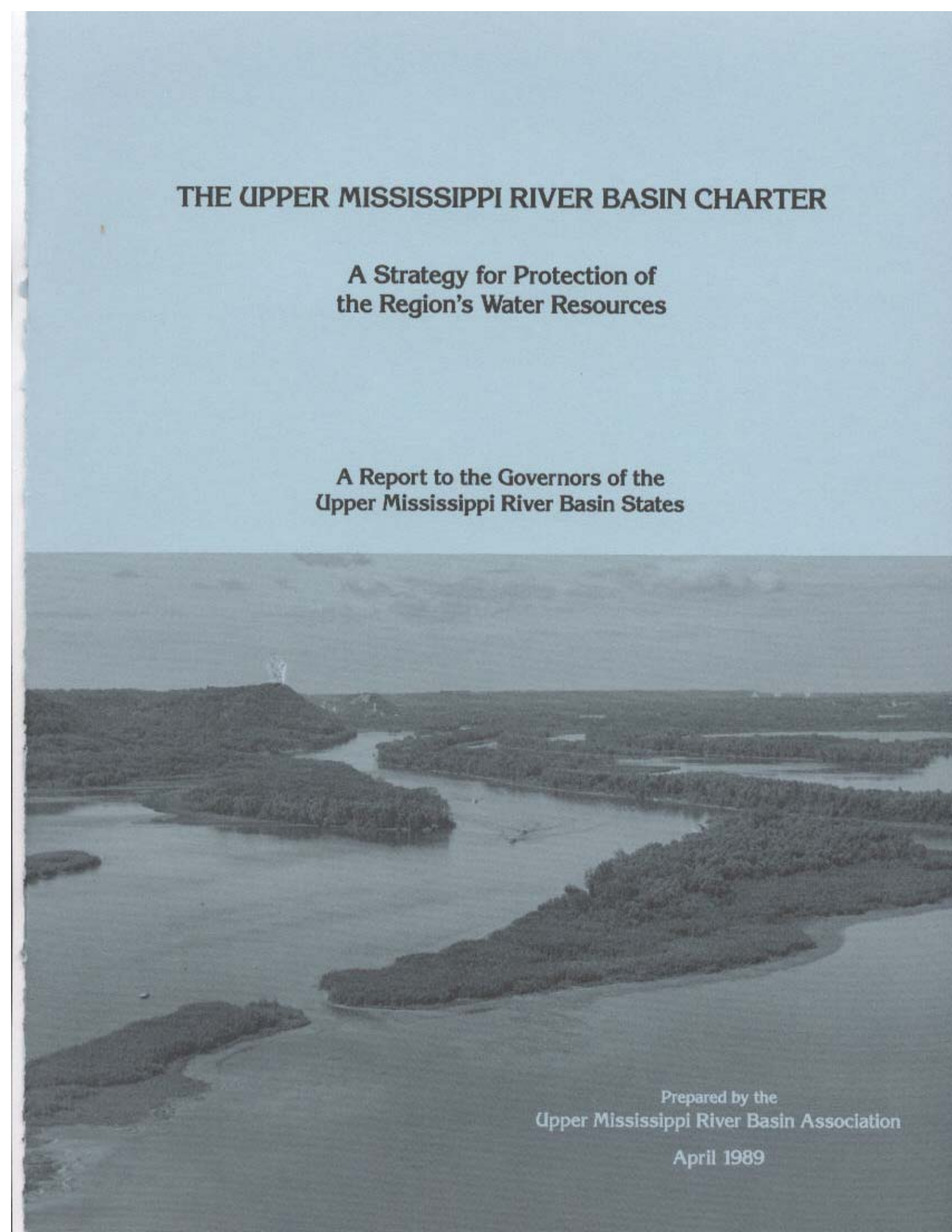


THE UPPER MISSISSIPPI RIVER BASIN CHARTER

**A Strategy for Protection of
the Region's Water Resources**

**A Report to the Governors of the
Upper Mississippi River Basin States**



Prepared by the
Upper Mississippi River Basin Association

April 1989



Upper Mississippi River Basin Association

ILLINOIS. IOWA. MINNESOTA. MISSOURI. WISCONSIN

ILLINOIS
Donald Vonnahme
Director
Division of Water Resources
Illinois Department of
Transportation
2300 South Dirksen Parkway
Springfield, Illinois 62764

IOWA
J. Edward Brown
State Water Coordinator
Iowa Department of
Natural Resources
Wallace State Office Building
Des Moines, Iowa 50319

MINNESOTA
Jack Ditmore
Chairman
Minnesota Environmental
Quality Board
300 Centennial Building
St. Paul, Minnesota 55155

MISSOURI
G. Tracy Mehan, III
Director
Missouri Department of
Natural Resources
P. O. Box 176
Jefferson City, Missouri 65102

WISCONSIN
Linda Bochert
Executive Assistant
Wisconsin Department of
Natural Resources
P. O. Box 7921
Madison, Wisconsin 53707

To the Governors
of the States of Illinois, Iowa,
Minnesota, Missouri, and Wisconsin:

The Upper Mississippi River Basin Association has completed its charge from you to evaluate and develop an appropriate mechanism for strengthening the position of the Basin states in addressing interbasin water diversions. As a result, we are pleased to recommend the Upper Mississippi River Basin Charter to you for your signature and implementation.

The Charter establishes a notification and consultation procedure as a framework for cooperative action should the Basin ever be faced with a proposal to divert its waters. While it preserves the individual states sovereign rights, it embodies a philosophy of shared stewardship which we believe is essential to protecting and managing the region's water resources.

This summary report describes the resources of the Basin and their significance, justification for collective action, and a description of the Charter developed by the Upper Mississippi River Basin Association. In recommending this Charter, we believe the Governors will position our states and the region to better protect the interests of our citizens and the valuable water resources we share.

Upper Mississippi River Basin
Association Members

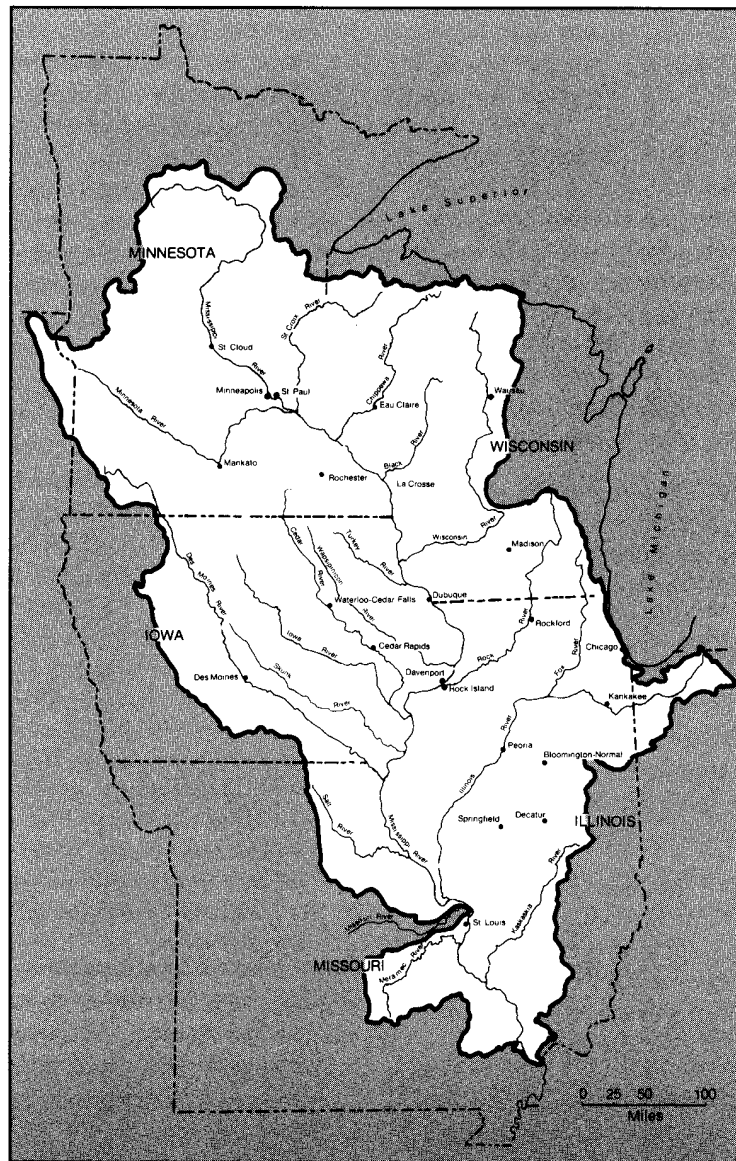
Linda Bochert, Wisconsin
J. Edward Brown, Iowa
Jack Ditmore, Minnesota
G. Tracy Mehan, III, Missouri
Donald Vonnahme, Illinois

415 HAMM BUILDING
408 ST. PETER STREET
ST. PAUL, MINNESOTA 55102
TELEPHONE: 612-224-2880
FACSIMILE: 612-223-5815

The Upper Mississippi River Basin

The Upper Mississippi River Basin is blessed with abundant and high quality water resources. In addition to the Mississippi River and its tributaries, natural lakes are prevalent throughout the region and fresh groundwater supplies are abundant. The 189,000 square mile watershed area includes, as well, over 150 dams and reservoirs with impoundment capacities greater than 10,000 acre feet.

The Basin includes large parts of the states of Illinois, Iowa, Minnesota, Missouri, and Wisconsin with the Mississippi River serving as both a state boundary and a valuable shared resource. The region supports a population of nearly 21 million people in a diversity of settings. While nearly 60 percent of the region is agricultural, the major metropolitan areas of Chicago, St. Louis, and Minneapolis-St. Paul are also within the Basin.



The Upper Mississippi Region

Water provides the basis for economic growth, a variety of recreational activities, and fish and wildlife habitat. The residents of the basin depend on the Mississippi River for commercial transportation, drinking and industrial water supplies, recreation, and disposal of treated wastewater. The water resources of the Basin are both a regional asset and a national treasure:

- The Upper Mississippi is the only inland river in the United States serving under federal law as both a federal commercial navigation project and a major national wildlife refuge complex. It is also currently under consideration for designation as a National Heritage Corridor. A portion of the river near the Twin Cities in Minnesota has already been designated as a National River and Recreation Area.
- The Upper Mississippi River and its tributaries include over 1,300 miles of commercially navigable waters moving essential industrial and agricultural products and linking the Upper Midwest with international markets. In 1950 about 8 million tons of commodities were shipped on the Upper Mississippi River System. By 1980, that number had grown to 126 million tons. Grain, coal, chemicals, and petroleum account for 75 percent of all waterborne tonnage. More than half of the grain exported from the region moves by barge.
- The Basin includes over 400,000 acres of national wildlife refuges and nearly 1.2 million acres of state wildlife areas. The wooded islands, water, and marsh of the Upper Mississippi River provide a migratory corridor for 28 waterfowl species. Over 20 percent of North America's migratory waterfowl use the river system for feeding and resting during migration.
- The Upper Mississippi River System is home for 154 different species of fish. Sport fishing has been valued at over \$250 million annually while commercial fishing is estimated to be worth about \$1.7 million annually.
- Water-based recreational opportunities abound on the lakes, streams, and rivers of the Basin. On the Upper Mississippi River alone there are 445 water-oriented recreation sites and 200 boat harbors and marinas. The economic value of river recreation has been variously estimated as high as \$700 million a year.
- There are roughly 450 steam electric power plants in the Basin with a total generating capacity of 38 million megawatts. In 1985, thermoelectric power accounted for 75 percent of the total water withdrawal in the

basin. In addition, power plants rely on commercial river navigation for over half of the coal used to generate electricity.

Protecting the Region's Water Resources

Though the Upper Mississippi River Basin is generally considered to have abundant supplies of water, the distribution of surface water both in quantity and quality can lead to resource problems and limit use for supply, recreation, and fisheries. Seasonal flow variations are most extreme in the western and southern portions of the basin where many small streams are completely dewatered during the dry season. One need only recall the drought conditions of 1988 to realize that even the Mighty Mississippi is not immune to the impacts of climatic and seasonal variations. During the summer of 1988 public water supplies in many communities including the major city of Minneapolis were seriously threatened and commercial navigation on the unpooled portions of the river was virtually halted. Geographic and yearly variations in water supply, combined with uncertainties about future water need, require careful planning and stewardship of the resource. While no recent basin-wide projections are available, major studies conducted during the late 1970's agreed that consumptive use in the Basin is expected to increase through the year 2000 despite projected decreases in withdrawal.

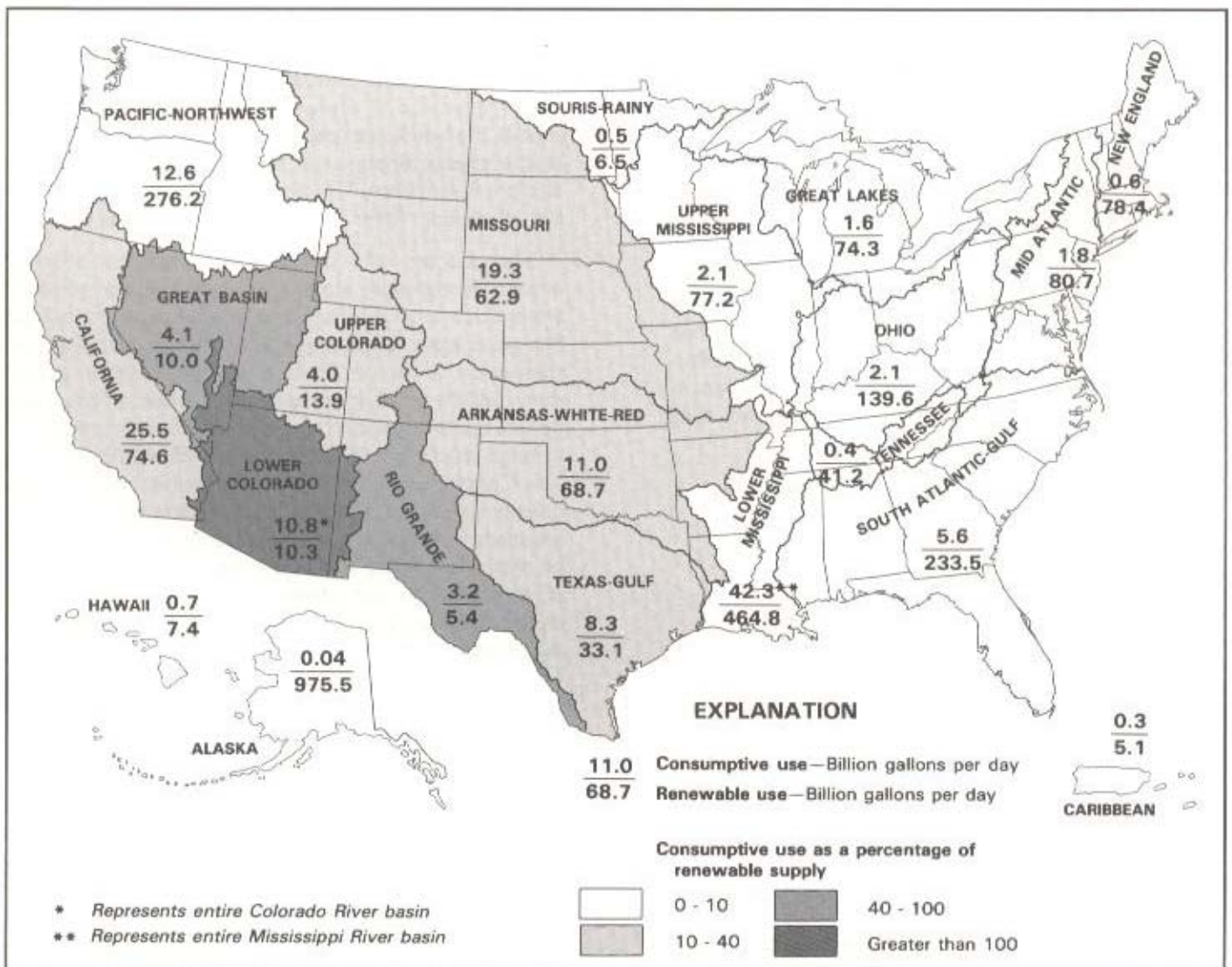
The sobering reality for the Upper Mississippi River Basin is that many arid regions of the country are experiencing severe and dramatic water shortages. Limited supplies in some regions are further threatened by toxic contamination or salinization. In a 1983 summary of national water issues, the United States Geological Survey noted that "although the Nation's natural endowment of water may, in total, be more than adequate to meet everyone's needs, the real issue is that the water is not always available when and where needed."

The rising competition for water is even more alarming given the rate of growth in water withdrawals in the United States. During the period 1950-1980, the withdrawal of water from streams, reservoirs, lakes, and underground aquifers increased 2½ times, while the population increased only 1½ times. Thus, per capita use grew from about 1,200 gallons per day to about 2,000 gallons per day.

Examining consumptive water use as a percentage of renewable supply yields an interesting comparison of regions. In 13 of the 21 regions, including the Upper Mississippi River Basin, consumptive use is less than 10 percent of renewable supply. However, in two regions (the Great Basin and the Rio Grande) consumptive use is between 40 and 60 percent of renewable supply. And in the Colorado River Basin consumptive use actually exceeds the renewable regional water supply.

The fact that many regions of this country are experiencing severe water depletions raises concern in water-rich areas such as the Upper Mississippi River Basin. The reality is, that although other basins have faced the prospect of water loss to other hydrologic regions, there have been no recent proposals for diversion of water from the Upper Mississippi River Basin. However, it is prudent and responsible public policy to plan now for a future which is unknown.

**Average Consumptive Use and Renewable Water Supply
(USGS: National Water Summary 1983)**



Courtesy United States Geological Survey

The Upper Mississippi River Basin Charter

The genesis of the Upper Mississippi River Basin Charter was actually the result of controversy in the Great Lakes region. In 1981, a proposal to build a coal slurry pipeline to move high grade coal from Wyoming to the Great Lakes region using Lake Superior water caused significant concern among Great Lakes states. While that proposal was ultimately abandoned, the possibility of diversion of Great Lakes water out of the region was being openly discussed and planned for.

The governors of the eight Great Lakes states and the premiers of two Canadian provinces initiated discussions that resulted in the signing of the Great Lakes Charter in February 1985. The Great Lakes Charter is an historic intergovernmental agreement to protect the waters of the Great Lakes from inappropriate diversions and consumptive uses. It was born of the governors' and premiers' commitment to protection of the Great Lakes and their concern over proposals to divert its waters to water-poor parts of the country. In acting on their concern, the governors and premiers were cognizant of U.S. Supreme Court and federal district court decisions involving interstate disputes over water. In particular, the cases of *El Paso v. Reynolds* and *Sporhase v. Nebraska* made clear that state attempts to prohibit diversions across state boundaries would be struck down as unconstitutional if challenged. As the Final Report and Recommendations to the governors and premiers of the Great Lakes states and provinces states:

“ . . . when regulating interstate water transport, states must be able to demonstrate that (1) the regulations apply to both in-state and out-of-state users, although a state may show a limited preference for its own citizens in times of shortage in order to protect their health and welfare (and not simply the economic wellbeing of the state); and (2) the regulations are narrowly tailored to the purpose of the statute, in this case, to protect and ensure the water supply for the state's citizens.”

Acting on that knowledge, the governors and premiers styled the Great Lakes Charter to emphasize the process of notification and consultation among the signatory governments. This allows the states and provinces to be informed of and to participate in any individ-

ual decision, without violating the principle of 'even-handedness' established in the case law.

Impressed by the need to protect the waters of the region for its citizens and by the significant act of interstate cooperation embodied in the Great Lakes Charter, in April 1985 the state of Wisconsin approached her sister states in the Upper Mississippi River Basin to discuss the possibility of a similar agreement on the Upper Mississippi River. The governors of Minnesota, Illinois, Iowa, and Missouri all responded enthusiastically and agreed that the Upper Mississippi River Basin Association, composed of representatives of each governor, should work to develop such an agreement. The Upper Mississippi River Basin Association accepted that responsibility and formed a task force consisting of representatives of each state (Appendix A). Using the Great Lakes Charter as a model, the task force crafted an agreement reflecting the unique characteristics and resources of the Upper Mississippi River Basin. This agreement is known as the Upper Mississippi River Basin Charter (Appendix B).

The charter calls for notification and consultation among the signatory states prior to any new or increased water diversion out of the basin which will exceed a 5 million gallons per day average in any 30 day period. Implementation of the notification and consultation procedures will be accomplished through a committee made up of a contact person from each state, and coordinated through the Upper Mississippi River Basin Association. The Charter agreement does not prohibit nor regulate diversions. Rather, it establishes a regional framework for interstate dialogue and cooperative action should it ever be necessary. While each state retains its legal rights to act to protect its own interests, the states agree to cooperate as fully as possible to act in the best interests of the region and the Basin.

The purposes of the Charter are to conserve the levels and flows of the water resources, to protect the environmental ecosystem, to secure present development, to provide a foundation for future investment and development, and to assure all significant benefits and impacts are considered before a decision is made. Born of a shared commitment to protect the interests of the Basin's citizens, the Charter embodies an anticipatory strategy designed to assure that sound and well-informed decisions are made about the region's water resources. It is an expression of the states' mutual concern and shared stewardship of the Basin's valuable water resources.

References

Great Lakes Governors Task Force on the Water Diversion and Great Lakes Institutions, *Final Report and Recommendations*, January 1985.

Solley, W.B., Merk, C.F., and Pierce, R.R., *Estimated Use of Water in the United States in 1985*, U.S. Geological Survey Circular 1004, 1988.

U.S. Geological Survey, *National Water Summary 1983 — Hydrologic Events and Issues*. U.S. Geological Survey Water Supply, Paper 2250, 1984.

U.S. Water Resources Council, *The Nation's Water Resources 1975-2000, Volume 4: Upper Mississippi Region*, December 1978.

Upper Mississippi River Basin Commission, *Comprehensive Master Plan for the Management of the Upper Mississippi River System*, January 1982.

Upper Mississippi River Basin Commission, *Water Resources Management Plan, Upper Mississippi Region, Volume 1, 45 Day Review Draft*, September 1981.

**Resolution
of
the Upper Mississippi River Basin Association
April 26, 1985**

**INTERSTATE EFFORTS
FOR PROTECTION OF BASIN WATERS**

WHEREAS, the waters of the Upper Mississippi River Basin are a valuable and vulnerable resource, and

WHEREAS, the wise use and development of the water resources of the Upper Mississippi River Basin is essential to the welfare of the region, and

WHEREAS, the Basin States have a shared responsibility to protect, conserve, and manage the waters of the Upper Mississippi River Basin, and

WHEREAS, the Governors of the States of the Upper Mississippi River Basin have indicated an interest in protecting the Basin's waters from inappropriate diversions and consumptive uses, and

WHEREAS, significant precedent has been set for such a cooperative state venture by the Great Lakes States in the ratification of the Great Lakes Charter by the Governors of that region, and

WHEREAS, the Upper Mississippi River Basin Association is recognized as the instrumentality of the member States for water resources planning, communication, and coordination in this Basin, and

WHEREAS, the Governors of the Upper Mississippi River Basin States have further specifically suggested that the Upper Mississippi River Basin Association provide the forum for discussions and negotiation of interstate efforts to protect the region's water resources,

NOW, THEREFORE BE IT RESOLVED, that the Upper Mississippi River Basin Association hereby accepts the responsibility of serving the member States' Governors in their efforts to devise an effective cooperative means of protecting, conserving, and managing the Basin's water resources.

BE IT FURTHER RESOLVED, that towards that end, the Upper Mississippi River Basin Association establish a task force, within 30 days from the date of this resolution, composed of a representative from each of the member States, to evaluate the merits of developing an interstate charter or other appropriate mechanism for strengthening the position of the States in addressing diversions and consumptive uses of Upper Mississippi River waters.

THE UPPER MISSISSIPPI RIVER BASIN CHARTER

**PRINCIPLES FOR THE MANAGEMENT OF
UPPER MISSISSIPPI RIVER BASIN WATER RESOURCES
AND
NOTIFICATION AND CONSULTATION PROCESS GUIDELINES**

FINDINGS

The Governors of the signatory Upper Mississippi River Basin States jointly find and declare that:

The water resources of the Upper Mississippi River Basin are precious natural resources. The Basin's water uses include municipal, industrial, and agricultural water supply; navigation; hydroelectric power and energy production; recreation; mining; and the maintenance of fish and wildlife habitat. The Basin States have a duty to protect, conserve, develop, and manage the water resources of the Basin.

The water resources of the Upper Mississippi River Basin comprise a valuable regional and national resource. The Upper Mississippi river system is a multi-purpose system with two Congressional mandates; it is managed both for commercial navigation and as a national wildlife refuge. The States in partnership with the federal government of the United States share a continuing and abiding responsibility to maintain and enhance all aspects of this multipurpose system. Without careful and prudent management, future diversions of the water resources of the Upper Mississippi River Basin may have significant adverse impacts on the environment, economy, and welfare of the region.

Management of the water resources of the Upper Mississippi River Basin is subject to the jurisdiction, rights, and responsibilities of each Basin State. Effective management of the water resources of the Basin requires the Basin States to exercise their jurisdiction, rights, and responsibilities in the interest of all of the people of the region through a continuing spirit of comity and mutual cooperation.

A preferred means to achieve effective management of the water resources of the Upper Mississippi River Basin is through the joint pursuit of unified and cooperative principles and policies mutually agreed upon and adhered to by the States of the Upper Mississippi River Basin.

PURPOSE

The purposes of this charter are to conserve the levels and flows of the water resources; to protect the environmental ecosystem; to secure present development; to provide a foundation for future investment and development; and to assure all significant benefits and impacts are considered before a decision is made.

PRINCIPLES FOR THE MANAGEMENT OF THE UPPER MISSISSIPPI RIVER BASIN WATER RESOURCES

In order to achieve the purposes of this Charter, the Governors of the signatory Upper Mississippi River Basin States agree, subject to the laws of each state, that:

Principle I Integrity of the Upper Mississippi River Basin

The water resources of the Upper Mississippi River Basin shall be managed for the wise use, benefit, and enjoyment of all citizens of the Basin. The planning and management of the water resources of the Upper Mississippi River Basin shall recognize that the water resources of the Upper Mississippi River Basin transcend political boundaries within the Basin and should be conserved and provided for beneficial uses including navigation, recreation, municipal and industrial water supply, irrigation, hydroelectric power and energy production, water quality, mining, maintenance of fish and wildlife habitat, aquatic ecosystem, and other instream and withdrawal uses.

Principle II Notification and Consultation

The signatory states agree that it is the intent of the states that interbasin diversion of water resources will not be supported if individually or cumulatively they would have significant adverse impact on instream flows, in-basin uses, and the basin ecosystem.

Any state having knowledge of a proposal for a new or increased diversion of water which will exceed 5 million gallons per day average in any 30 day period from the waters of the Upper Mississippi River Basin to another basin shall notify and offer to consult with all signatory states in order to allow all signatory states to express their concerns, identify their interests, develop where possible mutually acceptable agreements, or take such other actions as they may find appropriate.

Principle III Cooperation Among States

The Governors agree to pursue such additional agreements as may be necessary to promote greater cooperation with respect to any new or increased interbasin diversions of Mississippi River Basin waters.

Principle IV Reservation of States Rights

The signatory States mutually recognize the rights and standings of each other to represent and protect the rights of their respective jurisdictions. Each State reserves and retains all rights and authority to seek, in any state, federal, or other appropriate court or forum, adjudication or protection of their respective rights.

NOTIFICATION AND CONSULTATION PROCESS GUIDELINES

1) State Appointments

- Each signatory state shall designate a contact person for the state's involvement in the notification and consultation process.
- The Upper Mississippi River Basin Association shall compile and maintain a mailing list.

2) Notification

- Notice shall be given to all signatory states of an anticipated diversion which exceeds 5 million gallons per day average in any 30 day period.
- The notice shall include at a minimum:
 - a) name, location, and sending and receiving waterbodies or basins
 - b) list of applicable permits
 - c) purpose of water use
 - d) method of measurement
 - e) request for comments

3) Comments/Objections

Comments or objections from the signatory states:

- a) shall be submitted by the Governor or his representative within 45 days
- b) should be based on hydrologic, economic, or environmental concerns
- c) may include a request for a consultation meeting

4) Consultation

- The originating state shall schedule and conduct a consultation meeting when a letter of objection has been received and a consultation meeting requested.
- The originating state shall provide a minimum 30 day notice of the meeting to the Governors or their representatives.
- The originating state shall be responsible for preparation of the agenda, chairing of the meeting, and preparation of notes of the meeting.
- The consultation meeting shall include opportunities for description of the proposed diversion, presentation of basin states positions, and discussion.

5) Decision

- If no objections are received, the originating state shall make its decision on the proposed withdrawal and inform the signatory states.
- If objections are received, whether or not a consultation meeting is convened, the originating state shall:
 - a) distribute to signatory states a summary of the consultation discussion and comments and a draft response to the diversion request.
 - b) allow 30 days for comments from the signatory states.
 - c) consider comments received.
 - d) distribute the final disposition of the diversion request to all signatory states within 15 days after the final decision has been made.

6) Annual Review

At each annual meeting of the Upper Mississippi River Basin Association each state shall report on its involvement with diversion requests.

Water Withdrawal Requirements of the Upper Mississippi River Basin States

The states of the Upper Mississippi River Basin utilize permits and registration to keep track of water withdrawals in the state. The requirement for a permit or registration is usually based on a trigger level. Water withdrawals below the trigger level are not required to be reported, registered, or permitted. If a permit is required, the water use and volume of water must be reported monthly or annually. It is through these reports that the states acquire much of their water use data. Information on nonpermitted withdrawals must be estimated by the state. Following is a discussion of each of the state's water withdrawal requirements and a summary table.

Illinois

In Illinois, all withdrawals from Lake Michigan, which are also diversions from the Great Lakes Basin to the Mississippi River Basin, require an allocation permit from the Department of Transportation, Division of Water Resources. This permitting program was established pursuant to a 1967 U.S. Supreme Court Decree limiting Illinois' Lake Michigan diversion and to state law directing the Department of Transportation to develop an equitable program for the allocation of water from Lake Michigan. All Lake Michigan diverters must file annual reports on water use and consumption to the Department.

Other surface water withdrawals in the state do not require a permit and are not required to file annual reports on amounts withdrawn. However, construction of water intake facilities within public waters does require a construction permit, and reporting of annual withdrawal amounts can be made a condition of permit.

Although Illinois does not have a mandatory statewide registration program for surface water withdrawals, the Illinois State Water Survey conducts annual, voluntary surveys of water use by public water suppliers and self-supplied industries.

Groundwater withdrawals outside of the Lake Michigan watershed do not require a permit but if the well is designed to pump greater than or equal to 100,000 gpd, the owner must notify the local Soil and Water Conservation District of their intention to construct the well (Public Act 83-700). The district will conduct an impact analysis on the well and notify neighbors of the intent to construct a well. If the impact analysis shows a potential conflict in water use the affected parties may legally attempt to stop the well construction. There is no reporting requirement for groundwater use.

In two counties along the Illinois River and two counties on the Indiana border the state has amended Public Act 83-700 requiring all wells (new or existing) to be registered with the Soil and Water Conservation District. This requirement was necessary to alleviate groundwater conflicts due to irrigation.

Iowa

Prior to 1986, Iowa had large data gaps in water use information that made it nearly impossible to accurately determine water use. Use by power plants along the Mississippi and Missouri Rivers was substantial but unregulated. Municipal, industrial, commercial, and other uses within corporate limits that were established prior to 1957 were not regulated.

To remedy the problem the legislature passed Chapter 51 of the Iowa Regulations in 1986. These regulations closed the loopholes and required a permit for all surface and groundwater appropriations greater than 25,000 gpd. The permit is renewable every ten years and an annual water use report must be filed with the Department of Natural Resources (DNR).

Minnesota

Minnesota has a permit system implemented by the Department of Natural Resources per Chapter 105.41. A permit is required for all surface and groundwater withdrawals greater than 10,000 gallons per day (gpd) or 1,000,000 gallons per year (gpy). A permit is not needed for instream uses, domestic use serving less than 25 persons, or for livestock use. Permit holders are required to submit an annual report of water appropriated per month.

Missouri

Missouri does not have a permit system but Revised Statute 256.410 requires registration of all facilities with a withdrawal capacity $\geq 100,000$ gpd. The water user must report to the Department of Natural Resources annually on the amount of water used in that year.

Wisconsin

Wisconsin has both a permit system and registration for water withdrawals. Originally Section 30.18 of the Wisconsin Statutes required a permit for withdrawal of any water from streams for the purpose of irrigation, agriculture, or maintaining or restoring the normal level of a navigable lake or flow of a navigable stream. Irrigators were required to report use for the six-month growing season from April to September while other permitted users were required to report monthly use on an annual basis. At the same time Section 144.025 required a permit for a well with a pumping capacity of ≥ 70 gpm (high capacity well) and an annual report of monthly use.

Since these laws did not cover appropriations from lakes, or stream appropriations for industrial/commercial uses, the Wisconsin legislature passed Wisconsin Act 60 in 1985. This Act embodied in § 144.026, Wis. Stats., called for a water-loss permit for any project involving interbasin diversion or consumptive use averaging more than 2 million gpd in any 30 day period and registration of any facility appropriating at least 100,000 gpd in a 30 day period. To find appropriators of $> 100,000$ gpd the DNR utilized National Pollution Discharge Elimination System (NPDES) permits to locate industrial/commercial users. They utilized the high capacity well reports and public water supply records for ground and surface water appropriators, and have been attempting to locate the estimated ten to twenty irrigators using lake water.

State Water Withdrawal Requirements, Data Collection and Storage

	ILLINOIS	IOWA	MINNESOTA	MISSOURI	WISCONSIN
Permit for surface water withdrawals	Yes (only for Lake Michigan withdrawals/diversions)	Yes	Yes	No	Yes
Trigger level	All Lake Michigan diverters must have an allocation permit	> 25,000 gpd	> 10,000 gpd or 1,000,000 gpy	—	Water loss permit for consumptive use and interbasin diversion of $\geq 2M$ gpd in 30 day period Permit for all "stream" withdrawals for irrigation, agriculture, or maintaining flow of a navigable stream or level of a navigable lake
Permit for ground water withdrawals	No, only notification	Yes	Yes	No	Yes
Trigger Level	> 100,000 gpd	> 25,000 gpd	> 10,000 gpd 1,000,000 gpy	—	≥ 70 gpm "capacity"
Registration for withdrawals	No, but a voluntary, statewide water use inventory of withdrawals is conducted every year	No (permit system)	No (permit system)	Yes	Yes
Trigger Level	—	—	—	$\geq 100,000$ gpd "capacity"	$\geq 100,000$ gpd average in 30 day period
Statute/Law	1969 amendment to Level of Lake Michigan Act, P.A. 83-700	Ch. 51	MN Stat. 105.41	MO Rev. St. 256.410	SS. 30.18, 144.025, 144.026 Wis. Stats.
Data collected	Lake Michigan users (direct) send monthly daily use report. Indirect users send annual report.	Monthly total of withdrawal	Monthly total of withdrawal	Annual total of withdrawal	Monthly total of withdrawal
Data Storage	Computerized data.	Computerized data.	Computerized since 1984. (SWUJDS)	Computerized data. D Base III and downloaded to Lotus 1-2-3	Computerized since 1985.
Abbreviations:	gpd gallons per day gpy gallons per year gpm gallons per minute				