adoption of the statute. The argument is less persuasive, however, when applied to restrictions relating to surface waters. Since Illinois has always placed reasonable use restrictions on the withdrawal of surface waters, the "vested" interest is simply one of a reasonable use of the water. Thus, if the modifications simply further define and clarify what is considered "reasonable"—an arguably nebulous and uncertain area under present Illinois law—persuasive argument can be made that no valid constitutional problems should arise.

Several courts in other jurisdictions have reached similar conclusions. For example, in *California-Oregon Power Co. v. Portland Cement Co.*,[197] a statute required all persons intending to acquire the right to use riparian waters to first obtain a

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[190]S.D. Codified Laws Ann. § 61.0101 (1955). The statute provides: "Subject to vested private rights . . . all the waters within the limits of this state . . . are subject to appropriation for beneficial use."

[191]127 N.W.2d at 711.

[192]*Id.*

[193]405 Ill. 132, 89 N.E.2d 900 (1950).

[194]*Id.* at 142, 89 N.E.2d at 902.

[195]*Id.*

[196]*See, e.g., In re Chumstuck Creek Drainage Basin*, 103 Wash. 2d 698, 705, 694 P.2d 1065, 1069 (1985); *Undlin v. City of Surrey*, 262 N.W.2d 742, 745 (N.D. 1978); *Williams v. Wichita*, 374 P.2d 578, 591 (Kan. 1962); *In re Adjudication of Upper Guadalupe River*, 625 S.W.2d 353 (Tex. Ct. App. 1981), *aff'd*, 642 S.W.2d 438 (Tex. 1982).

[197]73 F.2d 555 (9th Cir. 1934), *aff'd*, 295 U.S. 142 (1935).

permit from the state engineer.[198] The plaintiff challenged the validity of the regulation, claiming that its rights were vested prior to the enactment of the statute.[199] The court rejected the challenge, concluding that the police powers of the state justified the regulation.[200] The court found that "the modification of riparian rights . . [was] not so drastic a change as to amount to taking of property without due process of law."[201] Even under prior law, the right "of the riparian owner was not absolute; it was conditioned on the equal right of every other riparian owner to the use of the water."[202]

In any event, any proposed modifications to the present status of Illinois water law should take into account the above constitutional considerations. Of course, the specific proposed alternatives, once developed, should be individually analyzed to determine the impact on vested interests and the corresponding constitutional implications.

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[198] *Id.* at 557.

[199] *Id.* at 559.

[200] *Id.* at 568.

[201] *Id.*

[202] *Id.*

IV. CONCLUSION

Water quantity disputes in Illinois are governed largely by the common law. With the exception of limited regulatory authority in the area groundwater, water quantity issues will primarily be resolved through the application of common-law reasonable use principles. Unfortunately, the common law is fraught with uncertainty. Much of the ambiguity relates to the somewhat nebulous and obscure definitions of "natural" and "artificial" wants originally enunciated in the *Evans* case over 150 years ago. These definitions continue to be applied by Illinois courts, and are now applicable to groundwater as well as surface waters. The cases, however, do not provide answers to many of the issues that will likely arise in the future. As a result, current users of water are given only limited guidance under present Illinois law. As demand for water escalates, water users will increasingly look to the courts to resolve disputes. To the extent possible, the optional responses should address ways to deal with these issues more efficiently.

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APPENDIX C

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