Organizational Options for Interstate Water Quality Management on the Upper Mississippi River

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Upper Mississippi River Basin Association

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Front cover photos courtesy of the U.S. Geological Survey. Map created by UMRBA.

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Executive Summary

Under the federal Clean Water Act, the U.S. Environmental Protection Agency and the States are jointly responsible for protecting the quality of our Nation's waters. Yet each State exercises its responsibilities and authorities independently. On shared boundary waters, such as the Mississippi River, this can lead to a variety of challenging problems. In particular, on the Upper Mississippi River, there are inconsistencies among neighboring States' designated uses for the river, water quality criteria and standards, monitoring and assessments, and determinations of whether the river is "impaired" and thus in need of restoration. These differences can result in an unequal and uncertain regulatory environment for economic investment, public confusion about the water quality of the river, inefficient allocation of resources, and vulnerability to legal challenge.

Assessment of Organizational Needs

To address these challenges, the Upper Mississippi River Basin Association (UMRBA) convened a series of meetings among the senior managers of environmental protection agencies in Illinois, Iowa, Minnesota, Missouri, and Wisconsin to explore organizational options for enhancing interstate water quality management on the Upper Mississippi River. As a result, the States concluded that:

- The Upper Mississippi River should be managed as an integrated system. The States working together is more effective and efficient than each State working alone.
- The existing UMRBA Water Quality Task Force has been instrumental in advancing interstate water quality efforts on the Upper Mississippi River. However, there are limits to what the Task Force and other informal coordination mechanisms can accomplish. Thus, enhanced institutional capacity and standing is required.
- Creating a new approach to interstate water quality management on the Upper Mississippi River should be an incremental process, building upon the institutions and processes already in existence.

Review of Organizational Options

There are a variety of examples across the country of how States have organized themselves to address shared management of interstate waterbodies. In particular, there are six interstate commissions that receive funding under Section 106 of the Clean Water Act to carry out interstate water pollution control functions. They include commissions on the Ohio, Delaware, Potomac, and Susquehanna Rivers, as well as in the New England and the New York-New Jersey-Connecticut regions. If a similar commission were to be created on the Upper Mississippi River, it would not be eligible for Section 106 funding. Nevertheless, the six Clean Water Act interstate commissions provide instructive models of interstate organizational structure. All of them were created prior to the Clean Water Act and many have broader responsibilities than water pollution control. With the exception of the Ohio River Valley Sanitation Commission (ORSANCO), all of the commissions are in the mid-Atlantic/Northeast region of the U.S. and cover watersheds less than 15 percent of the size of the Upper Mississippi River Basin. Although the Ohio River may be the most similar to the Upper Mississippi River, ORSANCO, like the other Clean Water Act commissions, is significantly larger than UMRBA. For example, ORSANCO's budget is approximately 8 times larger than UMRBA's and it supports a staff that is approximately 5 times larger.

The six Clean Water Act commissions and a variety of other interstate water resource organizations across the country provide examples of the types of organizational structures that could be considered for the Upper Mississippi River Basin. During the course of this study, the five Upper Mississippi River States examined alternative legal authorities, including an interstate compact, a federal-state compact, an administratively-established commission, or an organization with its authority derived from a specific

federally created program. Similarly, features of organizational structure, such as representation of parties, decision-making processes, and staffing arrangements were also considered; as were funding options including state contributions, grants and cooperative agreements, fees, and direct Congressional appropriations.

Recommendations for Organizational Approach

As a result of their review of organizational options and accompanying deliberations, the five Upper Mississippi River States recommend that:

- an interstate water quality agency be established for the Upper Mississippi River by building upon the Upper Mississippi River Basin Association (UMRBA),
- the primary focus initially be on implementing water pollution control activities under the Clean Water Act on the main stem of the river,
- the five States and U.S. EPA share responsibility for funding the interstate agency, and
- an incremental process be employed to increase UMRBA's authority and capacity to work with and act on behalf of the five basin States,

Incremental Implementation Strategy

The first step will be creation of a UMRBA Water Quality Executive Committee. The work of the UMRBA Water Quality Task Force has been tremendously useful and significant advances in interstate coordination have been made during the past six years, since the Task Force was formed. However, as the realm of decisions and actions expands to include issues affecting state policy, administrative rules, and state law, it is essential to involve the senior management level of the state agencies with delegated authority under the Clean Water Act. Establishing a Water Quality Executive Committee will help facilitate those connections and is already underway.

The second step will be to enhance UMRBA's capacity to address interstate water quality issues by increasing staff and resources devoted to Clean Water Act activities. Creating forums for interstate discussion and coordination like the UMRBA Water Quality Executive Committee and Task Force will not in and of itself accomplish the work that needs to be done on the Upper Mississippi River. To properly support these coordination bodies, UMRBA will need to significantly increase its ability to take on planning and technical functions associated with actually implementing the Clean Water Act on the Upper Mississippi River.

Finally, the need for an interstate compact should be reevaluated in the future, after the States gain more experience with implementing increasingly robust interstate water quality programs through the UMRBA. Creation of an interstate compact is a lengthy and complicated process and should thus not be undertaken until other organizational options have been pursued and tested. However, the option of creating an interstate compact on the Upper Mississippi River should not be totally dismissed because there are a variety of potential advantages to such a legally binding commitment among the States, including durability of authority, clear and explicit legal standing, enhanced ability to attract funding, enhanced funding stability, and protection of state sovereign authority over an interstate resource (in contrast to potential increases in federal power).

The motivation for establishing an interstate water quality agency on the Upper Mississippi River is obvious and compelling — protecting and enhancing water quality requires managing the river as an integrated system. Yet that cannot be accomplished within the current Clean Water Act program structure, which relies on individual States' authority. Such a system is not conducive to making management decisions on an interstate basis and lacks the capacity to address many of the unique and

complex water quality issues associated with a large floodplain river system like the Mississippi River. Thus, institutional change will facilitate real improvements in water quality.

Furthermore, there are critical unmet needs that can be best addressed by States working together. States can maximize their limited resources by pooling them, thereby avoiding unnecessary duplication of effort, adding value through consolidation or collaboration, and leveraging outside funding sources to advance water quality research and management efforts on the Upper Mississippi River. In addition, by working together on the Upper Mississippi River, through the UMRBA, the States can increase the transparency and predictability of the regulatory process, enhance public understanding and confidence, and reduce the States' vulnerability to legal challenges that may arise as a result of regulatory inconsistencies.

Upper Mississippi River
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Chapter 1

Introduction

Overview

For most of the 2300 miles of the Mississippi River, from its headwaters in northern Minnesota to the Gulf of Mexico, the Mississippi River forms the border between States. The portion of the Mississippi River north of the Ohio River is called the Upper Mississippi River (UMR). For the 850 miles of the UMR between Minneapolis-St.Paul, Minnesota and Cairo, Illinois, the river divides the States of Minnesota, Iowa, and Missouri on the west from the States of Wisconsin and Illinois on the east. It also transports water, sediment, and pollutants from upstream States to downstream States. Thus, the Upper Mississippi River is an interstate waterbody, both hydrologically and geopolitically.

Interstate Coordination on the Upper Mississippi River

Given the multi-use character of the Upper Mississippi River and its interstate setting, river management and regulation are particularly challenging. The Upper Mississippi River is heavily influenced by federal activities, such as the U.S. Army Corps of Engineers' operation and maintenance of the river for commercial navigation and by U.S. Fish and Wildlife Services' management of 285,000 acres of national wildlife refuges. However, the States that border the river also have significant management responsibilities, most notably with regard to water pollution control, for which the States have been delegated authority by the U.S. Environmental Protection Agency, under the federal Clean Water Act.

To address this multi-state and federal-state complexity, a variety of interagency and interstate institutions have been created on the Upper Mississippi River to bring government agencies together to coordinate their plans and policies or to collaboratively administer programs. For the most part, these organizations are relatively informal, with little foundation in either state or federal law. Yet, they serve an important role in the region, sharing information, helping to resolve conflicts, and forging partnerships among sovereign States and among state and federal agencies with disparate missions and authorities. The Upper Mississippi River Basin Association is among the oldest of such interstate organizations.

> *"The States, in partnership with the federal government, share a continuing responsibility for the wise use and management of the Upper Mississippi River System. While the federal government's role is an important and long-standing one, the States of the basin possess a unique obligation to manage the waters of the basin in the interest of all the citizens of the region."*
>
> Joint Governors Proclamation on Upper Mississippi River Management, April 1997

Upper Mississippi River Basin Association

The Upper Mississippi River Basin Association (UMRBA) was created in 1981 by the Governors of the five basin States (Illinois, Iowa, Minnesota, Missouri, and Wisconsin) to help coordinate the States' river-related policies and programs and to work with federal agencies on inter-jurisdictional river programs. As such, UMRBA is involved in a broad range of river management issues including water quality, ecosystem restoration, navigation improvements and channel maintenance, hazardous spills contingency planning, and floodplain management. UMRBA routinely collaborates with agencies from its member States, as well as federal agencies involved in the management and protection of the Mississippi River, such as the U.S. Environmental Protection Agency, U.S. Geological Survey, and U.S. Army Corps of Engineers.

In all its endeavors, UMRBA strives to bring state agencies together, promote the States' mutual interests and shared perspectives, and enhance their ability to collectively and individually address issues related to the river as a shared border waterbody. While UMRBA was founded as a 501(c)(3) nonprofit organization, in many ways, it functions similarly to a regional agency, governed by gubernatorial appointees from state agencies.

Since its inception, UMRBA has addressed a variety of water quality issues, including sedimentation, toxic pollution, hazardous spills, and emergency response. However, water pollution has not, until recently, been one of UMRBA's major focus areas. Yet, with the formation of its Water Quality Task Force in 1998, UMRBA has led the basin States' efforts to coordinate their Clean Water Act responsibilities on the Upper Mississippi River. In particular, the UMRBA Water Quality Task Force evaluates and seeks to resolve differences in the States' approaches to water quality assessments, standards, and listings; developed an interstate Memorandum of Understanding establishing a minimum set of assessment reaches on the Upper Mississippi River; sponsored interagency workshops devoted to fish consumption advisories; and is beginning development of common approaches and guidance for sediment-related water quality criteria on the river.

> *"The responsibilities of the Upper Mississippi River Basin Association shall include, but not be limited to, the study and evaluation of issues of common concern to the member states; creation of opportunities and means for information exchange on policy and scientific matters; review and comment on federal projects, programs, and policies of regional significance; and development and administration of intergovernmental agreements.*
>
> *The Upper Mississippi River Basin Association shall provide a forum whereby the Governors seek to unify the states' river-related policies and articulate their mutual concerns and shared vision for management of the Upper Mississippi River."*
>
> Joint Governors Proclamation on Upper Mississippi River Management, April 1997

"Organizational Options" Project

Despite the progress that the States and UMRBA have been able to make, there has been a growing recognition that protecting Upper Mississippi River water quality is an enormous challenge given the vast size of the resource, in combination with its status as an inter-jurisdictional waterbody bordering five states. There are clearly limits to what individual states can accomplish given available resources, and limits to what UMRBA can undertake with its current institutional structure, legal standing, and resources. Given the States' expressed interest in the pursuit of new ways to protect and improve Upper Mississippi River water quality, in January 2006, UMRBA embarked on a project to explore "Organizational Options for Interstate Water Quality Management on the Upper Mississippi River." In particular, the purpose of the project was "to evaluate the feasibility of establishing an interstate organizational structure on the Upper Mississippi River with the capacity to coordinate and/or administer water quality programs under the Clean Water Act." A secondary inquiry

was related more specifically to Section 106 of the Clean Water Act, which, among other things, provides federal funding to state and interstate agencies to support their water pollution control programs.

Through UMRBA's "Organizational Options" project, the state water quality directors in Illinois, Iowa, Minnesota, Missouri, and Wisconsin sought to answer the following questions:

- What specific roles and program responsibilities might a water quality interstate agency on the Upper Mississippi River serve?
- How do interstate water resource agencies in other parts of the country function? What can we learn from them?
- What are the organizational and institutional options for interstate water quality coordination and management on the Upper Mississippi River?
- What is the purpose and history of Section 106 of the Clean Water Act? How are funds allocated? How do the interstate agencies that receive such funding use it? What would be required to make UMRBA eligible as an interstate agency under the Clean Water Act?

This report presents the results of UMRBA's research and conclusions from the States' deliberations regarding "Organizational Options for Interstate Water Quality Management."

Chapter 2

Background: Existing State Approaches to Water Quality Monitoring, Assessments, and Listings on the Upper Mississippi River

QUESTIONS: In the absence of a single agency to address water pollution control activities on the Upper Mississippi River, how do the States that border the river currently approach their individual decisions and responsibilities under the Clean Water Act? What are the differences and similarities that result?

Clean Water Act Overview

The set of amendments to the Federal Water Pollution Control Act, passed in 1972, is a comprehensive federal statute aimed at restoring and maintaining the chemical, physical and biological integrity of the nation's waters. As amended in 1977, this law is commonly known as the Clean Water Act (CWA). The Act authorizes water quality programs; requires federal effluent limitations and state water quality standards, requires permits for the discharge of pollutants into navigable waters; provides enforcement mechanisms; and authorizes funding for wastewater treatment works construction grants and state revolving loan programs, as well as funding to States, interstate agencies, and tribes for their water quality programs.

Under the CWA, the U.S. Environmental Protection Agency (EPA) and the States are jointly responsible for protecting, maintaining, and restoring water quality. In general, States designate specific uses for their waters, establish standards designed to protect those uses, control various pollution sources through both regulatory and non-regulatory measures, and monitor and assess water quality on an ongoing basis. States must submit periodic water quality assessment reports under Section 305(b) of the CWA, submit lists of impaired waters under Section 303(d), and then take appropriate actions to protect and restore those impaired waters through development of Total Maximum Daily Loads (TMDLs). EPA has a largely oversight role, establishing minimum national standards and other elements of the framework within which the States implement their Clean Water Act authorities.

Water Quality Monitoring

A variety of federal and state agencies conduct water quality monitoring on the Upper Mississippi River. However, not all monitoring is undertaken specifically in support of the Clean Water Act. Moreover, there is no comprehensive strategy or integrated system for water quality monitoring.

The U.S. Geological Survey (USGS) operates three monitoring stations on the Upper Mississippi River, as part of the National Stream Quality Accounting Network (NASQAN). In addition, under the authority of the Congressionally-authorized Upper Mississippi River Environmental Management Program, USGS administers the Long Term Resource Monitoring Program (LTRMP). The LTRMP utilizes five State-run field stations on the river to study long term ecological change, including tracking a variety of water quality parameters. As part of the Environmental Monitoring and Assessment Program (EMAP), U.S. EPA is currently sponsoring some monitoring on the Mississippi River, but it is for research purposes and not intended to serve as an ongoing ambient water quality monitoring program.

The five UMR States employ a variety of approaches to water quality monitoring and data collection on the river. Wisconsin DNR conducts a wide variety of special studies on the Upper Mississippi River, as well as routine monitoring at Lock and Dams 3, 4, and 9. The Minnesota Pollution Control Agency conducts "condition" monitoring at 81 fixed stations throughout the State, 3 of which are on the interstate portion of the Mississippi River. Illinois EPA uses a series of 11 ambient monitoring sites on the Mississippi River, spaced at approximately 50-mile intervals. In contrast, Iowa DNR and Missouri DNR have no monitoring sites on the river.

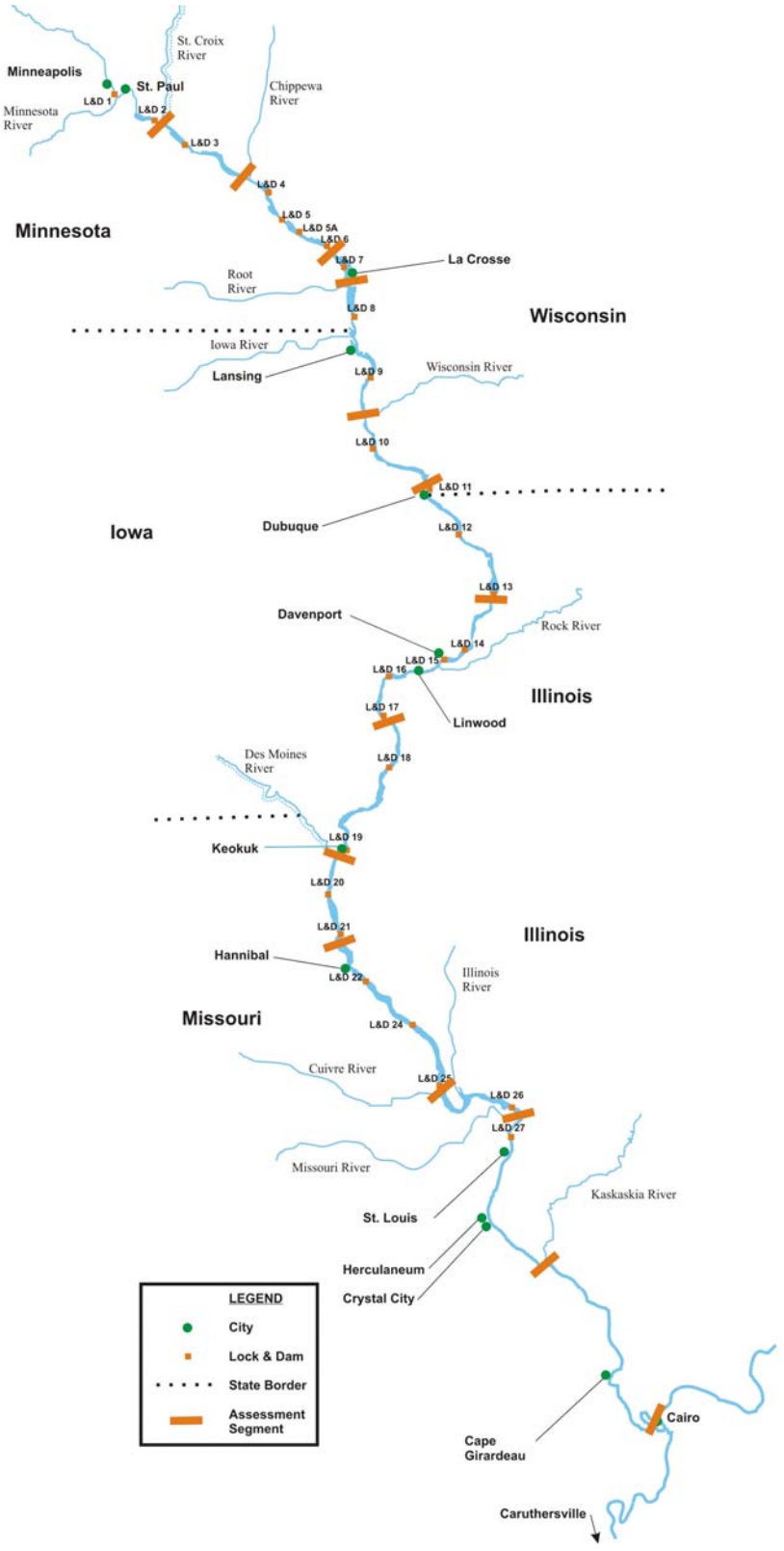
> *"Water quality monitoring data on the Upper Mississippi River are currently inadequate for assessing use support and impairments. There are deficiencies in the amount of data, number of monitoring stations, and spatial coverage of existing monitoring. These shortcomings are the combined result of a variety of factors, including the challenges associated with assessing large rivers, data suitability, limited resources, lack of priority, and lack of a comprehensive water quality monitoring strategy."*
>
> *The States' Approaches to Clean Water Act Monitoring, Assessment, and Impairment Decision*,
> Upper Mississippi River Basin Association, January 2004

Not only is there a lack of water quality data and significant differences among the States in their approaches to data collection on the river, but there is also no consolidated data base of the water quality data that do exist for the Upper Mississippi River. While U.S. EPA's STORET system was designed to make water quality data from a variety of sources nationwide broadly accessible, States report a number of problems with using STORET, since it was redesigned in 1999. Thus, neighboring States' data is often obtained directly through personal contacts with staff in those adjacent states. U.S. EPA regulations require states to "assemble and evaluate all existing and readily available water quality-related data and information" in determining whether a waterbody is impaired and should be included on a State's 303(d) list. In its 2002 *Consolidated Assessment and Listing Methodology*, U.S. EPA provides the example of an interstate waterbody noting that, "if a state shares a waterbody with another state, it must consider existing and readily available data from the state that shares the waterbody."

Assessment Reaches

Given the size of the Mississippi River, States subdivide the river into multiple segments for the purpose of establishing standards and/or assessing water quality. However, prior to 2003, the States did not necessarily utilize the same set of reaches, making it difficult to compare and evaluate differences among the States' water quality assessments. The first step toward greater consistency was agreeing on a set of uniform assessment reaches. Thus in 2003, the five States executed a Memorandum of Understanding establishing 13 uniform assessment reaches for the interstate portion of the Upper Mississippi River, extending from the mouth of the St Croix River to the mouth of the Ohio River. The segments were recommended by the Upper Mississippi River Conservation Committee, based on USGS Hydrologic Unit Codes (HUC). (Figure 2.1)

Figure 2.1
Upper Mississippi River
Interstate Assessment Reaches



The adoption of these new segments has required each of the five States to modify the reaches they use to assess water quality on the river. For some States, it has meant increasing the number of reaches, while for others it has meant decreasing the number of reaches. (See Table 2.1) The transition to the new set of reaches has been gradual, but will be nearly complete with the States' 2008 assessments and impairment listings.

Table 2.1
Upper Mississippi River
Assessment Reaches
Pre-and-Post 2003

	River Miles	Old Number of Reaches	New Number of Reaches
Illinois	698	15	8
Iowa	313	14	5
Minnesota	139	31	4
Missouri	366	2	5
Wisconsin	230	3	5

Water Quality Standards and Assessments

Even though States now utilize common assessment reaches on the Upper Mississippi River, there are notable differences in how they implement their Clean Water Act responsibilities on the river. Those differences are most prominent with regard to water quality standards and how the States assess whether those standards are exceeded (i.e., whether the Upper Mississippi River is "impaired").

In part, the differences arise from the fact that the designated uses States assign to the Mississippi River are not entirely consistent. (See Table 2.2) While the entire length of the river is designated for aquatic life use by all States, there are differences in the designations for primary contact recreation and drinking water use. The greatest apparent inconsistency among the States is with regard to drinking water use designations. For example, Illinois and Missouri both designate their entire length of the river for public water supply, though Illinois limits its drinking water *assessments* to areas approximately 20 miles upstream of existing intakes and applies its standards to the point of intake. In contrast, Iowa *designates* only those portions of the river where there is an existing public water supply intake. However, like Illinois, Iowa *assesses* areas upstream of its intakes in determining support for the drinking water use. Minnesota and Wisconsin do not have any existing public water supplies on the interstate UMR, and do not designate any portion of the interstate river for drinking water.

Table 2.2
Designated Uses[1]
on the Upper Mississippi River

		Aquatic Life	Contact Recreation	Drinking Water
Illinois	Entire UMR	X	X	X
Iowa	Minnesota Border — Lock and Dam 14	X	X	
	Lock & Dam 15 — Lock & Dam 15	X	X	X
	Lock & Dam 15 — Iowa River	X	X	
	Iowa River — Burlington water intake	X	X	X
	Burlington water intake — Skunk River	X	X	
	Skunk River — Missouri Border	X	X	X
Minnesota	Entire UMR	X	X	
Missouri[2]	Iowa Border to Missouri River	X	X	X
	Missouri River to Ohio River	X		X
Wisconsin	Entire UMR	X	X	

[1] The designated use descriptions are generalized and may thus vary somewhat from the language used by each State to describe its designated use categories.

[2] Missouri DNR and the Missouri Clean Water Commission are in the process of conducting a "use attainability analysis," which may affect the future designation of portions of the Mississippi River for whole body contact recreation.

Each of the States bordering the Upper Mississippi River list at least some portion of the Mississippi River as impaired under Section 303(d) of the Clean Water Act. However, the listing approaches vary considerably among the States, resulting in differences in both the number and types of pollutants identified as the cause of impairment. Furthermore, the listings may change every two years as States gain new information, detect improvements in water quality, or change their listing methodologies and requirements.

Figure 2.2 on pages 21-23, which is a stylized map of the Upper Mississippi River, summarizes the States' impairment listings on the Upper Mississippi River for the past three listing cycles (i.e., 2002-2006). This graphic summary highlights a variety of differences among the States:

Nutrients — None of the UMR States has numeric criteria for nutrients. Thus, UMR nutrient listings, including Minnesota's listing for Lake Pepin and Iowa's listing of a reach near Clinton, are based on narrative criteria. In particular, Minnesota PCA lists Lake Pepin as impaired for "excess nutrients," based on the State's narrative criterion related to excess algae growth. For Lake Pepin, the main cause cited is phosphorous. Iowa DNR also bases its listing of the reach near Clinton on a narrative criterion protecting Iowa's waters from "aesthetically objectionable conditions." This impairment, which has variously been listed as either "nutrients" or "organic enrichment," is due to slime growth on substrates and on the nets of commercial fishermen in a small 16-mile stretch of river. Missouri also bases its nutrient listings on narrative criteria, related to color and bottom sediments. However, Missouri DNR does not apply these criteria to large river systems that are deep and turbid, and thus does not include the Mississippi River on its 303(d) list for nutrient impairment.

Illinois had portions of the UMR listed for nutrients in 2002, but that listing was based on a 1988 water quality index that is no longer in use. The 2002 listings of specific nutrients (i.e., phosphorous, total ammonia-N) on a middle river reach have since been dropped because the data upon which the original listings were based is now older than 15 years.

Drinking Water Impairments— UMR impairments related to drinking water include manganese and sulfates in Illinois and arsenic in Iowa. Iowa's arsenic listing is based on ambient water quality monitoring data from Illinois EPA. However, Illinois does not list these same areas of the river as impaired for arsenic, because its criterion for arsenic in waters used for public water supply is much less restrictive. In particular, Illinois' criterion (50 µg/l) is based on the national maximum contaminant level for finished water that was in effect prior to U.S. EPA's changing the standard to 10 µg/l in January 2001. In contrast, Iowa's criterion (0.18 µg/l) is a human health number the State has established based on the potential intake of arsenic from consuming water or fish.

Illinois EPA added manganese as a cause of impairment in 2004 because the State changed its methodology for assessing whether the drinking water use is being supported. In contrast, Iowa does not have a standard for manganese.

Fecal coliform — Minnesota and Illinois are the only States that list reaches of the UMR as impaired for fecal coliform. Given that all five States have the same criteria for fecal coliform bacteria (200 organisms per 100 ml), the differences in border States' listings is largely a function of different data requirements and observations. For example, the difference between Iowa and Illinois' fecal coliform listings is due, in part, to differences in the time period each State uses to consider data. Iowa considers only the 2 most recent years of data, whereas Illinois uses the most recent 5 years of data.

Mercury — The States' approaches to listing for mercury impairment vary widely and depend, in part, on whether the State has issued a statewide fish consumption advisory for mercury and whether such an advisory triggers listing of specific waterbodies. For example, Minnesota PCA lists mercury as a cause of impairment on the UMR based on the fact that the Minnesota Department of Health has issued fish consumption advisories for the river. Illinois and Missouri have issued general statewide fish consumption advisories for mercury. However, these States do not list individual waterbodies for mercury impairment unless they have actual fish tissue data from that waterbody showing mercury contamination. Thus, they do not list mercury impairment for the UMR.

Polychlorinated biphenyls (PCBs) — The States appear to be most similar in their Upper Mississippi River listings for impairment due to polychlorinated biphenyls (PCBs), which all States but Iowa and Missouri list in 2006. However, underlying this apparent consistency are a variety of different reasons for the PCB listing. For instance, in Minnesota and Illinois, the PCB listings are based on fish consumption advisories, reflecting elevated levels of PCBs in fish tissue. In contrast, Wisconsin's PCB listing for the UMR is based on both a fish consumption advisory and water quality standards exceedances. In 2002, Missouri DNR did not initially propose a PCB listing for the Mississippi River, but U.S. EPA later added it to Missouri's 303(d) list, based upon fish consumption advisories. Missouri DNR has proposed "delisting" the Mississippi River on its draft combined list for 2004-2006.

These different approaches to listing for PCBs reflect, in part, differences in how the States issue fish consumption advisories and whether they use the advisories as the basis for impairment listings. In particular, Minnesota, Wisconsin, and Illinois issue fish consumption advisories based on the Great Lakes Sport Fish Consumption Advisory Protocol; Missouri uses EPA's risk assessment method for fish consumption advisories, but does not use those advisories as the basis for impairment listings; and Iowa has just recently changed its fish consumption advisories from a reliance on Federal Drug Administration action levels to a risk-based approach.

Figure 2.2
Upper Mississippi River
Comparison of Impaired Waters Listing
2002-2006

MINNESOTA[1]				WISCONSIN[2]		
2002	2004	2006		2006	2004	2002
(10 segments) 10 PCBs 10 Mercury 4 Turbidity 1 Ammonia Nutrients	PCBs Mercury Turbidity Nutrients	PCBs Mercury Turbidity Nutrients	St. Croix River	PCBs Mercury	PCBs Mercury	
(12 segments) 12 PCBs 12 Mercury 1 Fecal coliform	PCBs Mercury Fecal coliform	PCBs Mercury Fecal coliform	Chippewa River	PCBs Mercury	PCBs Mercury	
(5 segments) 5 PCBs 5 Mercury 1 Fecal coliform 2 Ammonia	PCBs Mercury	PCBs Mercury	Lock & Dam 6	PCBs Mercury	PCBs Mercury	PCBs Mercury
(4 segments) 4 PCBs 4 Mercury 2 Turbidity	PCBs Mercury Turbidity	PCBs Mercury Turbidity	La Crosse Root River	PCBs Mercury	PCBs Mercury	
IOWA[3]						
unlisted	unlisted	unlisted				
unlisted	unlisted		Wisconsin River			
unlisted	unlisted	unlisted		PCBs Mercury	PCBs Mercury	
unlisted	unlisted		Lock & Dam 11			
unlisted	unlisted	unlisted	Dubuque	PCBs Mercury	PCBs Mercury	
unlisted	unlisted	unlisted		ILLINOIS[4]		
				PCBs	PCBs	PCBs
			Lock & Dam 13			PCBs

IOWA[3]				ILLINOIS[4]		
2002	2004	2006		2006	2004	2002
Organic enrichment	**Nutrients** (localized)	**Arsenic** **Nutrients** (localized)	Lock & Dam 13	**PCBs** **Fecal coliform**	**PCBs**	**PCBs**
unlisted	unlisted					**PCBs**
Arsenic	**Arsenic**		Quad Cities			
unlisted	unlisted		Iowa River			**PCBs**
unlisted	unlisted	**Arsenic**		**PCBs** **Manganese** **Fecal coliform**	**PCBs** **Manganese**	**PCBs** **Priority organics** **Organic enrichment** **Pathogens**
unlisted	unlisted					
unlisted	unassessed					
Arsenic	**Arsenic**		Keokuk			
MISSOURI[5]			Des Moines River			
PCBs **Chlordane**	delisted			**PCBs** **Manganese** **Fecal coliform**	**PCBs** **Manganese**	**PCBs** **Priority organics** **Organic enrichment**
			Quincy			
			Lock & Dam 21			
			Hannibal	**PCBs** **Fecal coliform**	**PCBs**	**PCBs** **Priority organics** **Organic enrichment**
			Cuivre River			
			Illinois River	**PCBs** **Manganese** **Fecal coliform**	**PCBs** **Manganese**	**PCBs** **Nutrients** **Siltation** **Flow and habitat alteration**
						PCBs **Nutrients** **Metals** **Siltation** **Suspended solids** **Total ammonia-N** **Phosphorous** **Nitrates**
			Missouri River			

<table>
<tr><th colspan="3">MISSOURI[5]</th><th rowspan="2"></th><th colspan="3">ILLINOIS[4]</th></tr>
<tr><th>2002</th><th>2004</th><th>2006</th><th>2006</th><th>2004</th><th>2002</th></tr>
<tr><td rowspan="2">PCBs
Chlordane
Lead (5 mi)
Zinc (5 mi)</td><td colspan="2" rowspan="2">delisted</td><td rowspan="2">Missouri River
St. Louis</td><td rowspan="2">PCBs
Manganese
Fecal coliform</td><td rowspan="2">PCBs
Manganese</td><td>PCBs</td></tr>
<tr><td>PCBs
Priority org
Siltation
Habitat alteration
Suspended solids</td></tr>
<tr><td colspan="3"></td><td>Kaskaskia River</td><td>PCBs
Manganese
Sulfates
Fecal coliform</td><td>PCBs
Manganese
Sulfates
Fecal coliform
pH
sediment/silt
DO
TSS
Atrazine
Total P</td><td>PCBs</td></tr>
<tr><td colspan="3"></td><td>Cape Girardeau</td><td></td><td></td><td>PCBs</td></tr>
<tr><td colspan="3"></td><td>Ohio River</td><td></td><td></td><td></td></tr>
</table>

[1] Minnesota's 2006 list was approved by U.S. EPA June 1, 2006. In 2002, Minnesota used 31 segments to assess the portion of the UMR bordering Wisconsin. For simplicity, this table aggregates those segments and identifies how many in each reach were identified as impaired for the pollutants listed.

[2] Wisconsin's 2006 information is based on its June 9, 2006 draft list.

[3] Iowa's 2006 information is based on preliminary information provided by Iowa DNR. Iowa's 2006 list has not yet been released for public review.

[4] Illinois' 2006 list was approved by U.S. EPA June 27, 2006.

[5] Missouri developed a combined list for 2004 and 2006. The draft combined list was released for a 90-day public review on October 11, 2006.

The differences among States' listings on the UMR can be attributed to a number of factors, including differences in their water quality standards and criteria, methodologies for including waterbodies on the 303(d) list, and data interpretation. In addition, States' listing decisions are often shaped by public input at various stages in the process. Stakeholder advisory groups, best professional judgment groups, commissions of political appointees, and comments received directly from the public in response to formal public notices may all contribute to a State's ultimate decisions regarding which waterbodies are included on the 303(d) list and for which pollutants they are listed.

Total Maximum Daily Loads (TMDLs)

The Clean Water Act requires that a TMDL be developed for each pollutant of an impaired waterbody. A TMDL sets the pollutant reduction load necessary to improve the water quality of the impaired river, lake, or stream so that it meets its designated uses. Thus, the TMDL process includes calculating the allowable pollutant load, identifying the pollutant sources, allocating the allowable load to the sources, and developing a plan to clean up or restore the waters.

Developing TMDLs for the Mississippi River presents particularly challenging issues, not the least of which is the fact that the States do not have the river listed for the same pollutants. However, some States have begun TMDL development despite the inconsistencies. In particular, there are currently two TMDLs under development on the Upper Mississippi River.

The Minnesota Pollution Control Agency started the TMDL process for Lake Pepin in October 2004. Lake Pepin, a natural lake on the Mississippi River, has been listed for impairment from nutrients and turbidity. Given that the Lake Pepin watershed includes half of the State of Minnesota and a portion of Wisconsin, it is the largest TMDL Minnesota has undertaken to date. It is expected to cost $2.6 million over 5 years.

The other TMDL for the Upper Mississippi River is the TMDL for chlordane and PCBs on the Missouri stretch of the Mississippi River, which Missouri DNR completed in October 2006 and approved November 3, 2006. Given that PCBs and chlordane have been banned and are no longer produced, Missouri DNR notes that a "downward trend is inevitable." Thus, the TMDL includes no remediation plan, but recommends continued monitoring of fish tissue.

Chapter 3

Functions of an Interstate Water Quality Organization

QUESTIONS: What types of functions would be appropriate for an interstate water quality agency to serve on the Upper Mississippi River? How would those activities be implemented in conjunction with the States?

Considerations

In considering what specific functions would be useful and appropriate to have an interstate water quality agency serve on the Upper Mississippi River, there a variety of programmatic areas of potential interest, including:

- Clean Water Act functions, such as setting water quality standards, water quality monitoring, and NPDES permitting and enforcement;
- Planning and emergency response related to hazardous spills;
- Development and issuance of fish consumption advisories;
- Safe Drinking Water Act functions, such as source water protection and permitting and monitoring of water suppliers; and
- Public education and outreach.

In each of these programmatic areas, it would be possible for an interstate agency to serve one or more types of roles, including:

- *Actor* — Perform the function in conjunction with or on behalf of the States
- *Planner* — Develop a single unified approach that the States then execute, implement, or enact
- *Coordinator* — Facilitate coordination among the States to achieve greater harmony

Geographic considerations are also important. Most notably, should the scope of the functions of an interstate agency include the entire basin or be focused on the main stem of the river? Should the agency serve the entire Mississippi River, from the headwaters to the Gulf of Mexico, or focus only on the upper portion, north of the Ohio River?

Conclusions

Deliberations of the five UMR States has led to the conclusion that the primary focus of an interstate water quality agency on the Mississippi River should initially be on implementing water pollution control activities, under the federal Clean Water Act, on the main stem of the Upper Mississippi River.

Although there are a wide variety of water quality problems throughout the Mississippi River Basin that may benefit from enhanced interstate coordination, it is important to begin by focusing on a well-defined and limited suite of activities. The framework provided by the Clean Water Act — i.e., water quality standards, monitoring, assessment, and control strategies — is an excellent start, particularly on an interstate border river. Furthermore, the five upper basin States have already begun working together on such issues through the Upper Mississippi River Basin Association and have an opportunity to build

upon that momentum and success. Watershed management activities are obviously related to the protection and restoration of main stem water quality and should thus not be explicitly excluded from the scope of an interstate water quality agency. However, it cannot be the starting point for organizational development, the success of which will depend, in part, on focusing on a shared resource.

It will be necessary for an interstate water quality agency to be equipped to play a variety of roles. In some instances, it should actually perform some of the functions currently performed by individual States. In other instances, it should serve as a convener and coordinator among the States. And finally, in some cases, it could serve as a "contractor," taking on specific projects assigned by one or more States, such as TMDL development. The specific functions and responsibilities recommended for both the individual States and an interstate agency of the future are summarized on Table 3.1.

Table 3.1
Potential Responsibilities and Functions
of an
INTERSTATE WATER QUALITY AGENCY ON THE UPPER MISSISSIPPI RIVER

	Interstate Agency	States
Water Quality Standards		
Designated Uses	Develop and recommend a comprehensive set of designated uses for the entire UMR	Adopt designated uses developed by the interstate agency
Water Quality Criteria	Develop and recommend water quality criteria for pollutants of concern on the UMR	Use criteria recommended by the interstate agency to promulgate standards in accordance with state law
Anti-degradation	Develop a standard approach/ framework for anti-degradation	Adopt/integrate recommended framework into state policy
Monitoring		
Sampling Design and Sample Collection	▪ Develop a strategy, framework, and QA/QC protocols for comprehensive monitoring of UMR water quality in support of CWA (where, what, when, how) ▪ Coordinate, assist, and/or execute sampling	▪ Integrate and adapt States' existing UMR monitoring to conform with interstate agency's monitoring system ▪ Coordinate State UMR tributary monitoring with UMR strategy
Analysis	▪ Develop common analysis methods and procedures, including QA/QC procedures ▪ Analyze samples from UMR monitoring system using selected lab(s) and common methods	Utilize methods developed by the interstate agency for water quality samples, if State collects samples on UMR
Data Management	▪ Design and maintain data management system for UMR water quality data ▪ Integrate water quality data from other systems, programs, and agencies, as appropriate ▪ Make data accessible to all States and public	Submit data to interstate agency

	Interstate Agency	States
Assessments		
305(b) Assessment	▪ Develop an assessment protocol for the UMR ▪ Prepare 305(b) assessment for UMR	Include the UMR assessment developed by the interstate agency as part of State's 305(b) assessment
Impaired Waters List	Develop listing criteria and a recommended listing for UMR	▪ Review interstate agency's recommended assessment and listings ▪ Incorporate interstate agency's assessment and listing into State's integrated report
Control Measures		
TMDLs	▪ Coordinate development of interstate TMDLs for UMR ▪ Conduct studies, perform technical work associated with TMDLs assigned by States	Work through interstate agency, with neighboring States, to develop interstate TMDLs for UMR
Regulatory NPDES Permits Section 401 Certification Section 404 Permits	▪ Review draft NPDES permits for compliance with UMR water quality standards, as part of public review (Commission does not have separate review or approval authority) ▪ Coordinate States' review of 404 permits with neighboring States	▪ Issue NPDES permits ▪ Review 404 permits ▪ Issue 401 certifications
Enforcement		
	No specific role. Support State efforts as needed.	All enforcement responsibilities
Other		
Interagency Coordination	▪ Coordinate with other interstate groups and government agencies engaged in UMR management ▪ Generally, coordinate States' other water quality and CWA activities that may affect the UMR (e.g. Section 319 Nonpoint programs)	
Public Information & Education	Specific activities to be determined	
Technical Support & Special Studies	As assigned and contracted by States or EPA	
Fish Consumption Advisories Fish tissue sampling Fish tissue analysis Issue advisories	▪ Develop sampling and fish tissue analysis methods and procedures ▪ Conduct sampling and analysis ▪ Develop recommended UMR advisories for use by States	Issue fish consumption advisories
Early warning monitoring and spill reporting	Planning and coordination with UMR spill response agencies and organizations (Similar to current UMRBA role or potentially enhanced role)	Spill response (carried out by existing, designated State agencies)

Chapter 4

Clean Water Act: Section 106

QUESTIONS: What is the purpose and history of Section 106 of the Clean Water Act? How are Section 106 funds allocated? How do the interstate agencies that receive such funding use it? What would be required to make UMRBA eligible for Section 106 funding, as an interstate agency, under the Clean Water Act?

Section 106 of the Clean Water Act authorizes EPA to provide grants to States (including territories, the District of Columbia, and Indian Tribes) and interstate agencies to establish and implement their water pollution control programs. Funds can be used to support a variety of program activities, including permitting, pollution control activities, surveillance, monitoring, enforcement, advice and assistance to local agencies, and training and public information. Each eligible State, interstate agency, and Indian Tribe negotiates an annual Section 106 work plan with EPA before funding is awarded. There is considerable variation in work plans, especially among the different EPA regions.

Tables 4.1 and 4.2 summarize how a number of States and interstate agencies use the Section 106 funds they receive.

State Allocation Formula

Section 106 of the Clean Water Act does not directly address how the grant funds are to be allocated. Rather, it directs EPA to make allotments in accordance with regulations it promulgates "on the basis of the extent of the pollution in the respective States." Those regulations are contained in 40 CFR 35.160 - 35.168.

In FY 1974, the first year of Section 106 funding, an allocation formula based on four point source factors was used. The factors included the number of cattle feedlots with more than 1,000 head; number of industrial dischargers; number of municipal dischargers; and number of nuclear, oil, coal and gas power plants.

However, States were guaranteed to receive no less than they had received in FY 1973 under Section 7 of the Federal Water Pollution Control Act. The result of this "minimum guaranty clause" was that population and population density continued to determine Section 106 funding. This allocation formula was used through FY 1998, when it was revised to reflect the following six components, with weights to be phased-in by FY 2004:

Component	Weight
Surface water area	12
Groundwater use	12
Water Quality Impairment	35
Point sources	13
Nonpoint sources	13
Population of urbanized area	15

Table 4.1
Selected States'
Use of Section 106 Funding

	Colorado (Draft)	Connecticut	Indiana	Maine	Massachusetts	Minnesota	Montana	Oregon	Washington	Wisconsin
106 Funding (FY06)	$2,109,800	$2,001,100	$2,684,000	$2,081,000	$3,025,400	$4,294,400	$2,442,747	$2,712,600	$5,289,900	$6,028,900
106 Funding (FY05)	$2,295,547	$2,186,147	$2,873,347	$2,266,547	$3,216,947	$4,493,947	$2,256,100	$2,902,147	$5,345,100	$6,239,347
Activities for which States Use Section 106 Funds:										
WQ monitoring and surveillance	X	X	X	X	X		X	X		X
Water quality assessment/305(b)	X	X	X		X	X			X	X
Planning, WQ criteria, WQ standards	X	X		X		X	X		X	X
Watershed/Subbasin surveys		X			X					X
TMDL	X	X	X	X (Minor)	X	X	X	X	X	X
Urban Wet Weather Assessment/Stormwater			X	X	X	X				X
Biological studies				X (Database)	X (Criteria)					X
Regulatory functions (enforcement, permitting and technical support)	X	X	X	X	X	X	X	X	X	X
Fish restoration/aquatic nuisance species		X		X						X
Source water assessment and protection activities	X							X		X
GIS and data management			X					X		X
Public participation and education		X				X				X
Fish tissue analysis							X			X
Other programs/special projects	X					X (Feedlots)		X	X	X
Groundwater							X	X		X

Sources: Funding amounts from U.S. EPA computer runs of the allocation formulas.
Activities information is from States' Performance Partnership Agreements. Only States which post their Agreements on their web sites are included.

Table 4.2
Interstate Commissions'
Use of Section 106 Funding

	Delaware River Basin Commission*	Interstate Commission on the Potomac River Basin	Interstate Environmental Commission**	New England Interstate Water Pollution Control Commission	Ohio River Valley Water Sanitation Commission	Susquehanna River Basin Commission*
106 Funding (FY06)	$608,500	$610,800	$694,000	$1,007,800	$1,280,210	$557,200
106 Funding (FY05)	$612,100	$614,600	$696,300	$1,020,900	$1,289,209	$557,600
Activities for which States Use Section 106 Funds:						
WQ monitoring and surveillance	Included with Planning, etc.	X	54%		X	8%
Water quality assessment/305(b)	20%				X	10%
Planning, WQ criteria, WQ standards	50%		25%			
Watershed/Subbasin surveys					X	27%
TMDL	Included with Planning, etc.	X			X	7%
Urban Wet Weather Assessment/Stormwater					X	
Biological studies					X	
Regulatory functions (enforcement, permitting and technical support)			15.5%	X		8%
Fish restoration/aquatic nuisance species	10%					1%
Mercury				X		
Source water assessment and protection activities	20% (Anti-degradation)				X	2%
GIS and data management		X				17%
Public participation and education		X		X	X	7%
Coordination				X		13%
Fish tissue analysis					X	
Wastewater Treatment				>50%		
Work groups					X	
Regional projects		X				
Other programs			5.5%			

** percentages in column are percentage of Section 106 funding*
*** percentages in column are based on FTE counts*

Sources: Commission web sites and personal interviews during January – February 2006.

In FY 2000, a funding floor and cap were instituted. The funding floor guarantees that each State will receive an amount at least equal to its FY 2000 allotment, adjusted for inflation, unless appropriations decrease in future years. The funding cap sets the maximum allotment to any State at 150 percent of that State's allotment for the previous year.

The State allocation formula in effect for the past few years, according to EPA, "generally worked well." However, that formula has not allowed the Agency to effectively target funding to support priority activities. For example, in FY 2005, the Administration proposed a $9.92 million increase in funding for Section 106 grants, with the intent that the additional funds be used to enhance monitoring activities. However, if the Agency had applied the existing allotment formula to the $9.92 million increase, the bulk of the new funds would have gone to only a few States and most States would not have received sufficient increases to provide any measurable strengthening of their water quality monitoring activities. Therefore, EPA issued a "Class Deviation" (waiver) allowing it to apply an alternative formula to distribute only the FY 2005 funding increase.

In January 2006, the regulation governing the Section 106 allotment formula (40 CFR 35.162) was amended to authorize EPA to distribute a portion of the grant funds using a different allocation formula. In particular, Section 35.162(d) was added, giving EPA the flexibility to use a different formula "if the Administrator determines that a portion of the funds … should be allotted for specific water pollution control elements." The alternative formula for that portion of the funds is to be determined by the Administrator "after consultation with the respective States and interstate agencies." The regular formula will continue to be used to allocate other Section 106 funds.

Section 106 Grants to UMR States (FY 2006)

Illinois	$4,430,000
Iowa	$2,509,000
Minnesota	$3,871,000
Missouri	$2,949,000
Wisconsin	$5,434,000

The 2006 amendment was designed to address situations like the one which occurred in FY 2005 and again in FY 2006, when a budget increase specifically designed to enhance monitoring activities, would not have had its desired effect if it were allocated based on the regular formula.

Interstate Agency Provisions

Eligibility: Section 106 of the Clean Water Act authorizes grants to both States and interstate agencies, but does not explicitly identify those interstate agencies. However, Section 502, which includes definitions for a variety of terms used in the Act, defines an interstate agency as "an agency of two or more States established by, or pursuant to, an agreement or compact approved by the Congress, or any other agency of two or more States, having substantial powers or duties pertaining to the control of pollution as determined and approved by the Administrator."

The only other interstate "eligibility" requirement in the Act itself is Section 106(f), which, among other things, stipulates that:

"Grants shall be made under this section on condition that —
(1) Each State (or interstate agency) filed with the Administrator within one hundred and twenty days after the date of enactment of this section:
(A) a summary report of the current status of the State pollution control program, including the criteria used by the State in determining priority of treatment works; and
(B) such additional information, data and reports as the Administrator may require."

This same requirement is then repeated in the Section 106 regulations promulgated by EPA. In particular, 40 CFR 35.168 says, in part:

> *"(b) The Regional Administrator may award section 106 funds to an interstate agency only if:*
> *(1) The interstate agency filed with the Administrator within 120 days after October 18, 1972, a summary report of the current status of the State pollution control program, including the criteria used by the State in determining priority of treatment works."*

In addition, 40 CFR 135.165 says that, to receive a Section 106 grant, "a State or interstate agency must expend annually for recurrent section 106 program expenditures an amount of non-federal funds at least equal to expenditures during the fiscal year ending June 30, 1971."

Given the provisions linking grant eligibility to the timing of enactment of the original Federal Water Pollution Control Act, there are only six interstate organizations that currently receive Section 106 grants:

- Delaware River Basin Commission
- Interstate Commission on the Potomac River Basin
- Interstate Environmental Commission
- New England Interstate Water Pollution Control Commission
- Ohio River Valley Water Sanitation Commission
- Susquehanna River Basin Commission

In 1998 and again in 2004, the Tahoe Regional Planning Agency sought recognition under Section 106, but was notified it would not be considered eligible based on the fact it did not seek to be included as an interstate agency in 1972. At that time, there was not clear support for the Tahoe agency's request from the States of Nevada and California, due to insufficient information about how it might impact the States' 106 funding.

The Clean Water Act is silent on any process for approving other interstate agencies as eligible for 106 funding. Many believe that Congress never intended for there to be any additions to the "list of six." Over the years, EPA has stated that the list is fixed and there can be no additions, citing Section 106(f) of the Clean Water Act. However, in 1998, a joint workgroup of interstate agency representatives and EPA staff issued working documents outlining criteria and processes for EPA to approve additional interstate agencies as eligible for 106 funding. Presumably, these recommendations never advanced.

Interstate Funding Formula: The Clean Water Act itself does not address the relative balance of Section 106 funding between States and interstate agencies, nor how funds should be allocated among the 6 interstate agencies. Those provisions are set forth in regulations promulgated by EPA. In particular, the regulations governing allocation of interstate funds are in 40 CFR 35.162(c). These regulations call for a portion of the annual Section 106 funding to be set aside for interstate agencies. Beginning in FY 1999, the interstate set-aside was set at its historic (i.e., FY 1976) level of 2.6 percent.

The allocation of the 2.6 percent set-aside among the eligible interstate organizations was revised most recently in 2004, when a guaranteed $125,000 "base portion" for each interstate agency was changed to a "funding floor." In particular, the interstate grant allotment formula now consists of two parts:

1) *Funding floor* — For FY 2005, the floor was set at least equal to each interstate agency's FY 2003 allotment. Beginning in FY 2006, each interstate is guaranteed, at a minimum, the same level of funding they received the previous fiscal year, unless the appropriation decreases. The funding floor is adjusted for inflation when the appropriated funds increase from the preceding fiscal year.

2) *Variable allotment* — "Funds not allotted under the base allotment will be allotted to eligible interstate agencies based on each interstate agency's share of their member States' Water Pollution Control grant formula allotment ratios…. The allotment ratios for those States involved in compacts with more than one interstate agency will be allocated among such interstate agencies based on the percentage of each State's territory that is situated within the drainage basin or watershed area covered by each compact."

Conclusions

The Upper Mississippi River Basin Association (UMRBA) is not eligible for funding under Section 106 of the Clean Water Act for the following reasons:

- UMRBA does not qualify under the definition of an interstate agency in Section 502 of the Act. Specifically, UMRBA was not established by a compact approved by Congress, nor would it likely be judged by the EPA Administrator to have "substantial powers or duties pertaining to the control of pollution."
- UMRBA did not file with EPA within 120 days after enactment of the Clean Water Act on October 18, 1972. (The Upper Mississippi River Basin Association was not formed until 1981.)

Chapter 5

Interstate Water Quality Organizations

QUESTIONS: How are interstate water resource agencies in other parts of the country structured, how and why were they formed, and what authorities do they have? What can we learn from them?

Given that rivers transcend political boundaries, it is not unusual for multi-jurisdictional organizations to be formed in response to water planning and management needs or water conflicts. The Upper Mississippi River Basin Association is one example of such an interstate institution. But there are many others across the country, ranging from small informal alliances to statutorily-based agencies with operational authority and substantial planning and/or regulatory activities.

INTERSTATE COMMISSIONS ELIGIBLE FOR SECTION 106 GRANTS

The six interstate commissions that receive funding under Section 106 of the Clean Water Act are certainly not the only examples of interstate water resource organizations. But in so far as they perform many of the types of functions that are being considered as helpful and/or necessary on the Upper Mississippi River, these commissions are of particular interest. They are the:

- Delaware River Basin Commission (DRBC)
- Interstate Commission on the Potomac River Basin (ICPRB)
- Interstate Environmental Commission (IEC)
- New England Interstate Water Pollution Control Commission (NEIWPCC)
- Ohio River Valley Water Sanitation Commission (ORSANCO)
- Susquehanna River Basin Commission (SRBC)

Table 5.1 provides a summary of the structure, history, functions, and funding for these six interstate water resource commissions.

Table 5.1
Interstate Commissions
Structure, History, Functions, and Funding

	Delaware River Basin Commission (DRBC)	Interstate Commission on the Potomac River Basin (ICPRB)	Interstate Environmental Commission (IEC)	New England Interstate Water Pollution Control Commission (NEIWPCC)	Ohio River Valley Water Sanitation Commission (ORSANCO)	Susquehanna River Basin Commission (SRBC)
Institutional Characteristics						
Members	Delaware New Jersey Pennsylvania New York United States of America	Maryland Pennsylvania Virginia West Virginia District of Columbia United States of America	Connecticut New Jersey New York	Connecticut Maine Massachusetts New Hampshire New York Rhode Island Vermont	Illinois Indiana Kentucky New York Ohio Pennsylvania Virginia West Virginia United States of America	Maryland New York Pennsylvania United States of America
Basis of Organization	Federal-State Compact	Federal-State Compact	Interstate Compact	501(c)(3) nonprofit	Federal-State Compact	Federal-State Compact
Year Established	1961	1970 (1940)	1936	1947	1948	1970
Establishment	President Kennedy and the governors of Delaware, New Jersey, Pennsylvania, and New York signed concurrent compact legislation.	The Compact is the 1970 Congressional amendment to the 1940 law creating the Interstate Commission on the Potomac River Basin.	Established in a Compact between New York and New Jersey and approved by Congress. The State of Connecticut joined the Commission in 1941.	Originally formed by Connecticut, Rhode Island, and Massachusetts. The States of Vermont, Maine, New Hampshire, and New York joined later.	Compact negotiated by representatives of States. Each State adopted and enacted Compact into state law. Consent of Congress given.	Problems of water pollution and over usage led to Compact, which was adopted by U.S. Congress and the Maryland, New York and Pennsylvania state legislatures.
Governing Board Composition	5 commissioners (1 from each member)	18 commissioners (3 from each member)	15 commissioners (5 from each member)	35 commissioners (5 from each member)	27 commissioners (3 from each member)	4 commissioners (1 from each member)
Governing Board Selection Process	The commissioners are the Governors of the four States and a federal representative appointed by the President (currently from the Corps of Engineers). Commissioners may appoint alternates to serve in their places. Governors appoint high-ranking officials from their state environmental agencies.	Commissioners are appointed by the Governor and the President. Governor appointees may include persons who assume the post due to their appointed position in state government.	Commissioners are appointed by the Governors or, in some cases, assume the post due to their position.	Each State has five commissioners. The Governor appoints 3 (from industry, local government, or general public) and the other 2 are the heads of the State's environmental protection agency and health department. (Agency heads typically delegate representatives to fulfill their responsibilities.)	Commissioners are appointed as required by each State's law.	Commissioners are the Governors or their designee. The President appoints the federal representative (currently the Corps of Engineers).
Meeting Schedule	5/year	4/year	Periodic	3/yr (Commission) 6/yr (Executive Committee)	4/year	4/year

	Delaware River Basin Commission (DRBC)	Interstate Commission on the Potomac River Basin (ICPRB)	Interstate Environmental Commission (IEC)	New England Interstate Water Pollution Control Commission (NEIWPCC)	Ohio River Valley Water Sanitation Commission (ORSANCO)	Susquehanna River Basin Commission (SRBC)
Geography						
Watershed area	13,539 sq. mi.	14,679 sq. mi.	NA	25 river basins within the 7 States	154,185 sq. mi.	27,510 sq. mi.
River Length	330 mi.	383 mi.	NA	NA	981 mi.	444 mi.
Geographic area	The Delaware River extends from Hancock, New York to the Delaware Bay where it meets the Atlantic Ocean. The river forms the border between New Jersey and Pennsylvania. Over half the basin is in Pennsylvania. New York City gets half its water from reservoirs on tributaries to the Delaware.	The Potomac River flows through Maryland, Pennsylvania, Virginia, and West Virginia, as well as the District of Columbia, and empties into the Chesapeake Bay.	The Commission's area of jurisdiction is the tidal and coastal waters in the adjacent portions of New York, New Jersey, and Connecticut.	New England area and New York State	The Ohio River forms the border between 6 States. Two of the 8 member States (Virginia and New York) are within the basin, but not on main stem.	The river flows from Cooperstown, New York to the Chesapeake Bay. The river basin borders the major population centers of the east coast, and although relatively undeveloped, has experienced problems of water pollution and overuse.
Activities						
Goals/mission	Protect, enhance, and develop water resources of the basin. Serve as policy-maker regulator, planner, manager, and mediator.	To enhance, protect, and conserve the water and associated land resources of the Potomac River Basin through regional and interstate cooperation.	Protect and enhance environmental quality through cooperation, regulation, coordination, and mutual dialogue between government and citizens in the tri-state region.	▪ Coordination and cooperation among states ▪ Public education ▪ Research ▪ Training ▪ Leadership in water management	To implement the Ohio River Valley Water Sanitation Compact through direct action and by coordinating the actions of the member States.	To enhance public welfare through comprehensive planning, water supply allocation and management of the water resources of the Susquehanna River Basin.
Areas of focus/ activities	▪ water quality protection ▪ water supply allocation ▪ regulatory review (permitting) ▪ water conservation ▪ watershed planning ▪ drought management ▪ flood control ▪ recreation	▪ water quality ▪ water resources ▪ aquatic biology ▪ fisheries restoration ▪ public education and outreach	▪ water quality regulation and enforcement ▪ coordinate interstate and regional water quality programs ▪ interstate coordination on air pollution ▪ resource recovery and toxics ▪ public education	▪ water quality ▪ wastewater and onsite systems ▪ drinking water ▪ regulatory review of watershed planning ▪ wetlands nonpoint source pollution ▪ drinking water ▪ source water protection ▪ wastewater treatment plant security ▪ underground storage tanks	▪ wastewater discharge standards ▪ biological assessments ▪ monitoring ▪ special surveys and studies ▪ coordinates emergency spills and discharge response ▪ promotes public participation	▪ floodplain management and protection ▪ water supply ▪ water quality ▪ watershed protection and management ▪ recreation, fish and wildlife ▪ cultural, visual and other amenities

	Delaware River Basin Commission (DRBC)	Interstate Commission on the Potomac River Basin (ICPRB)	Interstate Environmental Commission (IEC)	New England Interstate Water Pollution Control Commission (NEIWPCC)	Ohio River Valley Water Sanitation Commission (ORSANCO)	Susquehanna River Basin Commission (SRBC)
Financial/ Administrative						
Staff	34	23	18 (including 8 at lab)	13	25	45
Annual Budget	(FY 05) Revenue 4,318,000 Expense 4,318,000	(FY 04) Revenue 2,430,186 Expenses 2,281,906	(FY 05) Revenue 1,087,008 Expenses 1,515,521	(FY 05) Revenue 9,569,000 Expense 9,376,000	(FY 06) Revenue 4,093,482 Expense 3,493,430	(FY 07) Proposed Expense Budget: 4,450,000
Funding Sources	(FY 05) States 61% WQ Grant 19% Water Supply Storage 12% Other 8%	(FY 04) U.S. EPA 40% State dues 19% Other State contributions 14% USGS 13% Other 14%	(FY 05) States 78% U.S. EPA 19% Misc. 2%	(FY 05) Federal grants 67% State contracts 16% Training fees 8% Donated Services 5% State dues 1% Other 2%	U.S. EPA 60% States 35% Other 5%	(FY 04) Grants/Projects 54% Signatories 35% Fees/Other 10%
Membership Dues	DE 434,000 NJ 867,000 NY 608,000 PA 867,000 U.S. 694,000 (U.S. does not pay its dues)	MA 145,000 PA 57,000 VA 140,000 WV 51,000 DC 64,000	(FY 05) CT 84,956 NY 388,000 NJ 383,000	FY 05 total for 7 States = $129,000	(FY 06) IL 62,000 IN 242,800 KY 276,600 NY 12,700 OH 327,400 PA 164,000 VA 44,900 WV 130,400	(FY 07) Proposed: NY 300,000 PA 1,232,000 MD 318,000 U.S. 1,000,000 (U.S. does not pay its dues)
Other State Contributions	PA 265,000 (Groundwater Protection)	MA 198,219 PA 78,652 VA 13,051 DC 45,524	(FY 04) CT 10,000 (Byram River)	(FY 05) State Contracts 1,524,620	NA	NA
106 Funding (FY 06)	608,500	610,800	694,000	1,007,800	1,280,210	557,200
106 Funding (FY 05)	612,100	614,600	696,300	1,020,900	1,289,209	557,600
106 Grant as % of Total Revenue*	19%	25%	45%	10%	38%	15%
Location/Contact Info	P.O. Box 7360 West Trenton, NJ 08628 609-883-9500 www.state.nj.us/drbc	51 Monroe St. Rockville, MD 20850 309-984-1908 www.potomacriver.org	311 West 43rd St. New York, NY 10036 212-582-0380 www.iec-nynjct.org	116 John Street Lowell, MA 01852 978-323-7929 www.neiwpcc.org	5735 Kellogg Ave. Cincinnati, OH 45228 513-231-7719 www.orsanco.org	1721 N. Front St. Harrisburg, PA 17102 717-238-0423 www.srbc.net
Additional Facilities	none	none	Laboratory	4 sub-offices	Riverboat	none

* Percentages calculated based upon best available data from commission budget materials, which do not always reflect the same Section 106 grant allocations as presented above and provided by U.S. EPA, due to differences in accounting periods and budget categories.

Sources: Commission web sites, annual reports and other publications, and personal interviews from January – June 2006.

History

The "Section 106" commissions were all established between 1936 and 1970, prior to enactment of the 1972 Federal Water Pollution Control Act (Clean Water Act). The Interstate Environmental Commission is the oldest and the Susquehanna River Basin Commission is the youngest. Most were established in response to a water crisis. In the case of the Delaware River Basin, the issue was water allocation between New York City and the downstream States — a conflict which was eventually resolved by the Supreme Court. In contrast, it was water quality concerns that led to the formation of the Interstate Commission on the Potomac River Basin. In 1940, there was widespread contamination of the Potomac River due to the expanding population of the Washington metropolitan area and untreated waste was being discharged into the river. Low DO levels endangered fisheries, and the river was unfit for swimming and other water use.

Geographic Setting

With the exception of the Ohio River Valley Water Sanitation Commission (ORSANCO), all the "Section 106" commissions are in the mid-Atlantic and Northeast regions. Most define their geographic scope or jurisdiction as the hydrologic unit of a major river basin. The exceptions are the Interstate Environmental Commission (IEC), which addresses only the tidal and coastal waters of the adjacent portions of New York, New Jersey, and Connecticut; and the New England commission (NEIWPCC), which includes 25 basins in the 7-state area of New England.

In contrast to the Upper Mississippi River Basin, most of these other river basins are relatively small. The Ohio River Basin, covering 154,000 square miles rivals the 189,000 square mile Upper Mississippi River Basin. However, the other river basins in the mid-Atlantic region are only 7 to 15 percent of the size of the Upper Mississippi River Basin.

Each "Section 106" commission includes among its members the States of the geographic region it encompasses. They range in size from 3 to 8 States. Pennsylvania has portions of 4 of the river basins within its borders and is thus a member of 4 interstate commissions.

Governance

With the exception of the New England commission (NEIWPCC), all the commissions were originally formed by and are now governed by an interstate compact. In the cases of the Delaware River, Potomac River, Ohio River, and Susquehanna River, the federal government is also a party to the compact and thus a member of the commission.

The governing boards of the commissions are composed of commissioners representing each of the States that are compact members and a commissioner representing the federal government, if it is also party to the compact. In some cases, each State is represented by only one commissioner. In other cases, there may be as many as 5 commissioners from each member State. Thus, the size of the governing boards range from 4 to 35 commissioners.

The federal commissioners are appointed by the President. In the Delaware River and Susquehanna River, there is a single federal commissioner and that individual is from the U.S. Army Corps of Engineers. ORSANCO has 3 federal commissioners, including the EPA Region 3 Administrator and two members of the public appointed by the President.

The process for appointing commissioners is outlined in each of the compacts and may be specified in state law as well. In most cases, State commissioners are appointed by the Governors of the compact States. The Delaware River Basin Commission is the only interstate commission where the compact designates the Governors themselves as the commissioners.

Activities and Authorities

While all of the "Section 106" commissions have some sort of water quality responsibilities, most also have responsibilities related to other water resources or environmental protection concerns. The New England Commission (NEIWPCC) and the Ohio River Valley Water Sanitation Commission (ORSANCO) are the only "Section 106" commissions that focus exclusively on water quality, including such issues as wastewater systems, drinking water, wetlands pollution, source water protection, emergency spill response, and underground storage tanks. In contrast, the Interstate Environmental Commission has responsibilities related to interstate air pollution and resource recovery and toxics, as well as water quality. In addition to their water quality activities, the three mid-Atlantic river basin commissions (Potomac, Delaware, and Susquehanna) have a variety of other water resource responsibilities, such as water allocation, water conservation, drought planning, floodplain management, and fisheries restoration.

The extent to which the "Section 106" interstate commissions have regulatory authority varies. For example, the commissions of the Delaware River and Ohio River promulgate water quality standards, while the Susquehanna River and Potomac River commissions do not. Although the Susquehanna River Basin Commission does not have water quality regulatory authority, it does regulate water withdrawals and water conservation. In addition to its water quality regulations, the Delaware River Basin Commission issues floodplain regulations, regulates groundwater and surface water withdrawals, regulates reservoir operations, and has project review authority within the basin.

Although all these interstate commissions receive funding under Section 106 of the Clean Water Act, there are significant differences in their responsibilities and authorities under that Act. Differences include whether or not they conduct water quality monitoring, promulgate water quality standards, prepare the 305(b) report for their waterbody, exercise enforcement authority, or develop TMDLs. Those commissions that do not have regulatory authority, such as the Interstate Commission on the Potomac River Basin, rely upon their member States for implementation. In contrast to the other commissions, the New England Interstate Water Pollution Control Commission is primarily a technical service organization for its member States, providing research, public education, and training and certification of wastewater treatment plant operators.

Budget and Staff

The annual budgets of the six "Section 106" interstate commissions range from approximately $1.5 million to over $9 million. The Ohio River Valley Water Sanitation Commission (ORSANCO), whose functions are most directly comparable to those potentially needed on the Upper Mississippi River, has an annual budget of about $4 million, approximately 8 times larger than the current budget of UMRBA.

Support for these commissions comes mainly from a combination of dues, other contributions from their member States, and grants from federal agencies such as U.S. EPA. Other miscellaneous income, such as fees for training or project review, typically accounts for a much smaller portion of revenue. The extent to which these commissions rely upon State contributions varies widely. In FY 05, state funding accounted for as much as 78 percent of revenue for the Interstate Environmental Commission, but only 16 percent for the New England Interstate Water Pollution Control Commission. The federal government is a member of the compact commissions in the Delaware, Potomac, Ohio, and

Susquehanna River basins and, until fairly recently, contributed annual dues in support of the commissions. However, since FY 1997, Congress has failed to appropriate the federal dues for the compact commissions. The loss of this federal funding has significantly impacted the Delaware, Potomac and Susquehanna River commissions. In addition, during certain fiscal years, some States have not met their dues obligations, causing some commissions to experience shortfalls. The strength of the compact has aided some, but not all, of the interstate agencies in compelling States to meet their dues obligations.

The U.S. EPA annually awards Clean Water Act Section 106 grants to the six interstate commissions. The FY 2006 grants ranged from $557,200 to $1,280,210. The impact of this funding on the commissions' budgets varies considerably. It accounts for 45 percent of the budget of the Interstate Environmental Commission, but only 10 percent of the New England commission's budget. For most of these commissions, the Section 106 funding is not considered a major funding source for their organizations.

The six "Section 106" commissions have anywhere from 13 to 45 staff. Some use contractors, temporary staff, and paid or unpaid interns. All are organized in a traditional hierarchical structure with a chief executive (executive director) and department managers. For most of the commissions, the majority of the staff positions are scientific or technical. Many have a significant number of positions devoted to communications, education and outreach.

OTHER INTERSTATE ORGANIZATIONS AND INITIATIVES

In addition to the six interstate commissions that receive Clean Water Act Section 106 funding, a number of other organizations and regional programs may provide insight into potential approaches for the Upper Mississippi River. A few of these organizations are briefly described here.

Tahoe Regional Planning Agency (TRPA)

The Tahoe Regional Planning Agency was created by a compact between California and Nevada to address development pressures on Lake Tahoe. Of particular concern was the impact that population growth was having on water quality, especially the clarity of the lake. The original compact was adopted in 1969 and amended in 1980.

TRPA has extensive regulatory authority regarding development, including setting "environmental threshold carrying capacities" and standards related to water quality, air quality, scenic resources, vegetation, and land use. The compact created a 15-member Governing Board, including seven from California, seven from Nevada and one non-voting Presidential appointee. Some members of the State delegations are appointed by county boards or city councils, while others are appointed by the Governors or state legislatures, or are specified to be state officers, such as the Secretary of State or Director of the state Department of Natural Resources. The compact provides for a majority of the seats to be held by citizens from outside the Tahoe Region who represent at-large voters from the two States. This ensures that the Board reviews issues not only from a local perspective, but also from statewide and nationwide viewpoints.

A 19-member Advisory Planning Commission assists the Governing Board with technical and scientific issues. The Commission is made up of local planners, general members of the community and other representatives who are experts in their fields.

Chesapeake Bay Program

The Chesapeake Bay Program was created in 1983 when the States of Virginia, Maryland, Pennsylvania, the District of Columbia, the Chesapeake Bay Commission, and the U.S. Environmental Protection Agency signed an agreement that established a partnership to protect and restore the Chesapeake Bay's ecosystem. A second agreement was signed in 1987 and amended in 1992. In June 2000, Chesapeake Bay Program partners adopted the Chesapeake 2000 agreement, a strategic plan to achieve a vision for the future of the Chesapeake Bay.

The Chesapeake Executive Council consists of the Governors of Maryland, Pennsylvania, and Virginia; the Administrator of the U.S. Environmental Protection Agency; the Mayor of the District of Columbia; and the Chair of the Chesapeake Bay Commission, which is a legislative body serving Maryland, Pennsylvania, and Virginia. The Executive Council establishes the policy direction for restoration and protection of the Chesapeake Bay and its living resources. In addition, the organizational structure includes a variety of committees, composed of representatives from the member organizations that implement the program.

The Chesapeake Bay Program Office (CBPO) of the U.S.EPA represents the federal government in the implementation of strategies to meet the restoration goals of the Chesapeake Bay Program. The CBPO is located in Annapolis, Maryland and has a staff of approximately 70, including 23 from U.S. EPA, 33 non-EPA, and 12 research fellows.

The Chesapeake Bay Program received a federal appropriation, through EPA, of approximately $22 million in FY 2006. Although EPA takes the lead in Chesapeake Bay activities for the federal government, 11 federal departments, 3 States, 15 academic institutions, and 19 non-profit organizations participate in the program, contributing funding, staffing, and technical assistance.

Great Lakes

There are a number of interagency organizations on the Great Lakes, including the International Joint Commission (IJC) established by the Boundary Waters Treaty of 1909 and the Great Lakes Commission, established by interstate compact in 1955. However, much of the interstate coordination related to implementation of the Clean Water Act is led by U.S. EPA's Great Lakes National Program Office (GLNPO), established in 1987.

The stated purpose of EPA's GLNPO is to "oversee and help all Great Lakes stakeholders work together in an integrated, ecosystem approach to protect, maintain, and restore the chemical, biological, and physical integrity of the Great Lakes." It monitors lake ecosystem indicators; manages and provides public access to Great Lakes data; helps communities address contaminated sediments in their harbors; supports local protection and restoration of important habitats; promotes pollution prevention through activities and projects such as the Canada-U.S. Bi-national Toxics Strategy (BNS); and provides assistance for community-based Remedial Action Plans for Areas of Concern and for Lakewide Management Plans.

The GLNPO office is located in Chicago, Illinois and has a staff of 46 and a budget of $15 million. For FY 2006, the Great Lakes Program received a federal appropriation of approximately $21 million. In addition, GLNPO administers the 2002 Great Lakes Legacy Act, which addresses clean up of contaminated sediment. In FY 2006, the Legacy Act program provided an additional $29 million to the Great Lakes region.

In May 2004, President Bush signed an Executive Order creating the Great Lakes Interagency Task Force, under the lead of EPA. The Task Force brings together ten agency and cabinet officers to provide strategic direction on federal Great Lakes policy, priorities and programs. In addition, the order directs EPA to work with the Chairs of the Council of Great Lakes Governors and the Great Lakes Cities Initiative to convene a complementary process of regional collaboration.

Lake Champlain Basin Program (LCBP)

In 1990, Congress amended the Clean Water by adding a section authorizing development of a comprehensive pollution prevention, control and restoration plan for Lake Champlain. Implementation of that plan is undertaken through the Lake Champlain Basin Program (LCBP), which works in partnership with government agencies from New York, Vermont, and Quebec, private organizations, local communities, and individuals. Core funding for the LCBP is through the US Environmental Protection Agency. The FY 2006 appropriation was approximately $2 million.

The LCBP is administered jointly by several agencies: the U.S. Environmental Protection Agency (Regions 1 and 2), the New York State Department of Environmental Conservation, the Vermont Agency of Natural Resources, the Quebec Ministry of the Environment, and the New England Interstate Water Pollution Control Commission. The LCBP has a core staff of approximately 8 people, but also receives support from 5 other organizations.

Chapter 6

Organizational Options for Interstate Water Quality Management

QUESTIONS: If a new interstate organization were to be established on the Upper Mississippi River to address water quality management needs, what are the institutional options? In particular, what are the different types of legal authority, organizational structure, and funding sources that could be considered? What are the advantages, disadvantages, and other considerations associated with each of the alternatives?

BASIS OF AUTHORITY

The authority upon which an interstate relationship is established defines the nature of the affiliation of the States and other parties and determines the legal standing of the relationship. The authority serves as the foundation for the organization, often defining its purpose and governing structure. Because the nature of the authority is the underpinning of the organization, it is a major consideration at the time a new organization is being created. The following authority options are not entirely mutually exclusive, but represent the major types of water-related interstate authorities: interstate compact, federal-state compact, administratively-established commission, and federal program.

Interstate Compact

Interstate compacts are contracts between two or more States that establish a formal legal relationship to address common problems or resolve interstate disputes. Interstate compacts are used in a wide variety of areas, including law enforcement, probation and parole, transportation, taxes, education, emergency management, insurance products, mental health, workers compensation, and low-level radioactive waste, as well as river management and water rights. Some interstate compacts authorize the establishment of multi-state government bodies, while others simply establish uniform regulations without creating any new agencies. Interstate compacts generally take precedence over state law.

There are approximately 200 active interstate compacts nationwide, 3/4 of which have been created in the past 75 years. There are 22 compacts that are national in scope and 30 compacts that are regional in scope, with 8 or more member States. On average, States belong to 25 interstate compacts. Interstate compacts are enjoying a recent resurgence. In 2006, there were 16 interstate compacts established and 100 compact bills pending in state legislatures. Another 30 compacts are under consideration in Congress.

Creating an Interstate Compact

Compacts are essentially contracts among States. They are thus adopted by action of each state legislature and must adhere to state constitutional requirements regarding separation of powers, delegation of power, and debt limitations. Each state legislature must adopt identical compact language.

The U.S. Constitution (Article I, Section 10) requires Congressional consent for interstate compacts. However, the purpose of this provision is not to inhibit the States' ability to cooperate with each other, but rather to protect the pre-eminence of the federal government. Accordingly, not all compacts require Congressional consent. Only those that affect a power delegated to the federal government or alter the

political balance within the federal system require the consent of Congress. However, even if not required, it is often considered desirable to have express Congressional consent for an interstate compact, to help protect it against invalidation by a future act of Congress. Fortunately, the consent requirement is typically not particularly burdensome. It can be obtained either before or after the time the compact is created.

Regardless of how complex or controversial they are, interstate compacts can take years to establish. Adoptions of recent compacts, such as those related to adult offender supervision and insurance product regulation, have taken as little as 2-3 years. However, compacts that address more controversial natural resource issues typically take longer. The average time required to enact 19 compacts governing river management and water rights was nearly 9 years.

Components of an Interstate Compact

No two interstate compacts are alike. However, they typically include one or all of the following:

- Statement of purpose, including legislative findings and declarations of policy.
- Goals and objectives.
- Description of the function, powers and duties of any intergovernmental agency that is created.
- Provisions related to representation of the parties in the governing structure and with regard to administration of the compact.
- Substantive regulations or standards.
- Financial participation requirements, such as dues or assessments.
- Enforcement guidelines.
- Provisions governing activation, amendments, withdrawal, and termination.

Advantages of an Interstate Compact

- Most powerful and durable of the authority options.
- Clear and explicit legal standing and potentially extensive capabilities of the implementing interstate organization.
- Enhanced funding stability.
- Protects state sovereign authority over an interstate resource (in contrast to potential increase in federal power).
- Provisions are enforceable. (A violation of compact terms, like a breach of contract, is subject to judicial remedy. Since compacts are agreements between States, the U.S. Supreme Court is the usual forum for resolution of disputes.)

Disadvantages of an Interstate Compact

- Requires broad understanding of and support for the purpose of the compact by state legislators, the public, the regulated community, and others who may not have extensive knowledge of the issues or compact law.
- Length of time required to establish (i.e., drafting negotiations and approval by state legislatures).
- Ceding of state authority may be perceived as a disadvantage.
- Given the durability of the compact and the difficulty of the amendment process, the original provisions should carefully balance the need for explicitly defined powers with the need for flexibility to accommodate future unforeseen needs.
- Exclusion of membership for non-state entities can limit a compact's planning and coordination potential. This can be mitigated by providing observer status or associate membership.
- Enforceability can be problematic in a practical sense.

Compact Considerations Related to the Mississippi River

Congressional Consent — Congress has already given its consent to the five Upper Mississippi River States to negotiate an interstate "agreement." In particular, the following language is contained in the 1986 Water Resources Development Act:

> "The consent of the Congress is hereby given to the States of Illinois, Iowa, Minnesota, Missouri, and Wisconsin, or any two or more of such States, to enter into negotiations for agreements, not in conflict with any law of the United States, for cooperative effort and mutual assistance in the comprehensive planning for the use, protection, growth, and development of the Upper Mississippi River system, and to establish such agencies, joint or otherwise, or designate an existing multi-state entity, as they may deem desirable for making effective such agreements. To the extent required by Article I, section 10 of the Constitution, such agreements shall become final only after ratification by an Act of Congress." (Section 1103(d)(1) of P.L. 99-662)

This provision was included in the 1986 Act authorizing the Corps of Engineers to undertake the Upper Mississippi River System Environmental Management Program (EMP) for habitat restoration and monitoring. Although the provision is not directly related to the EMP, the EMP authorizing legislation was a convenient vehicle. In 1982-83, when the EMP legislation was originally drafted, the UMR States were trying to determine what kind or organization they wanted to succeed the River Basin Commission that had been terminated by the Reagan Administration. The Commission's legal counsel at that time, who was assisting in the transition from the previous Basin Commission to UMRBA, recommended that a Congressional consent clause be included. It has never been utilized.

Mississippi River Interstate Pollution Phase Out Compact — In 1987, the State of Louisiana proposed an interstate compact to:

- Reduce and eliminate river pollution.
- Encourage alternatives to discharging wastes into the river.
- Collect and share information on technologies, methods, incentives, and regulatory concessions to improve river water quality.
- Establish a waste registry for disseminating waste information and supporting waste exchanges and productive reuse.

The compact would have created a Mississippi River Interstate Pollution Control Commission to:

- Establish guidelines for classification of water use.
- Review and make recommendations to States regarding discharge reduction credit programs.
- Develop and implement a comprehensive water quality management plan to eliminate waste discharge to the river by 1998.
- Establish a waste registry to "maintain a reasonable interstate balance of trade in the transfer of waste between signatories.

The Louisiana state legislature adopted the compact in 1987, after which the Secretary of the Louisiana Department of Environmental Quality (DEQ) wrote letters to the Governors of each of the other nine Mississippi River States asking for their support. All five of the upper basin States responded individually, expressing interest in working with other States on the Mississippi River, but reservations about the value of and need for a compact. A number of States (Minnesota, Wisconsin, and Iowa) mentioned in their response that they already coordinate their programs through organizations like UMRBA. In addition, some States expressed concerns about the possibility of conflict with state law and the formality and potential bureaucracy of the compact. UMRBA also wrote a letter in 1987 to the

Secretary of Louisiana DEQ, offering to serve as a forum for future interstate discussions about the compact, if Louisiana was still interested in pursuing the idea. No further discussions took place and ultimately, none of the Mississippi River States, other than Louisiana, adopted the compact. In 1989, Louisiana Congressman Richard Baker introduced legislation in the U.S. House of Representatives granting the consent of Congress to the Mississippi River Pollution Compact. However, Baker withdrew his bill when it was discovered that Louisiana was the only State that had adopted the compact.

Federal-State Compact

A federal-state compact is substantially similar to an interstate compact, with the addition of some type of formal federal membership, either voting or non-voting. Operationally, the federal government's role under such a compact is similar to the States' role, except in the area of judicial enforcement. The federal entity is exempt from the Compact and Contract clauses of the U.S. Constitution. Federal compliance with a compact action is not enforceable by other member States if the U.S. Congress elects not to cooperate.

Four of the six interstate organizations that are currently eligible for Section 106 funding under the Clean Water Act are federal-state compacts including the Delaware River Basin Commission, the Interstate Commission on the Potomac River Basin, the Susquehanna River Basin Commission, and the Ohio River Valley Water Sanitation Commission (ORSANCO). The federal representative to the governing body is typically appointed by the President.

Advantages of a federal-state compact include many of the same advantages associated with the durability and standing of an interstate compact. In addition, the federal-state compact has the advantage of including the federal government as a partner, a feature that may be particularly important when there is an overriding federal interest in the issues addressed by the compact or the geographic area covered by the compact.

The disadvantages of a federal-state compact are also similar to those of the interstate compact. In particular, the process for establishing the compact is complicated by the addition of the United States as a party, which increases the length of time and political obstacles. Also, as many of the existing interstate compact river commissions have experienced, having the federal government as a party to the compact does not necessarily guarantee federal funding or active participation.

Administratively-Established Interstate Commission

Interstate commissions that are not based on an interstate compact can vary widely in their purpose, structure, and mechanism for creation. However, in general, they are less formal and have fewer powers and authority then organizations that arise from compacts. As a result, their effectiveness can vary significantly. The UMRBA is an example of such a commission, but there are countless others at all levels of government and for a wide variety of purposes. Other relevant water resource examples include the Western States Water Council, Council of Great Lakes Governors, and the Missouri River Basin States Association, an organization currently undergoing considerable growing pains and re-organization.

General Characteristics

- Involves an explicit agreement among the States, but that agreement can be manifested in a variety of ways including resolutions or memoranda of agreement that are executed by Governors or directors of state agencies.
- Creation of an implementing or governing body.

- Defined procedures to guide decision-making.
- Level of authority that does not interfere with the federal government's primacy.
- "Soft" management functions (e.g. planning, coordination; policy analysis; advocacy; and other non-regulatory, non-binding functions).

Advantages

- Flexibility. Focus can be readily redirected to address emerging issues.
- Relative ease of establishment. Compared to compacts, there is less need for specificity and legal considerations in the founding document, no involvement of state legislatures, and thus a shorter length of time to establish.

Disadvantages

- Limited authority. Institutional power is derived solely from the support and confidence vested in it by its member States at any given point in time.
- Limited autonomy and independence.
- Less long term funding stability.
- Limited ability to attract outside funding sources.

Considerations Related to the Upper Mississippi River

With regard to organizational options for the Upper Mississippi River, the key consideration in establishing a non-compact interstate commission is whether to build upon the existing UMRBA structure and organization or create a new and separate interstate organization. In particular, there appear to be 3 main options:

- Restructure UMRBA — This option would presumably involve amending and re-executing the foundational agreement upon which UMRBA is based (i.e., 1981 Articles of Association). Potential amendments to be considered would include redefining the purpose, powers, and membership. Because the current Articles of Association are broadly written, none of the provisions preclude general planning and coordination functions. However, there is little in the Articles that explicitly describes the management or policy issues of focus. It simply states that "the principal purpose of this Association is to maintain communication and cooperation among the States….on matters related to water resources planning and management in the Upper Mississippi River Basin." The members are defined as the five basin States, with the representatives of those members appointed by the Governors.

  UMRBA's Articles of Association have been amended only 3 times since originally executed 25 years ago. In 1982 and 1983 the duration clause was amended, extending the initial duration from one year to three years and then ultimately eliminating the duration. In 1991, a minor amendment was made that legal counsel felt was necessary to allow UMRBA to contract with a national organization (the Interstate Council on Water Policy (ICWP)) to provide staff services to that Council. That relationship with ICWP no longer exists.

- Formalize the UMRBA Water Quality Task Force — This option would not necessarily involve any changes to UMRBA's governing documents. Instead, the purpose, functions, and membership of the UMRBA Water Quality Task Force would be explicitly defined in some sort of formal document. In addition, that document would define the relationship between the Task Force and UMRBA's governing body. Currently, there is no such document for the Task Force or other ad-hoc committees of UMRBA, such as the UMR Spills Group that UMRBA has sponsored since 1989.

- Create a New Organization — This option would not involve UMRBA in any way, other than informally supporting the deliberations and negotiations to launch a separate interstate water quality entity.

Federal Program

Using federal law to create a specific water quality protection "program" for the Mississippi River is an option that is quite different from other interstate organizational alternatives. There are a number of examples of federal programs related specifically to water quality, all of which are under EPA leadership and funding. In particular, the Chesapeake Bay, Great Lakes, and Lake Champlain Programs are all authorized in the Clean Water Act. Typically, these sorts of federal programs are established to implement a plan or an agreement that the States and EPA developed. The initial development of that plan may also be mandated in federal law. All of these geographic-based programs have interagency committees, advisory bodies, or commissions that bring all the relevant parties together to help implement the program.

To the extent that it is possible to generalize about these sorts of programs, the following considerations, strengths, and weakness are noted:

- These types of programs carve out a particular niche for delivery of federal assistance to specific regions of the country, thereby adding significantly to the resources available to address water quality problems in those areas. For example, in FY 07, EPA's budget includes $26 million for the Chesapeake Bay Program, $20 million for the Great Lakes Program and $2 million for the Lake Champlain Program. These funds are in addition to the funds that the States in these regions otherwise receive for their base water quality programs.
- There is obviously a strong federal leadership role in such programs. The States participate in a wide variety of ways, but experience has shown, particularly on the Great Lakes, that the States are not always comfortable with their ability to influence the decisions and policies.
- Given the fact that these programs need Congressional authorization and annual funding, they require substantial political influence to establish and sustain. This is particularly true given their regional nature, where one area of the country clearly benefits. In addition, there is some evidence that creating new additional place-based programs would not be supported by EPA, which has grown to realize that sustaining such regional programs diminishes its ability to support its base programs.

ORGANIZATIONAL STRUCTURE

The structure of an interstate organization (i.e., commission) involves a number of interrelated issues including representation of the parties, decision-making processes, and staffing arrangements. Some of these issues may be dependent upon the type of authority in which the organization is grounded. For instance, an interstate compact cannot have non-state entities as parties to the compact, thereby affecting the role of such entities in the governing structure. However, many of the structural questions are related to function, efficiency, or political considerations and should be determined in advance so they can be set forth in the documents establishing the commission.

Representation

How the governmental parties and other stakeholders are represented in the governing structure of a commission may involve a variety of considerations, including how representatives are appointed or

selected, who they are, and how many there are. Many of these considerations are interrelated and include the following:

State Representatives

- Governor appointment — If the appointment is left to the discretion of the Governor, it is possible that the individual may not be from an agency with the most direct relationship to water quality or, in some cases, may not be within the state government structure at all (e.g., a private citizen). This deference to the Governors' wishes may have advantages, such as strengthening the relationship to the Governors' offices and thus keeping the commission politically visible and linked to state policy and budgetary decisions. However, if the Governor does not choose to appoint someone from a state executive agency, it could also lead to situations in which the ability of the State's representative to link the work of the commission directly to state agency management is compromised. It may also result in dissimilar representation among the States, with some States being represented by state cabinet members and others by program staff or private citizens.

- Specified in state statute -— Interstate compacts often mandate that the member States be represented by individuals chosen in the manner provided by each state legislature. Thus, when the state legislature approves the compact, it also identifies how its State will be represented. For example, when the Louisiana legislature approved the Mississippi River Interstate Pollution Phase Out Compact in 1987, it also mandated that Louisiana be represented on that commission by the Secretary of the Louisiana Department of Environmental Quality. Another example, directly affecting the UMRBA, is the provision in Minnesota statute that the Chair of Minnesota's Environmental Quality Board (EQB) represent the Governor on all interstate water resource organizations. However, at least in the case of UMRBA, the practice that has evolved over time is for the EQB Chair to appoint the Deputy Commissioner of Minnesota's Department of Natural Resources as an alternate, who then takes the lead in representing Minnesota on UMRBA.

- Who are the representatives? — Assuming that the individuals who represent the States are specified in the founding documents of the interstate commission, consideration should be given to who the "ideal" appointee would be. If the representative is from within state government, it could range from the Governor to cabinet level leaders, to mid-level managers or technical staff. However, there is frequently a need to have all these levels involved. The participation of policymakers, who can commit resources and make decisions, is needed. But they often do not have the time or sufficient knowledge, and therefore delegate the responsibility. This problem is faced by countless interagency commissions and compact agencies and there are ways to overcome it. It is common to use "alternates" or "advisory committees" composed of state agency staff to support the designee. For instance the Delaware River Basin Compact specifies that the four basin States' Governors are the States' commission members. However, the compact also directly provides for the Governors to appoint alternates.

- How many representatives per state? — Each State typically has the same number of representatives, but that number needs to be specified. Considerations include: the efficiency of smaller numbers for decision-making, odd numbers to avoid tie votes, and multiple representatives to bring varied perspective and expertise. Among the interstate commissions that receive Section 106 funding, the governing boards range in size from 5 (one representative of each member) to 35 (five representatives of each member).

Federal Representatives

- If the federal government is party to a compact, the federal representative is appointed by the President. This opens the possibility of having that individual be from any one of many federal agencies or from outside the federal government structure entirely.
- If the federal representation is to be prescribed in whatever documents govern the establishment of the interstate organization, then it will be necessary to identify the most appropriate type of representation. Considerations are similar to those associated with defining the most appropriate state representation. Should U.S. EPA be a member of the organization? If so, how are the individual Regions involved and represented? How is EPA Headquarters involved? Do other federal agencies have representation (e.g., U.S. Geological Survey, U.S. Department of Agriculture)?

Other Representatives

- Should representatives of nongovernmental organizations, municipalities, counties, or other local units of government be involved? If so, in what capacity? Possibilities include advisory or full voting members. However, voting status may not be possible in a governing body established by interstate compact.
- If nongovernmental representatives are involved, what sectors and types of groups should be represented? Options might include agriculture, environmental groups, water utilities, industry, or the regulated community.
- If non-governmental or local government representatives are involved, how should they be chosen or selected? The answer to this question might depend upon the role they are expected to play. If they are full members of the decision-making body, some accountability is necessary and it may be appropriate to have them appointed by the Governors. However, if their role is strictly advisory, it may be appropriate to establish a less formal process for recruiting and selecting such representatives.

Decision-Making Process

- Is consensus required or is a majority of voting members sufficient for the governing body to make decisions? Is this the same for all types of decisions? In the case of the Interstate Commission on the Potomac River Basin, the compact differentiates between actions related to "policy or stream classification or standards" and the transaction of other business. The Delaware River Basin Commission requires a majority vote of its 5 commission members, except for adoption of the budget and declarations of drought, which require unanimity.
- Are public hearings a required part of the decision process? If so, for what types of decisions? Typically, public hearings are associated with entities that are created by state or federal law and thus have a higher degree of regulatory authority and need for accountability. For example, the compact establishing ORSANCO requires that the Commission hold a hearing if it intends to issue an order upon an entity discharging into the Ohio River. It also holds hearings before adopting water quality standards. The Susquehanna River Basin Compact requires the Commission to hold at least one public hearing in each State prior to the adoption of its comprehensive plan. The Delaware River Basin Commission holds hearings on a wide variety of issues and decisions, including adoption of its annual budget.

Staff

Although it is probably not advisable to specify staffing arrangements for an interstate organization in the governing documents, some basic decisions may need to be made in advance to ensure that the organization is empowered to secure the staff services it anticipates needing. Even the UMRBA's relatively informal governing document (Articles of Association) confers upon UMRBA the power to obtain staff. Considerations include:

- Staff size and areas of expertise
- Is the staff independent or composed of individuals on interagency assignments from member agencies?
- Does the staff report to the executive director or the governing board?
- Is the staff centrally located or dispersed throughout the geographic area?

FUNDING SOURCES

How the functions and operations of an interstate organization are funded will, in part, depend upon its authority and structure. However, to some extent, all of the following sources may be possible. The question for consideration is not only what sources are appropriate and feasible, but also what is the most appropriate balance among them. In that regard, experience indicates that, similar to a good investment plan, a balanced "portfolio" is important. In addition, the greater the reliance on "outside" funding, the less responsive the organization is to its member States' needs and priorities.

State dues contributions or assessments

- Allocation of state dues among the member States can either be on an equal basis or based upon a formula reflecting population, river miles, land area, or any other relevant metric. UMRBA dues are the same for each State and currently are set at $48,000 annually. However, not all States contribute the full amount. The only consequence of defaulting on UMRBA dues is a proportional reduction in funds available to reimburse that State's members' travel.

  In contrast, ORSANCO dues are based on a combination of population and land area. In FY 07, ORSANCO dues ranged from $12,700 (New York) to $327,400 (Ohio). Given the legal standing of an interstate compact, a compact-based commission can seek to enforce payment of its state dues through federal courts, if necessary.

- There are a variety of revenue sources and mechanisms States can use for paying dues to an interstate commission. The state legislature could make an appropriation from the State's general funds directly to the interstate agency. Alternatively, a state agency could make the payment from within its own budget and funding sources. Options related to that alternative might include part of the State's Section 106 grant from EPA, operating budget from state general funds, or dedicated funds established for specific purposes by the State.

Grants, Contracts, and Cooperative Agreements

- Sources of potential grant and contract funds include federal agencies (particularly EPA), member States, and private foundations. Some EPA grants and funding agreements may be limited to those agencies that have Clean Water Act responsibilities. For instance, this has proven to be the case with EMAP.

- There may be opportunities for an interstate commission to contract directly with a single state for a specific work item. An example of this type of relationship would be if a member State uses the interstate agency as an outside contractor to develop a TMDL or undertake a particular study. For example, Pennsylvania, which pays $867,000 in annual dues to the Delaware River Basin Commission, provided an additional $265,000 to the Commission to develop a ground water protection plan for southeastern Pennsylvania.

Fees

- Some interstate compact commissions perform functions that have fees associated with them. For interstate agencies like the Port Authority of New York and New Jersey, which collects fees for use of its tunnels and bridges, those fees constitute a substantial portion of their revenue. Other agencies, like the Tahoe Regional Planning Agency, which charges fees for permit applications and environmental mitigation, rely less on that source of revenue. For example, in FY 06, the Tahoe agency received approximately 11 percent of its revenue in fees. Given the type of functions currently anticipated for a UMR interstate agency, fees are not expected to be relevant.

Direct Congressional Appropriation

- If the U.S. government is a member of the compact, it would be expected to contribute annual dues to support the operation of the commission, similar to the member States. However, this federal contribution is not enforceable in the same way that state dues are. In fact, the Delaware, Potomac, and Susquehanna River commissions have all lost their federal funding in recent years. For example, the federal government used to pay $694,000 in dues to the Delaware River Basin Commission. This contribution constituted 20 percent of the Commission's dues revenue and was contained in a separate line item appropriation in the federal budget.

- Direct Congressional appropriations are also possible if there is a specific federal program authorized, such as the Great Lakes, Chesapeake Bay, or Lake Champlain programs. These funds are generally used to both operate the EPA program offices, as well as conduct studies and monitoring and support on-the-ground projects for water quality improvement.

Chapter 7

Conclusions and Recommendations

During March through November 2006, the Upper Mississippi River Basin Association convened a series of meetings at which the state water quality directors in Illinois, Iowa, Minnesota, Missouri, and Wisconsin considered the question of whether a new interstate water quality organization is needed on the Upper Mississippi River. In particular, the information compiled and presented in this report was reviewed and discussed at those meetings. The following conclusions and recommendations are the result of those deliberations and were endorsed by the UMRBA in December 2006.

Conclusions

1) State water quality standards, assessments, monitoring efforts, and impairment listings on the Upper Mississippi River are inconsistent, despite ongoing coordination efforts. These inconsistencies lead to public confusion, inefficient allocation of resources, and vulnerability to legal challenge.

Differences in how the States implement their water quality management responsibilities on the Upper Mississippi River are the result of a combination of interrelated factors, including differences in state law and regulations, inconsistencies in how data are interpreted and utilized, and a paucity of resources to address the unique challenges associated with shared waterbodies of the size and complexity of the Mississippi River. These differences can result in an "unequal playing field" for industry and other permit holders, public confusion about the water quality of the river, and impede efforts to address priority water quality issues.

2) The Upper Mississippi River is a shared river that should be managed as an integrated system. Working together to manage and protect its interrelated parts is more effective and efficient than having each State work alone.

The Upper Mississippi River is the boundary between States and flows from upstream States to downstream States. Although each State has responsibility for some portion of the river, there is no single agency with responsibility for the river as a whole. Protecting river water quality can only be assured if all sources of pollution are addressed, whether those sources are within one State or many States. Thus, to be effective stewards of the Mississippi River as a shared water resource, the States must find new ways to work together. Working together can also bring new efficiencies to river management through consolidated and coordinated approaches to monitoring and research.

3) The UMRBA Water Quality Task Force has been instrumental in advancing interstate water quality efforts on the Upper Mississippi River. However, there are limits to what the Task Force and other informal coordination mechanisms can accomplish. Enhanced institutional capacity and standing is required.

Since creation of the UMRBA Water Quality Task Force in 1998, the States have been able to make great progress toward greater consistency on the river, particularly with regard to their responsibilities under the Clean Water Act. An interstate MOU was executed in 2003, establishing a single set of uniform assessment reaches for the Upper Mississippi River. In addition, through the UMRBA Water

Quality Task Force and other forums, the States share data, solicit each others' advice on interpreting that data, and consult on their assessments and listings for the river. However, this fairly informal coordination has its limits, often falling short when the impediments to consistency result from differing state water quality standards or other policy or legal issues beyond the States' ability to simply resolve through the use of professional judgment.

4) Creating a new approach to interstate water quality management on the Upper Mississippi River should be an incremental process, building upon the institutions and processes already in existence.

Institutional change is difficult and thus taking small steps is easier than taking large ones. But an incremental process is also valuable because it is through experience that we learn what works best and what limitations must be overcome. It is difficult, if not impossible, to anticipate in advance all the needs and problems associated with establishing an interstate water quality agency on the river.

Recommendations

1) The States of Illinois, Iowa, Minnesota, Missouri, and Wisconsin should establish an interstate water quality agency for the Upper Mississippi River that coordinates and works on behalf of the States to fulfill their responsibilities under the Clean Water Act. The interstate water quality agency would be:

- **dedicated to preventing pollution and protecting and restoring the river's water quality,**
- **recognized as the "go to" agency for information on the river's water quality, and**
- **capable of doing what no single state can do alone.**

The recommendation to establish an interstate water quality agency on the Upper Mississippi River is motivated by the following factors:

- **Protecting and enhancing water quality requires managing the river as an integrated system.** The Upper Mississippi River is the boundary between States and flows from upstream States to downstream States. Protecting river water quality can only be assured if all sources of pollution are addressed, whether those sources are within one State or many States. Yet that cannot be accomplished within the current Clean Water Act program structure, which relies on individual States' authority. Such a system is not conducive to making management decisions on an interstate basis and lacks the capacity to address many of the unique and complex water quality issues associated with a large floodplain river system like the Mississippi River. Thus, institutional change will facilitate real improvements in water quality.

- **There are critical unmet needs that can be best addressed by working together.** In FY 2006, the five States spent a combined total of $720,000 on water quality activities specific to the Upper Mississippi River. This included monitoring, standards review, assessments, permits, enforcement, research, and coordination. In addition, the UMRBA devotes approximately $85,000 annually to interstate water quality coordination activities. Yet there are critical unmet needs, including monitoring and the development of nutrient and sediment criteria. In addition, the development of TMDLs on the Mississippi River will likely be a complex and costly endeavor, as evidenced by the fact that Minnesota will spend $2.6 million over five years on the Lake Pepin TMDL alone. We need to find the most economical ways to meet these growing needs. States can maximize their limited resources by pooling them, thereby avoiding unnecessary duplication of effort, adding value

through consolidation or collaboration, and leveraging outside funding sources to advance UMR water quality research and management efforts.

- **Consistency, transparency, and predictability will enhance public understanding and confidence.** It is understandably confusing when a single waterbody has a variety of different standards, designated uses, or water quality assessments. While there can be legitimate reasons for these differences, the public deserves to clearly understand the basis for the differences and have confidence that government agencies are working together to protect public health and the environment. In addition, business and industry value clean water, but cannot thrive in a regulatory environment of uncertainty and inconsistency. Consolidating and better coordinating water quality management on the Upper Mississippi River can help build public awareness and a level playing field for economic development.

- **The States and EPA have a continuing vulnerability to legal challenges due to inconsistent water quality standards on the UMR.** In 2003, the Sierra Club filed a petition requesting that EPA intervene to set water quality standards on portions of the Mississippi and Missouri Rivers because state standards were alleged to be inconsistent and inadequate. EPA denied the petition, but committed to working with the States to identify and resolve differences in 303(d) listings on the river. EPA's response to the petition also cited the work of the UMRBA Water Quality Task Force. Enhancing interstate coordination on the Upper Mississippi River, by establishing a new interstate organization, will not necessarily shield the States from legal challenges, but it will help maintain the States' leadership role.

2) The primary focus of an interstate water quality agency on the Upper Mississippi River should initially be on implementing water pollution control activities, under the federal Clean Water Act, on the main stem of the Upper Mississippi River.

Although there are a wide variety of water quality problems throughout the Mississippi River Basin that may benefit from enhanced interstate coordination, it is important to begin by focusing on a well-defined and limited suite of activities. The framework provided by the Clean Water Act — i.e., water quality standards, monitoring, assessment, and control strategies — is an excellent start, particularly on an interstate border river.

The proposed interstate water quality agency could play a variety of different roles. In some instances, it could actually perform some of the functions currently performed by individual States. In other instances, it should serve as a convener and coordinator among the States. And finally, in some cases, it could serve as a "contractor," taking on specific projects assigned by one or more States, such as TMDL development. However, as an agent of the States, the new water quality organization should not act in isolation or unilaterally. All functions for which the agency is responsible should be carried out in consultation with the States and be approved by the States for implementation. The specific functions and responsibilities recommended for both the individual States and an interstate agency of the future are summarized on Table 3.1 on pages 26-27.

3) The five States and U.S. EPA should share responsibility for funding an interstate water quality agency on the Upper Mississippi River.

The States cannot and should not be solely responsible for supporting the work of an interstate water quality agency on the Upper Mississippi River. The U.S. EPA has responsibility under Section 103 of the Clean Water Act to "encourage cooperative activities…, uniform State laws…., and compacts between States…." Thus, the States expect EPA to assist in creating and sustaining an interstate water

quality agency on the UMR, not only by providing financial support, but also by actively participating in the work of the interstate agency and recognizing the legitimacy of the interstate consultation processes and products that result.

There is no interstate organization on the Upper Mississippi River (UMR) that is eligible to receive funding under Section 106 of the Clean Water Act to support interstate water pollution control activities. Even if a new UMR interstate water quality agency, with substantial responsibilities under the Clean Water Act, is created, it would not be eligible either. To qualify for grants under Section 106, an interstate agency would have had to have been in existence in 1972, when the Clean Water Act was enacted. This artifact of history puts the Upper Mississippi River at a distinct disadvantage compared to a number of other interstate waterbodies that have equally challenging interstate water pollution control problems to address. Nevertheless, it is incumbent upon U.S. EPA to work with the States in this basin to find alternative sources of funding.

4) An incremental process should be employed to move from the status quo to a future interstate water quality agency on the Upper Mississippi River that has greater authority and capacity to work with and act on behalf of the five States. That interstate water quality agency should by created by building upon the existing Upper Mississippi River Basin Association.

A. Establish a UMRBA Water Quality Executive Committee (2006—2008)

The work of the UMRBA Task Force has been tremendously useful and significant advances in interstate coordination have been made during the past 6 years. The types of issues that the Task Force has addressed thus far have required the expertise and experience of technical staff involved in a wide range of Clean Water Act program activities, including assessments, standards, and TMDLs. As the realm of Task Force decisions and recommendations expands to include issues affecting state policy, administrative rules, and law, it is essential to involve the management level of the state agencies with delegated authority under the Clean Water Act. Establishing a Water Quality Executive Committee would help facilitate those connections.

The role of the Executive Committee will be to provide policy direction for the technical work of the Water Quality Task Force and to ensure that the products and efforts of the Task Force are recognized and incorporated, as appropriate, into the water quality programs of the States' environmental protection agencies. The intent is not to replace the excellent work of the Task Force, but rather to empower it.

B. Enhance UMRBA's capacity to address interstate water quality issues by increasing staff and resources devoted to Clean Water Act activities (2007—2015)

Formation of a UMRBA Water Quality Executive Committee represents an important expansion of the organization, designed to facilitate greater interstate coordination at the policy level. However, creating a forum for interstate discussion and coordination will not in and of itself accomplish the work that needs to be done on the Upper Mississippi River. To properly support the Water Quality Executive Committee and Water Quality Task Force, UMRBA will need to significantly increase its ability to take on planning and technical functions associated with actually implementing the Clean Water Act on the Upper Mississippi River. The specific technical expertise and number of employees will be determined by the particular water quality program activities that UMRBA pursues. Undoubtedly, these needs will evolve over time. While specific needs, and thus costs, have not yet been identified, it should be noted that other interstate commissions, with water quality functions similar to those envisioned for the UMRBA, have staffs that are 3 to 7 times the size of the current UMRBA staff.

To support this type of organizational growth, UMRBA will need to seek and secure substantially increased funding. As acknowledged in Recommendation #3, responsibility for funding should be shared by the five States and U.S. EPA. Funding stability will be an important consideration in the rate of growth.

Increasing UMRBA's staff and level of effort devoted to interstate Clean Water Act activities does not imply that UMRBA's efforts in other areas will be cut back. UMRBA will continue to support the States' needs for coordination activities related to ecosystem restoration and navigation, oil spill planning and mapping, floodplain management, and other river-related issues.

C. Reevaluate and determine need for interstate compact in the future (2012—2013)

An interstate compact is not likely absolutely necessary to accomplish the functions and responsibilities that the States have currently identified for an interstate water quality agency on the UMR. However, this conclusion may change, as the States gain more experience over the next few years with implementing increasingly robust interstate water quality programs through UMRBA.

Creation of an interstate compact is a lengthy and complicated process and it should thus not be undertaken until other organizational options have been pursued and tested. However, the option of creating an interstate compact on the UMR should not be totally dismissed because there are a variety of potential advantages to such a legally binding commitment among the States, including:

- Durability of authority
- Clear and explicit legal standing
- Enhanced ability to attract funding sources
- Enhanced funding stability
- Protection of state sovereign authority over an interstate resource (in contrast to potential increases in federal power)

If and when UMRBA reevaluates the merits of establishing an interstate compact, it should consider doing so in the context of <u>all</u> river-related interstate functions and management issues, not just water quality.

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