

# Connecting with Minnesota's Urban Rivers



Helping Cities Make Sustainable Choices for the Future

## MINNESOTA PLANNING



Room 300  
658 Cedar St.  
St. Paul, MN 55155  
651-296-3985

[www.mnplan.state.mn.us](http://www.mnplan.state.mn.us)

March 2002

**Minnesota Planning** develops long-range plans for the state, stimulates public participation in Minnesota's future and coordinates public policy among state agencies, the Minnesota Legislature and other units of government.

Minnesota Planning provides staff support to the Minnesota Sustainable Development Initiative, a collaboration of business, government and civic interests to promote policies, institutions and actions that ensure Minnesota's long-term environmental, economic and social well-being.

### Acknowledgments

This document was prepared by Minnesota Planning in consultation with the Department of Natural Resources, and with contributions from federal, state, regional and local governments, and from the private and not-for-profit sectors. Contributors included: John Helland of House of Representatives Research Department; Andrea Dick, Marcia Farinacci, Heidi Habeck, Andrew Koebrick, Rolf Nordstrom, Steve Reckers, Karen Roach, Michael Tietz and John Wells of Minnesota Planning; Charlotte Cohn, Sandy Fecht, Dale Holmuth, Steve Johnson, Peder Otterson and Steve Morse, Minnesota Department of Natural Resources; Dick Lambert and Carol Zoff Pelton, Department of Transportation; Jim Barton, Eli Cooper, Linda Henning, Bob Mazanec, Sandy Pinel, Kristina Smitten and Arne Stefferud, Metropolitan Council; Kate Hanson, Nancy Duncan and Susan Overson, National Park Service; Ann Calvert, Minneapolis Community Development Agency; Fred Neet, City of Minneapolis, Planning; Rachel Ramadhyani, Minneapolis Park and Recreation Board; Virginia Burke and Larry Soderholm, City of St. Paul, Department of Planning and Economic Development; Greg Page and Tim Griffin, St. Paul Riverfront Development Corporation; Whitney Clark, Friends of the Mississippi River; Theresa Benda and Peggy Lynch, Friends of the Parks and Trails, St. Paul and Ramsey County; Deborah Karasov, Great River Greening; Chris Hood, Coalition of Greater Minnesota Cities; Remi Stone, League of Minnesota Cities; Loren Gordon, Hoisington-Koegler Planning, Inc.; Rick Krueger, JLT Group; Cordelia Pierson, The Trust for Public Land; Steven Rohlf, city of Elk River; Robert Backman, River Keepers; Pat Nunnally, University of Minnesota; Barry Gore and Bill Weber, URS; Ben Wopat, U.S. Army Corps of Engineers; John Kerwin and Representative Phyllis Kahn. John Wells was project manager and John Helland helped with writing and research.

For further information, contact:

John Wells, Sustainable Development Director, at 651-297-2377 or [john.wells@state.mn.us](mailto:john.wells@state.mn.us)

John Helland, House Research, at 651-296-5039 or [john.helland@house.leg.state.mn.us](mailto:john.helland@house.leg.state.mn.us)

Upon request, copies of *Connecting with Urban Rivers: Helping Cities Make Sustainable Choices for the Future* will be made available in an alternative format, such as Braille, large print or audio tape. For TTY, contact Minnesota Relay at (800) 627-3529 and ask for Minnesota Planning.

### Statutory Authority

This document was prepared at the direction of the Minnesota Legislature in Laws of Minnesota 2001, First Special Session, Chapter 10, Article 1, section 11.

The cost of preparation of this report was \$25,000.

Cover photo by Minnesota Planning.

### Urban Rivers Sustainable Development Laws 2001, Special Session, Chapter 10, Article 1, Section 11

The Office of Strategic and Long-Range Planning, in consultation with the Department of Natural Resources and appropriate and affected parties, must prepare urban rivers sustainable development draft guidelines along the central business districts of rivers in urban areas of the state. The office must:

- (1) evaluate existing state and municipal laws;
- (2) evaluate the need for the Department of Natural Resources to have authority to adopt rules to implement the Mississippi River critical area order (Executive Order 79-19);
- (3) review federal legislation affecting urban rivers; and
- (4) identify the technical and administrative procedures to guide urban river development.

The draft guidelines must be made available to the environmental and economic development policy committees of the Legislature, and to interested parties, by January 15, 2002.

# Contents



**EXECUTIVE SUMMARY 1**

**INTRODUCTION 3**

**METROPOLITAN MISSISSIPPI 4**

**PRINCIPLES FOR SUSTAINABLE DEVELOPMENT OF RIVERS 7**

**DRAFT GUIDELINES FOR SUSTAINABLE DEVELOPMENT OF RIVERS 10**

**ISSUES SURROUNDING URBAN RIVERS 11**

**LAWS GOVERNING RIVER DEVELOPMENT 16**

**FEDERAL URBAN RIVER AUTHORITIES 19**

**APPENDIX**

## EXECUTIVE SUMMARY

How people and communities connect with rivers and how Minnesota's laws, rules and guidelines help or hinder these connections is the subject of this preliminary report.

Minnesota rivertowns have come to realize that their rivers can be a defining community asset. *Connecting with Minnesota's Urban Rivers* describes how cities can capitalize on that asset and how the state can better support them in sustaining the asset over time.

The Urban Rivers Act calls for draft guidelines that will lead to the sustainable development of urban rivers along central business districts (Laws of Minnesota 2001, Special Session, Chapter 10, Article 1, section 11). *Connecting with Minnesota's Urban Rivers* offers principles and design guidelines for river communities interested in adopting a sustainable approach to riverfront development. The approach requires a community to support long-range planning, engage all interests and act on a vision for its river based on sound management principles.

### PRINCIPLES

The principles describe a path for people and communities to connect with urban rivers in a way that creates social and economic opportunities while protecting natural resources.

- **Enlightened community interest.** Engaging people and communities with their rivers is essential to sustaining urban riverfronts.
- **Asset management.** Development should maintain and restore riverfronts as environmental, economic and social assets.
- **Endowment protection.** River management plans and decisions should identify, safeguard and restore the most fundamental and intrinsic qualities of each river reach.
- **Implications analysis.** Each development should be evaluated for its cumulative effects on the river and its consistency with a vision and plan for the river.
- **Results management.** Regulations should emphasize sustainable outcomes rather than prescribing how to reach those outcomes.

### GUIDELINES

The design guidelines give specific examples of what a community might look for or how it might approach development as it begins to make sustainable river connections. The goals are to preserve features of a river important to its ecological health while taking advantage of those that might serve as a positive community asset. This also means ensuring that private development makes the riverfront community a better place.

Five design elements to note:

- Create networks of green spaces that function as an ecological whole.
- Seek out and give priority to river-related and river-enhancing development opportunities. If there is no connection to the river, there is no need for a riverfront location.
- Establish public gathering places that capitalize on river views and access.
- Design the community around a river's unique natural and cultural features.
- Ensure that all groups have access to the river's amenities through river-connected open space, overlooks and view points.

### FINDINGS

The report discusses a number of issues. The findings cover a range of topics from the kind of standards used to guide development, to enforcement concerns to leadership and coordination in river management. The findings include:

- The state needs to adopt more sustainable approaches to the management of urban riverfronts. Although current law and practice make good efforts to preserve natural resources, there is much less effort to encourage sustainable economic or community development.
- A number of river cities have not adopted Shoreland Management ordinances, although they are covered by Floodplain Management ordinances.
- An integration of river-related rules could provide an opportunity to simplify, clarify and reach consensus on requirements for sustainable river management.
- Those carrying out the Mississippi River Corridor Critical Area Order are making important progress in protecting the resource values of the corridor, although cooperation is often less than it should be.
- Many people believe that the state makes value-laden judgments in its critical area enforcement decisions.
- People who should know do not seem to know what is expected of them in critical areas management.
- Flexible performance standards should be governed by principles and guidelines, and supplemented by dimensional standards, to guide Mississippi River critical area development.
- The critical area plan review process should be simplified and shortened, with duties assigned to the agencies best suited to administer them.
- A number of decisions about management of the river should be made before the need for a Mississippi River critical area rule can be determined. These include the consideration of new roles for the DNR and Metropolitan Council and the possible integration of the various land use related rules administered by DNR.

■ River stakeholders have an interest in the options and choices suggested in this report, and ought to be given ample opportunities to weigh in on them.

## MANAGEMENT

The report suggests a range of options to combat identified river management problems and address the findings. The key choices are:

- Keep the present situation of management, but develop and publicize educational materials and find ways to increase outreach about Mississippi River corridor needs.
- Give the DNR clear authority and an appropriation to do critical area rules by a certain date.
- Authorize and direct the DNR to evaluate, consolidate and integrate state land use requirements for the Mississippi River corridor, and possibly statewide.
- Provide additional technical and financial assistance to Mississippi River corridor communities so plans are updated in a timely manner.
- Change the critical area management lead from the DNR to the Metropolitan Council.
- Split responsibilities between plan oversight (Metropolitan Council) and ordinance enforcement (DNR).
- Give administrative penalty order authority to the critical area manager to help ensure sustainable management of the corridor.

Because the stakes are high and the interest likely widespread, the options should be discussed in an open, deliberate process.

## CONNECTING WITH MINNESOTA'S URBAN RIVERS: HELPING CITIES MAKE SUSTAINABLE CHOICES FOR THE FUTURE

Minnesota is often thought of as the "Land of 10,000 Lakes," but its rivers had a much greater influence on the state's early development. The Mississippi, St. Croix, Minnesota and Red rivers, in particular, played key roles in where people settled and how they prospered.

To a good extent, Minnesota rivers play these key roles today, but Minnesotans' relationship with their rivers is changing. Once limited to bearing waste and commerce, rivers today are viewed as a community's prized natural capital and a focal point of community vitality. The marketplace reflects this phenomenon. The value of riverine lands has increased in recent years, as has competition for these special spaces. No longer is the riverfront the exclusive domain of heavy industry.

Communities like Minneapolis, St. Paul, Hastings and Winona are taking steps to celebrate the river and build their vision of the future around a healthy urban river. Still, two-thirds of those responding to this project's informal survey of river interests believe that cities do not take full advantage of their connections to the rivers that flow through them.

The Urban Rivers Act of 2001, which called for this report, envisions downtown waterfronts that attract and engage people and businesses, yet preserve and enhance the natural environment. To accomplish this, a community must strike a balance between a waterfront's commercial, residential, recreational and ecosystem uses and needs, and must recognize the importance of all of these elements in its revitalization.

One goal is to build or rebuild the connections between downtowns, adjacent neighborhoods and their waterfronts. Another is to protect and enhance the natural environment that provides the basis for much of a river's value to a community. Understanding how to integrate these needs is the ultimate challenge of sustainable urban river management.

St. Paul's vision illustrates the importance of making this connection:

*The downtown offers a sense of inter-relatedness that cannot be easily duplicated. People will be attracted by choice, vibrancy and the diversity of experiences available – socially, culturally, economically and intellectually. As a place of assembly and recreation, the urban core linked to the neighborhoods will become a magnet, drawing visitors, tourists, residents, innovative start-up businesses and high-profile employers who are attracted by the unique features and high quality of life offered to their employees. Although it might require considerable commitment, this sustainable vision recognizes the intricate and delicate interdependence of environmental, social and economic issues. It aims in all aspects to create an urban area that is well integrated with its setting. It leaves*

*intact and reinforces natural and cultural resources for future generations. Its realization requires an effective and comprehensive approach, backed by strategies that address an extremely broad array of issues. [Saint Paul on the Mississippi: Development Framework, 1997. See [www.ci.stpaul.mn.us/stpaulonthemiss/frame/execsumm.html](http://www.ci.stpaul.mn.us/stpaulonthemiss/frame/execsumm.html).]*

### Winona Connects to the River



Minnesota Historical Society

City goal: Link the Mississippi River visually and further utilize the riverfront in downtown Winona.

Rationale: Developing downtown Winona's general appearance and access to the river is crucial to the core area of the city.

Objectives:

- Explore options for the rail storage area balancing the needs of all groups and consider/measure the demand of rail car storage. Is there the same demand as 30 years ago? Is there potential for interpretive historic signs?
- Present a vision of a downtown area more closely tied to the Mississippi River including a tour boat operating on the levee.
- Riverfront access, including docking facilities, should be developed.
- Identify boaters' needs.
- Work with marine operators on overnight dock facilities.
- Provide signs at docking areas including a listing of restaurants, hotels, and points of interest (work with the Convention and Visitors Bureau to coordinate the project).
- Support continuing efforts to develop the Upper Mississippi River Environmental Education Center in downtown Winona.
- Identify means of operating the Julius C. Wilkie Steamboat Center as an integral part of Winona's tourist base.

See [www.cityofwinona-mn.com/content/Planning/Compplan/compplan/sectionIV.html](http://www.cityofwinona-mn.com/content/Planning/Compplan/compplan/sectionIV.html).

The city of Minneapolis plan for the Mississippi River, *Above the Falls*, also presents a vision for how and why that city should connect to the river:

*The Upper River Master Plan presents a bold vision for developing the Mississippi riverfront into a regional park amenity in north and northeast Minneapolis. The need for action is clear: heavy industry on the river continues to pose land-use conflicts, while adjacent neighborhoods struggle to provide a quality of environment that attracts new investment. The opportunity is also clear: There is only one Mississippi, and the Upper River is the best potential large-scale amenity awaiting development in the City of Minneapolis. [Above the Falls: A Master Plan for the Upper River in Minneapolis, 2000. See [www.ci.minneapolis.mn.us/citywork/planning/planpubs/above-falls/report/index.html](http://www.ci.minneapolis.mn.us/citywork/planning/planpubs/above-falls/report/index.html).]*

Many river cities across the state are in the process of updating and rewriting comprehensive plans. Several of these are recognizing their river as an important asset and are making strides to better connect with it. Winona is one such city. During the 1995 update of its comprehensive plan, the city of Winona outlined several downtown revitalization and economic development strategies. Among them are goals to visually link the downtown to the river and further use the riverfront in the city's downtown. Similar efforts in other cities seek to bolster economic development by connecting the historical significance of the river to their city's downtown. See [www.cityofwinona-mn.com/departments](http://www.cityofwinona-mn.com/departments).

The city of Hastings is working on better connecting with the Mississippi River by reclaiming a 200-acre floodplain site, including an abandoned brownfield, and transforming it into a park. Still in the development phase, the project will ultimately include trails and natural areas, an interpretive center and a bandshell. Other site improvements will benefit roads and public access. See [www.ci.hastings.mn.us/Depts/Parks/InterpCenter.htm](http://www.ci.hastings.mn.us/Depts/Parks/InterpCenter.htm).

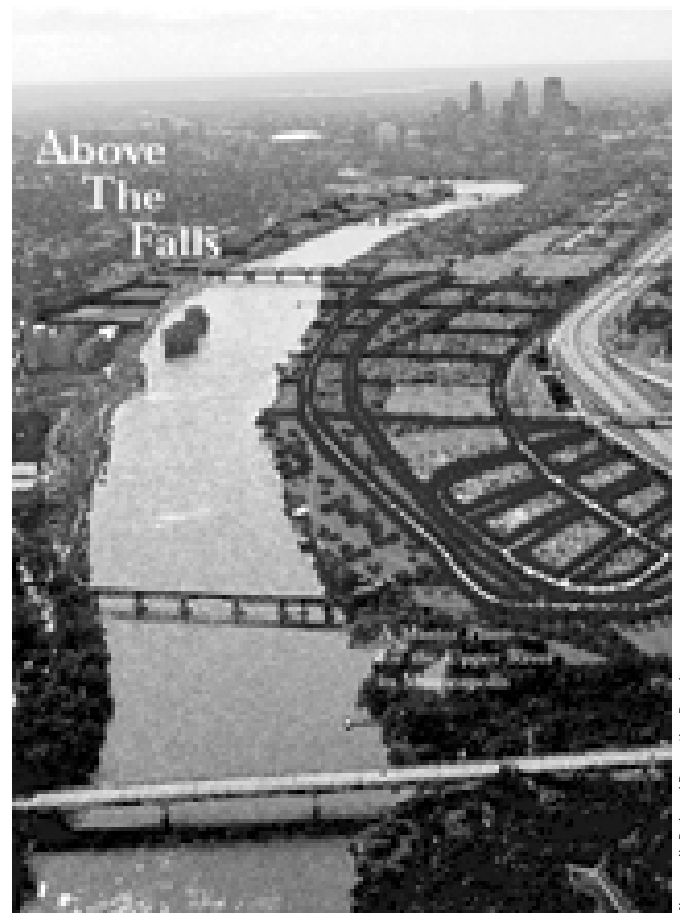
## METROPOLITAN MISSISSIPPI

Because so much of this report focuses on the Mississippi River in the metropolitan area, a brief summary of that corridor is in order. This 72-mile stretch of the river from Dayton and Ramsey to just below Hastings is covered both by a Governor's order designating it a "critical area," and by a federal designation as a national river and recreation area. Both designations resulted in a series of planning and implementation opportunities.

The Mississippi River Corridor Critical Area Order defines corridor boundaries, management districts, responsibilities, requirements, standards and guidelines for planning and ordinance development. The Department of Natural Resources is responsible for carrying out state duties under the order. The Metropolitan Council has

responsibility for coordinating plan development by communities along the corridor.

The 72-mile critical area reach is also within the federally designated Mississippi National River and Recreation Area, a unit of the National Park System administered by the National Park Service. The MNRRA boundary matches the state critical area boundary, and the comprehensive management plan for this unit of the National Park System incorporates the requirements of the critical area program. The critical area standards are the foundation for land use in the 30 county and municipal jurisdictions within MNRRA. The National Park Service works with the Department of Natural Resources, Metropolitan Council and local units of government to support implementation of the critical area program. Since 1995, the National Park Service has provided more than \$1 million in funding for critical area planning grants to MNRRA communities and for critical area program staff at Metropolitan Council and Department of Natural Resources.



Minneapolis Park and Recreation Board

Upper Mississippi River above the falls



## A Mississippi River Critical Area Chronology

**1973:** The Critical Areas Act is enacted by the Legislature and codified in Minnesota Statutes, Chapter 116G, giving the Governor the authority to create a critical area by executive order. Intention is to provide quick protection to natural resource areas that face a threat of development until permanent protection is established. Allows the Legislature or a regional development commission to make a critical area designation permanent.

Act requires the Environmental Quality Board to administer the program and oversee local government actions to adopt plans and ordinances and be notified of development projects.

**1976:** Governor Wendell Anderson designates the Mississippi River corridor in the Twin Cities as a critical area by executive order, establishing the original framework still in place today.

**1979:** Governor Al Quie continues the designation of the Mississippi River Corridor Critical Area, issuing Executive Order 79-19 within 90 days of taking office.

**1979:** The Metropolitan Council approves the permanent designation of the Mississippi River Corridor Critical Area.

**1988:** Congress establishes the Mississippi National River and Recreation Area to (1) protect, preserve and enhance the significant values of the Mississippi River corridor through the Twin Cities Metropolitan Area, (2) encourage coordination of federal, state and local programs, and (3) provide a management framework to assist the state of Minnesota and units of local government in the development and implementation of integrated resource management programs and to ensure orderly public and private development in the area. The MNRRA boundaries are the same as those of the state-designated Mississippi River Corridor Critical Area.

**1980s:** The EQB experiences budget difficulties and reduced staff, and many plans and ordinances wait on the sidelines.

**1994:** Comprehensive Management Plan for the Mississippi National River and Recreation Area recommended to the Secretary of Interior by Minnesota Governor Arne H. Carlson. The MNRRA plan incorporates by reference requirements of state Critical Area, Floodplain and Shoreland management programs.

**1995:** Secretary of Interior Bruce Babbitt approves the comprehensive management plan for the Mississippi National River and Recreation Area.

**1995:** As recommended by the MNRRA plan, an administrative reorganization order of the Commissioner of Administration shifts the responsibility for the Mississippi critical area from the EQB to the Department of Natural Resources.

In the process of developing or amending local critical area plans, communities can adopt on a voluntary basis additional policies from the MNRRA comprehensive management plan to achieve a greater level of protection for the river. Communities with approved critical area plans that also meet voluntary MNRRA guidelines are eligible for National Park Service matching grants. The NPS has awarded a total of \$300,000 for local matching grants to develop parks and trails, control exotic and invasive species, restore native habitat, stabilize shoreline and complete other river-related projects. National Park Service staff also provide technical assistance for plans and implementation projects. The NPS does not have authority to approve or deny specific local land use decisions. It only has direct management and regulatory authority over about 50 acres of islands owned by the NPS.

The pressures that metropolitan Minnesota imposes on the river as it flows by the 72-mile corridor are enormous. The mix of laws, institutions and people to cope with these pressures are found in four levels of government and make for a complex management system. That is why this short stretch of one Minnesota river is much of the focus of this report.

**Critical Areas Act.** In 1973, the Critical Areas Act became law (Minnesota Statutes, Chapter 116G). The Minnesota Legislature found that the development of certain areas possessing important historic, cultural or aesthetic values or natural systems that perform functions of greater than local significance could result in irreversible damage to these resources, decrease their value and utility for public purposes, or unreasonably endanger life and property. The state should identify these areas of critical concern and assist and cooperate with local units of government in preparation of plans and regulations for wise use of these areas. Pursuant to the statutes, the Environmental Quality Board adopted rules to implement the act (Minn. Rules, parts 4410.8100-4410.9910). See [www.dnr.state.mn.us/waters/programs/water\\_mgt\\_section/critical\\_area/index.html](http://www.dnr.state.mn.us/waters/programs/water_mgt_section/critical_area/index.html).

**Mississippi River designation.** The Mississippi River and its adjacent corridor were designated a state critical area on October 18, 1976, by Governor Wendell Anderson through Executive Order No. 130. The designation of the river and its corridor as a state critical area was reaffirmed and continued by Governor Albert Quie on March 27, 1979, through Executive Order 79-19, and made permanently a state critical area by action of the Metropolitan Council on July 12, 1979. In 1991, the Minnesota Legislature designated the federal Mississippi National River and Recreation Area, a unit of the National Park Service, as a state critical area in accordance with Minnesota Statutes, Chapter 116G.

**Corridor boundary.** The Mississippi River Corridor Critical Area extends from the northern borders of the cities of Dayton and Ramsey to the southern boundary of Dakota County on the west/



south side of the river and the boundary with the Lower St. Croix National Scenic Riverway on the east/north side of the river. Four corridor districts were established: rural open space, urban diversified, urban developed and urban open space. The boundaries of the Mississippi River Corridor Critical Area and that of MNRRA are the same, and include 72 miles of the Mississippi River in the metropolitan area and four miles of the Minnesota River west of Fort Snelling.

**Designation purposes.** The purposes for designating the Mississippi River as a state critical area include the following:

- Protecting and preserving a unique and valuable state and regional resource for the benefit of the health, safety and welfare of the citizens of the state, region and nation.
- Preventing and mitigating irreversible damage to this resource.
- Preserving and enhancing its natural, aesthetic, cultural and historical value for public use.
- Protecting and preserving the river as an essential element in the national, state and regional transportation, sewer and water, and recreational systems.
- Protecting and preserving the biological and ecological functions of the corridor.

**Plans and regulations.** The critical area program requires local units of governments and state and regional agencies to prepare or modify plans and regulations affecting lands within the critical area corridor. Consistent with the standards and guidelines in Executive Order 79-19, these must address land use and development, resource protection (especially riverbanks, bluffs, runoff, site alteration, vegetation, water quality, wetlands and floodplains), aesthetic quality protection, surface water uses, open space and recreation, view preservation and erosion. While plans are being completed, state and regional agencies and local units of government can approve development only in conformance with the interim development regulations. Once plans and regulations are adopted and approved, the interim development regulations are no longer in effect and development is permitted only in accordance with those plans and regulations.

Local units of government and regional agencies are required to adopt critical area plans and regulations that comply with Executive Order 79-19. The standards in Executive Order 79-19, as well as Minnesota Statutes and Minnesota Rules, are required to be followed by all local units of government in the corridor when preparing or modifying plans and regulations. Local units of government and regional and state agencies may permit development in the corridor only in accordance with those adopted plans and regulations or the interim development regulations.

**Agency roles in the critical area corridor.** Currently, the Department of Natural Resources, Metropolitan Council and

National Park Service work in partnership in various roles on the Mississippi River Corridor Critical Area and MNRRA Programs to protect and preserve the corridor.

■ **Department of Natural Resources.** The DNR has three primary roles for the Mississippi River Corridor Critical Area Program. The DNR has the mandate of reviewing existing plans and ordinances that affect lands within the critical area corridor for their compliance with state critical area standards and guidelines. Technical assistance for ordinance development is provided to local communities to ensure adoption and approval of a compliant state critical area ordinance or any ordinance amendments. The DNR will also provide individualized technical assistance for amending existing ordinances or developing proposed ordinances that will be consistent with the voluntary MNRRA comprehensive management plan policies. In addition, adoption or amendment of plans and ordinances affecting lands within the critical area and relating to Executive Order 79-19 purposes and standards are effective only after approval by the DNR. The DNR reviews the plans and ordinances to ensure their consistency with the provisions of the order following an evaluation by the Metropolitan Council.

In communities where critical area plans and ordinances have become effective, the local governmental unit must notify the DNR area hydrologist at least 30 days before action is taken for all development applications or variances requiring a public hearing or discretionary action. In communities where plans and regulations have not been adopted or approved, the DNR is also to be notified about additional types of projects listed in the interim development regulations. The DNR will review and comment on the project's compliance with critical area and state requirements and MNRRA policies, as well as provide technical assistance as requested. Notice of the final action is to be sent to the DNR.

In addition to the Mississippi River Corridor Critical Area program, the DNR works with local units of government and citizens on three other water-related land use management programs: Shoreland Management, Floodplain Management, and Wild and Scenic Rivers.

■ **Metropolitan Council.** The Metropolitan Council reviews existing plans that affect lands within the Mississippi River Corridor Critical Area. Technical assistance is provided to assist communities in amending or adopting plans to become consistent with Executive Order 79-19 standards and guidelines and any voluntary MNRRA comprehensive management plan policies. The council reviews all critical area plans and ordinances and makes an evaluation to the DNR prior to the approval decision. In addition, the council administers the pass-through funds from the National Park Service to provide financial assistance to communities wishing to revise their plans and ordinances. The council is also involved with oversight of the Metropolitan Land Planning Act.

■ **National Park Service.** The National Park Service supports critical area requirements as the foundation for land use within the Mississippi National River and Recreation Area. The NPS coordinates with the Department of Natural Resources, Metropolitan Council and local governments regarding land use in the river corridor. The NPS has provided funding to the state agencies to revitalize the critical area program, and has provided matching funds to local governments for critical area plans. The NPS encourages local governments to meet state critical area standards and to address additional voluntary MNRRRA policies in their critical area plans.

**Development activities.** A development proposal within the Mississippi River Corridor Critical Area should be reviewed by the city or township zoning official to see what ordinance provisions and state laws may apply. The local unit of government is responsible for enforcing the critical area plans and ordinances. DNR critical area program personnel and DNR area hydrologists are willing to partner and work with the developer and zoning staff from the beginning of a project to ensure compliance with critical area purposes.

## PRINCIPLES FOR SUSTAINABLE DEVELOPMENT OF RIVERS

Five principles should guide how people, businesses and governments relate to urban rivers. The principles should inform community and regional planning, river protection and development activities and city-building efforts.

### ■ Engaging people and communities with the river is essential to sustainable management of urban rivers.

Because river-related development can have such a profound effect on a community, its planning processes should provide the opportunity to connect citizens with rivers. Getting people and communities engaged in thinking about their urban river is important not only to connecting them with the river, but to reaching equitable decisions about river management. Ultimately, this is essential for river protection and enjoyment.

*The riverfront is a public resource, and care should be taken to make riverfront planning efforts broadly participative. This goes beyond just identifying stakeholder groups, and requires reaching out to neighborhoods that may not now use the riverfront, but could. The wishes and needs of various constituencies and neighborhoods may differ, and the riverfront will be more vibrant, inclusive, and successful if all these are taken into account. It also is essential to include regulators and developers in citizen forums to ensure that everyone is working toward the same vision and that all important considerations are on the table.* [River of Renewal: A Vision for Connecting Communities to a Living Upper Mississippi River, American Rivers, Inc., 2001.]

### ■ Development should maintain and restore rivers as environmental, economic and social assets.

Environmental, economic and social goals for rivers are interdependent and the steps a community or the state may take to achieve one goal should benefit the others. Water has long been a natural magnet for people. People find healthy rivers appealing and so do businesses. Riverfronts can be a great community asset, if the river is healthy and the waterfront is well taken care of. But to take advantage of the asset, a community must make connections to the amenity with its streets, transit, buildings, trails, parks and public gathering places. The result can be an engaged public that enjoys riverfront activities, and that will care about the long-term health of their river and community.

*Recreational trails and wetlands are interwoven with waterfront restaurants and industrial facilities. It is not possible – or even desirable – to focus exclusively on economic development or environmental concerns along most rivers. Few cities could recreate a completely natural river environment. At the same time, narrow economic considerations are not an excuse for limiting public access, or compounding riverfront damage. Riverfront communities will benefit more by integrating and balancing ecological, social, and economic concerns.* [River of Renewal: A Vision for Connecting Communities to a Living Upper Mississippi River, American Rivers, Inc., 2001.]

Good design also makes a difference in river development decisions because aesthetics are important to people. Much of what offends people with the use of urban waterfronts is bad design of developments. Since the first edition of *Design with Nature*, authored by Ian McHarg in 1969, the importance of making design compatible with the natural landscape has been well understood. Today's computer-assisted analytical tools also put rigorous analysis of development opportunities within reach of many communities.



St. Paul's High Bridge

John Wells

## 10 Principles of City Building

St. Paul has identified a set of principles for city building with a focus on the Mississippi River. These provide a good example of how sustainable development principles can be applied to decision-making in a city.

### **Evoke a sense of place.**

St. Paul has a unique natural setting. The Mississippi River, bluff formations, Phalen Creek-Trout Brook reach and remnants of the prairie landscape contribute to defining the city's character and sense of place. Downtown is also distinguished by a number of outstanding parks, buildings of architectural and historic importance, and significant natural features. The key is to use the city's unique physical qualities - natural setting, parks and buildings - to strategically enhance them and improve relationships between them.

### **Restore and establish the unique urban ecology.**

Generally speaking, since the industrial era, natural systems in urban areas have given way to the demands of development and industry. In light of the diminishing transportation and industrial role of the river valley, an unprecedented opportunity exists to re-establish a balance between urban and natural systems and to create a unique urban ecology in St. Paul, embracing natural features and providing a context for initiatives to restore contaminated lands and waters.

### **Invest in the public realm.**

Streets, sidewalks, parks and ravine edges support the public life of the city and contribute to a sense of community. Deliberately designed as a network, these spaces encourage pedestrian activity and form important connecting routes within the downtown. A successful and vibrant public realm fosters a sense of security and attracts private investment.

### **Broaden the mix of uses.**

A greater mix of uses creates a more vibrant urban core by encouraging people to live, work and walk downtown and by fostering a synergy between activities. Through an incremental process of building urban villages, the re-emergence of a downtown community can be accelerated.

### **Improve connectivity.**

Saint Paul is marked by an impressive legacy of built form and open spaces. While many elements are individually successful, such as Rice and Mears Parks, they are generally disconnected from each other. In some places, the dramatic changes in topography create barriers to movement. At a larger scale, the downtown as a whole is effectively isolated from adjacent neighborhoods by the massive "canyons" of the interstate network. The impact and role of built and natural elements downtown could be greatly enhanced if they were connected to and part of a larger city-wide network. There is an opportunity to provide the critical linking elements, taking advantage of a wide range of options for improved visual and physical connections at the local, city and regional scale.

Source: Saint Paul on the Mississippi: Development Framework, 1997.

### **Ensure that buildings support broader city-building goals.**

There are many examples of distinguished architecture within downtown that respond to context and contribute successfully to the public realm by framing and directly addressing streets and open spaces. However, some recent buildings have tended to be more insular and self-absorbed, thereby overlooking key opportunities to contribute to broader city-building objectives. The challenge is to rigorously identify and promote elements of building design that contribute to building a vibrant city and streetscape.

### **Build on existing strengths.**

The positive impact of downtown success stories - parks, buildings, streets - can be increased by strategically extending them and replicating their positive attributes. Greater benefit can also be attained from investment dollars by targeting areas where there are already initiatives underway. The key is to nurture and expand upon successes and to strategically consolidate initiatives throughout the downtown.

### **Preserve and enhance heritage resources.**

St. Paul has a rich legacy of historic resources - buildings, landscapes and monuments - as well as distinctive geological and topographic features. These resources define a sense of place that is rooted in local history. The challenge is to recognize the diverse range of such resources, to preserve them, and, where possible, to creatively adapt them for new uses and expanded significance.

### **Provide a balanced network for movement.**

A balanced network for movement supports travel by car, public transportation, bicycle and foot. It means that street rights-of-way are designed to be shared, attractive and safe for all modes of movement. In St. Paul, the dominant form of transportation is the automobile. Public transit is not an attractive or viable alternative for many trips. Similarly, the environment is not conducive to bicycling and walking in many parts of downtown. The key is to employ a diversity of strategies to create a more balanced system of movement, an objective that is closely linked to the overall quality of the public realm.

### **Foster public safety.**

The sense of safety is greatest when there is a vibrant downtown - when streets, parks and public spaces are active for longer hours of the day, when there is a continuous urban fabric, and when active uses provide an informal means of surveillance. The key is to implement the broad range of strategies in the Framework to revitalize and repopulate the downtown, and to create a vibrant and healthy urban environment.

**■ River management plans and decisions should identify, safeguard and restore the most fundamental and intrinsic qualities of each river reach.**

A healthy environment is the foundation for a river's economic and social health. Although environmental, economic and social goals are interdependent, the environment is the foundation for most economic and social goals. Today's resurgence of interest in rivers is no coincidence. It stems from decades of river cleanup activities. For the most part, rivers today are more aesthetically pleasing and better corridors of biodiversity.

Building on the foundation of a healthy river ecosystem requires understanding how and where economic and social needs can be met. Care should be taken to avoid development that undermines a healthy river ecosystem. This requires good information about important hydrologic and biological features, and the natural corridors that connect them to the river. Such areas should be avoided in planning for development, or if that is not feasible, they should be developed in a manner that maintains the natural ecosystem function.

In fact, the intrinsic qualities of a river may be of great economic or social value because people are so drawn to water and the vistas that surrounding landscapes often provide. The challenge is more one of fairly allocating access to an aesthetically pleasing public resource than it is to preserve certain habitat. The decision is no less important to a community's future, however. Such intrinsic qualities, carefully treated, can be the features that define a community and distinguish it from all the others. Or, they can be developed for the enjoyment of a few and provide little benefit in shaping a community.

Sustainable river development requires that steps for managing a community's urban-river connection be developed as part of a comprehensive community plan, and be clearly responsive to that plan. In developing its plan, a community should adhere to these principles and the guidelines described in the report.

**■ Each development should be evaluated for its cumulative effects on the river and its consistency with a vision and plan for the river.**

A frog placed in cold water does not realize its plight when the stove burner is turned on. A frog tossed in hot water will struggle frantically to leap out. Minnesota's collective river community sometimes acts like the frog in the first setting, insensitive to its plight or that of the river, when responding to the array of demands for river development.

Understanding the cumulative effects of a development means taking a long-term perspective about what that development and similar developments would do, good and bad for a river's health.



John Wells

**St. Paul riverfront development site**

If one development is approved, shouldn't others of a similar nature be? Given that, where would that set of actions lead and is that the future people desire for the river? Understanding the future people desire means continually planning for a river.

The actions a community takes or permits should make sense for the long term and should simultaneously improve environmental, economic and social conditions.

**■ Regulations should emphasize sustainable outcomes rather than prescribing how to reach those outcomes.**

While sustainable development means long-term environmental, economic and social health, no one has yet to come forward with THE solution to identifying development that is without a doubt sustainable. Despite the ease of administration offered by rules that prescribe how a developer must act, this argues for rules that focus on achieving the outcomes thought to be sustainable. To define these outcomes, a community must make planned, thoughtful, careful choices about a river's future.

To complicate matters, a community also should recognize that a river is more than just its immediate riverfront; it is a system that affects people far beyond its banks. The river requires management as a system beyond any one community's borders, upstream and down and both corridor- and watershed-wide. The Mississippi is a good example. It is a resource of national significance, often called America's river. Actions on the river can have local, regional and national effects, and actions far upstream can have a significant effect on a downstream riverfront.

The challenge is to translate the general principles of sustainable river development into design principles. Many cities have wrestled with this challenge. For river management decisions to consistently



## St. Paul Zones on the Mississippi River

River Zone	Opportunity
Gorge	Preservation and neighborhood stability: deep and narrow gorge and bluffs need preservation and stabilization.
Central Valley	Reclamation and community growth: area includes large undeveloped brownfield properties and bluff and shore lines in need of restoration.
Downtown	Reclamation and urban development: need to balance dense urban development with steps to enhance and restore public riverfront amenities.
Pig's Eye	Preservation and restoration: includes both a city dump needing cleanup and unique and sensitive natural resources needing protection.

Source: Adapted from *St. Paul River Corridor Urban Design Guidelines*, Cuningham Group, May 2000.

lead to sustainable outcomes, the application of these principles and the design guidelines that follow should be context specific. Decisions need to be reached on a case-by-case basis, which requires flexibility in the administration of rules.

The nonprofit rivers advocacy organization, American Rivers, Inc., has developed a third set of principles that many individuals and communities should find helpful in thinking about river management. These are presented in the appendix and are available in the report *River of Renewal: A Vision for Connecting Communities to a Living Upper Mississippi River*, American Rivers, Inc., Washington, D.C., August 2001. See <http://admin.amrivers.org/riverfronttoolkit/umreport.htm>.

## DRAFT GUIDELINES FOR THE SUSTAINABLE DEVELOPMENT OF URBAN RIVERS

Laws of Minnesota 2001, Special Session, Chapter 10, Article 1, section 11 calls for the development of draft guidelines for the sustainable development of urban rivers along central business districts. *Connecting with Urban Rivers'* five principles for urban rivers sustainable development are an integral part of the guidelines. Taken together, these offer river cities a sustainable approach to riverfront development, including process steps and design elements.

The first step in applying the guidelines is for a community to engage its citizens in understanding their river and its ecology. Understanding ecology is important if a community is to recognize

how a healthy river environment can be the foundation for a community's economic and social health. Engaging the community is similarly important if a local government is to garner understanding and support for its river-related ideas. Citizens also can help a community generate these ideas by helping to develop a plan members of a community can get behind.

A community's next step is to define the various distinct zones that can characterize a river and its adjacent landforms. The University of Minnesota Design Center for the American Urban Landscape defines these as "domains which share common physical and cultural characteristics." The community should describe each zone, identifying its various land forms (such as bluffs, slopes, wetlands, flats, floodways and shore features), existing development patterns and development potential, trails and other recreational facilities and opportunities, and ecosystem amenities (including wildlife habitat and natural areas).

The Design Center for the American Urban Landscape also sees corridors, networks and watersheds as the key design forms around

## A Framework for Connecting with Urban Rivers

### Framework principle

In building a framework of recreational connections to the metropolitan Mississippi River, the primary design forms are corridors, networks and watersheds.

### Corridor principle

Corridors are linear spaces that allow movement or visual access to the river. Inland neighborhoods can extend to the Mississippi River by constructing green corridors along streams, valleys and environmentally enhanced infrastructure, such as parkways.

### Network principle

Networks are defined systems of pathways which weave together important hubs, landmarks and loops within the river's reaches. River networks can be better defined and made more interesting by making surrounding resources more accessible.

### Watershed principle

Watersheds are land basins which funnel water into streams, lakes or, in the case of many urban areas, underground pipes. Each river neighborhood is located along a tributary to the Mississippi and should identify, protect and enhance the shared aquatic and habitat resources within its local watershed.

Source: *Building a Mississippi River Community: A Summary of Principles, Process and Recommendations*. The Design Center for the American Urban Landscape, University of Minnesota, June 1995.

which sustainable development can take place. Using them to find and exploit the physical connections to a river holds much promise for integrating environmental, economic and social features of a community in its river-related plans.

Once the various landforms, development and recreational patterns and ecosystem amenities of a river zone are described, a community can apply design guidelines to understand what a sustainable pattern of development and protection might look like for that zone. Computer-based assessment technologies that use geographic information systems – for example, with visual or habitat impact assessments – should be part of this analysis. This is a key step in understanding the challenges each zone will face in the future. It is part of the planning process that helps define when and where opportunities and threats to the environment, economy and community might present themselves, and demand resolution.

The University of Minnesota suggests that physical connections to a river (in this case, the Mississippi River) can be a powerful tool for integrating recreational and environmental planning with development efforts. The guidelines for sustainable management of a river should capitalize on these and other opportunities to make the connections that simultaneously enhance social, economic and environmental resources for the long term.

These guidelines do not lead to a single design solution to any development or protection initiative. Instead, they establish a framework of design considerations that should be addressed by communities, developers and the state. If properly addressed, the resulting decisions should:

- Preserve features of a river important to its ecological health.
- Take advantage of features that might serve as a positive community asset.
- Ensure that private development makes the riverfront community a better place.

#### **General design elements:**

- Identify and find ways to safeguard, restore, strengthen and plan for or with the most fundamental and intrinsic qualities of an area.
- Develop access and connections, views and vistas to bring people to the river and the river to people.
- Design to create the vision and carry out the plans the community, region and state have developed for the river.

#### **Environmental design elements:**

- Provide a continuous linear open space.
- Acquire sensitive areas and emphasize resource protection.
- Protect and restore natural river features and functions, such as meanders, backwaters, beaches, wetlands and gradually sloped banks.

- Create a network of green spaces that functions as an ecological whole, not as unrelated elements.
- Preserve natural stormwater runoff systems and connect them to river-related open space, parks and trails.
- Design riverfront developments to include trail and park features, and minimize effects on the floodplain ecosystem.
- Design and operate new structures or facilities to ensure that contaminants are not be released during flooding.

#### **Economic design elements:**

- Seek out and give priority to river-related and river-enhancing development opportunities. If there is no connection to the river, there is no need for a riverfront location.
- Link recreational trails with waterfront restaurants, shops and other community gathering places.
- Provide required public facilities consistent with adopted plans before development approvals.
- Create small blocks that can be developed incrementally and responsively to market conditions.
- Link public and private spaces oriented to the river.
- Leave sufficient flood storage capacity to meet floodplain management requirements and prevent downstream flooding.

#### **Social design elements:**

- Provide a continuous linear trail.
- Preserve and restore the natural appearance of shorelines and bluffs.
- Screen uses with native vegetation.
- Lower structures closer to the river to preserve views and vistas both from and to the river.
- Limit the visual impact of a proposed structure in scenic or culturally significant areas.
- Require building edges to define public streets and other public space related to the river corridor.
- Establish public gathering places that exploit river views and access.
- Design the community around a river's unique natural and cultural features.
- Ensure that all groups have access to the river's amenities through maintained open space, access, overlooks and view points.

## **ISSUES SURROUNDING URBAN RIVERS**

**Central business districts.** The Urban Rivers Act requires the preparation of urban rivers sustainable development draft guidelines along the *central business districts* of rivers in urban areas of the state.

According to the U.S. Census Bureau, a central business district is “an area of very high land valuation characterized by a high concentration of retail businesses, service businesses, offices, theaters and hotels, and by a very high traffic flow.”





John Wells

### Minneapolis on the Mississippi

The Mississippi River Corridor Critical Area Order adopted an *urban diversified* district to cover large areas of mixed use development, including downtowns. This district is somewhat similar to the Census Bureau definition, although broader in scope:

*The lands and waters within this district shall be used and developed to maintain the present diversity of commercial, industrial, residential, and public uses of the lands, including the existing transportation use of the river; to protect historical sites and areas, natural scenic and environmental resources; and to expand public access to and enjoyment of the river. New commercial, industrial, residential, and other uses may be permitted if they are compatible with these goals.* [Executive Order 79-19]

One significant difference between the two definitions is that the critical area district definition explicitly includes residential and public land uses. And, although it defines a district by its purpose and not merely by geographic boundary, it is substantially broader than that usually associated with a central business district. This definition can be useful in discussing many urban rivers issues, but some may consider it too inclusive to provide a basis for building height restrictions. (The interim development regulations of the Mississippi River Corridor Critical Area Order, which were in effect from 1976 until a community adopted its own state-approved plan and regulations, waived all height restrictions in an urban diversified district.)

A city's central business district naturally expands and contracts over time. The critical area order provides cities along the Mississippi in the metropolitan area the opportunity to plan for future industrial and commercial developments. The order also describes the conditions under which a district boundary can be changed:

Local units of government may prepare modifications of the use districts boundaries as described in the interim development

regulations if local units of government demonstrate to the *Environmental Quality Council* (Editor's note: DNR now has this responsibility) *in plans and supporting documents the consistency of the proposed modification with the general guidelines.* [Executive Order 79-19]

A river management system should accommodate such changes in a manner that would not compromise the integrity of a river's ecosystem. Integrating economic and environmental features necessitates finding where economic development can occur with net positive benefits to the environment long term.

**Performance and dimensional standards.** This study found important differences of opinion over the nature of regulations in the Mississippi River Corridor Critical Area. People responsible for setting and enforcing state regulations generally preferred dimensional standards – standards in which a setback or height limit is made explicit in rule. An advantage of dimensional standards is that the manager is freed from making, or appearing to make, personal value judgments.

Interviews with local officials and advocacy groups highlight the issue. Many interviewees believe that personal values influence state approval decisions for critical area corridor plans and ordinances. Some state officials see dimensional standards as a way to avoid the appearance of personal bias. However, with discontinuation of the interim development regulations as communities adopted their own plans and ordinances, the use of dimensional standards within the corridor has been reduced.

A disadvantage of dimensional standards can be their inflexible, if not arbitrary nature. An across-the-board, 45-foot height limit might be clear cut, but who could say that a 65-foot high building might not be equally suitable along a given reach of the river?

In fact, the critical area executive order allows high-rise structures when approved as part of a cluster development "where public services are available and adequate and compatible with adjacent land uses." However, high rises are often opposed by the state when not located within the vicinity of central business districts.

The issue would seem to call for the application of performance standards based upon a river valley's natural and cultural characteristics, the principles of sustainable river management and a set of community-supported design guidelines.

Only two respondents to the study's survey of river interests argued for the use of dimensional standards alone. A majority supported use of a combination of performance and dimensional standards, while 20 percent supported performance standards alone and 20 percent simply were not sure.

Clearly, the challenge of performance standards is how to incorporate flexibility with sensibility and certainty in a manner supported by citizens, the community, the region and the state. Some have suggested using both dimensional and performance standards as a way of doing this, with an approved performance-based alternative providing a means to exceed or ignore dimensional standards. A state rule-making process would be required to establish a framework of principles, procedures and guidelines for such an approach.

**Enforcement issues.** People responding to the survey of river interests were evenly split between agreeing, disagreeing or being undecided about whether enforcement of existing laws and rules was a problem. This was true statewide, as well as within the metropolitan area.

Outside the metropolitan area, a great number of Shoreland Management Program priority 3 and 4 cities – those in the lowest priority categories – have not adopted shoreland ordinances as required by the 1971 law. Because of its assessment of their priority, the Department of Natural Resources has not asked many of them to do so. Some important river communities such as Little Falls and New Ulm are not covered. Other cities, like Brainerd, were only recently asked to develop an ordinance. Still other cities, such as Wabasha, have adopted ordinances with shoreland zones restricted to floodplains under the flexibility provision of the Shoreland Management rule.

The absence of shoreland ordinances may not be important for those cities with little shoreland, but because a number of river towns are affected, it is a concern in this study. Many communities were considered a lower priority because they were not fast-growing 20 years ago when the priorities were set, and were considered to be afforded some protection by the zoning required under the Floodplain Management Program. With the goal to better connect cities to their rivers, the issue becomes important. Shorelands, when developed sustainably, can over time be better connected to the river. Current criteria may need to be evaluated to consider whether or not the goal of connecting with urban rivers is adequately addressed.

A number of Mississippi critical area enforcement issues also surfaced during the study. First and perhaps foremost was the observation offered by several participants that collaboration and cooperation is lacking in administration of the order. An atmosphere of distrust seems to exist, with motives often questioned and communications between state and local officials sometimes strained. This is difficult to measure objectively after the fact, and the project received numerous comments on this point in its survey and during interviews. In addition, fair or not, many people believe that the state makes value-laden judgments in its enforcement decisions.

Another related issue is that people who should know do not seem to know what is expected of them. Well over two-thirds of those surveyed in this study believe that neither citizens nor government officials understand the law. Some local officials argue that the state at times both oversteps and shirks its authority. State interpretations of performance standards often are ignored, sometimes, many might argue, to reasonable effect, sometimes not. Some communities have not kept pace with the required resubmission of plans and regulations, but neither have some state and regional agencies and other political subdivisions, which also are required to develop plans when their jurisdiction affects the critical area corridor. And, last but not least, developers routinely propose developments contrary to the critical area order, frequently get required local approvals even when contrary to local plans, ordinances and state variance requirements, and often successfully proceed with a development over state objections and comments.

To some extent, this state of affairs may be explained by the relatively recent emergence of the Department of Natural Resources as an active enforcer of the critical area order. From many accounts and for various reasons, the Environmental Quality Board did not actively enforce the order when doing so was its responsibility. Did this set a precedent early on, or is the problem simply one of conflicting views and interests? The answer is unclear.

Adding to the package of issues is the difficulty the state has in enforcing its standards. If the DNR determines that administration of local plans and regulations is inadequate to protect state or regional interests, its main recourse, like that of any citizen with standing, is to take a community to district court to compel proper enforcement – a cumbersome and costly enforcement vehicle. Further, should the Attorney General refuse to support an action despite the expert agency's recommendation, even this means of enforcement is removed. To address the problem, the Legislature could consider giving the Department of Natural Resources administrative penalty order authority for enforcing its river-related land use standards.

**Rule-making for the Mississippi River Corridor Critical Area.** People responding to the survey of river interests were also evenly split between supporting, opposing or simply being unsure about whether the state should have authority to adopt a new Mississippi River Corridor Critical Area rule. The state may already have this authority, although broad community support for the decision to adopt a rule would be important to its success. The 1995 administrative order that transferred management of the Mississippi River Corridor Critical Area program from the Environmental Quality Board to the DNR clearly states that “rule-making authority of the EQB is transferred to the Department of Natural Resources.” That authority, described in Minnesota Statutes, section 116G.04, states “The board shall adopt such rules pursuant to chapter 14 as are necessary for the administration of sections 116G.01 to 116G.14.”

The Legislature could direct the DNR to adopt rules to clarify standards for the Mississippi River Corridor Critical Area. If it were to do so, the rule-making process should further develop and adopt the principles of sustainable river management and related guidelines suggested in this report. It also should incorporate elements of the “10 Principles of City Building” developed by the city of St. Paul and the “Tier 2” guidelines for MNRRA. (See Appendix.)

The serious problems with enforcement, the inconsistent application of performance standards, the widespread ignorance of critical area standards, the planned expansion of central business districts and the modification of other river management district boundaries each

### Mississippi River Corridor Critical Area Findings

- Those carrying out Mississippi River Corridor Critical Area Order are making important progress in protecting the resource value of the Mississippi River corridor, yet need to be cognizant of economic and social factors existing alongside it. The central business districts that lie along the river in urbanized areas have different development needs and patterns.

- Since 1975, there has been more appreciation of the river's natural assets, more “green development” along it, stronger shoreland protection, more appreciation of the river by the public, local government plans that have sought to include environmental protection provisions, and more public access demanded.

- River development is changing from industrial uses to commercial, residential and recreational uses. The federal presence in the corridor through the Mississippi National River and Recreation Area and the Heritage River designations, further adds to more awareness of river protection and to wiser development patterns.

- Because of mixed land uses in the corridor, recognized in the critical area order, a balanced interpretation of rules and restrictions may be more appropriate than a literal rule interpretation. Rules that would impose prescriptive standards might leave no room for necessary judgment or innovation.

- Performance-based development allows design decisions to be reached through a collaborative process, working together to deal with differences. Design guidelines should be given to all communities for adoption and should be enforced. Perhaps a new administrative penalty authority should be part of the critical area management program.

- A number of decisions about management of the river should be made before the need for a Mississippi River critical area rule can be determined. These include the consideration of new roles for the DNR and Metropolitan Council and the possible integration of the various land use related rules administered by DNR.



Minnesota Historical Society

Unidentified city on the Mississippi

argue for development of a deliberate, straightforward and, perhaps, new approach. So does the need to consider new principles and guidelines for sustainable urban river management.

There may be value in integrating water-related land use programs in urban areas, combining the Mississippi Critical Area, Wild and Scenic Rivers, Shoreland and Floodplain management programs into a single, integrated rule. If the Legislature chooses to adopt this approach, it should authorize the DNR to merge, integrate and adjust, not just collate standards and requirements from the four laws. The department should be given authority to adopt flexible, performance-oriented measures, to incorporate principles and guidelines of sustainable urban river management, and to collaborate closely with affected communities and interests statewide, as well as with the Metropolitan Council concerning metropolitan rivers. In carrying out such a directive, the department also would need to consider the potentially different demands of the Mississippi River corridor in the metropolitan area and river corridors throughout Minnesota.

Although a complex undertaking with many affected interests, the integration of river-related rules offers an opportunity to simplify, clarify and reach consensus on requirements for sustainable river management. An evaluation and possible consolidation should be well supported financially with sufficient time to engage interested parties in considering how to sustain Minnesota's urban rivers.

**Planning and coordination.** The Metropolitan Council administers regional tasks associated with the Metropolitan Land Planning Act, and coordinates the preparation, submission, review and modification of land use plans, zoning ordinances, zoning amendments and other regulations under the Mississippi River Corridor Critical Area Order. While its critical area job is described as lead coordinator, the council actually acts more as an advisor to the state.

In addition to final approval, the DNR is charged with receiving and reviewing resubmitted plans and regulations affecting the critical area, and any recommended changes for update and approval. Local units of government or regional and state agencies may amend their plans and regulations by resubmitting them with recommended changes to the DNR for consideration, review and approval.

Under cooperative partnership agreements, the Metropolitan Council is the lead provider of technical assistance to local units of government for development, amendment and coordination of plans affecting lands within the critical area. The council reviews land use plans, zoning ordinances and capital improvement programs for consistency with regional objectives and the critical area order, and submits a written evaluation and recommendation to the DNR. The DNR reviews the plans and regulations to determine their consistency with the provisions of the order, and either approves them or returns them with a written explanation to the local units of governments for modification.

The Legislature should consider changes to the current arrangement of authorities to simplify the plan review process, cut the length of time it requires, and assign duties to the agencies best suited to administer them.

The DNR has expertise and experience dealing with zoning ordinances, while the Metropolitan Council has expertise and experience dealing with land use plans. The council has authority to approve many aspects of a community's comprehensive plan, but it must defer to DNR for approval of the critical area elements. The Legislature could fix this and give final critical area authority in each of these areas to the organization with the greatest expertise. The Metropolitan Council could have final approval authority over local plans, with advice and comment from the DNR, and the DNR could have final approval authority over local zoning ordinances, with advice and comment from the Metropolitan Council.

The Legislature also could consider designating the Mississippi River Corridor Critical Area as a Metropolitan System. If that were to happen, the council would be responsible for developing a corridor system plan, which would guide its approval of local plans affecting the river. Further, local critical area plan elements would be developed according to the 10-year schedule in place under the Metropolitan Land Planning Act. Short of such dramatic and potentially controversial legislative action, the Commissioner of Administration, with consent of the Governor, could order a slight mid-course correction to the administrative roles of the council and the DNR. In any case, the council should continue efforts to integrate river corridor planning policies and goals into the Regional Blueprint 2030, considering the implications for strengthening the urban core and its environment in pursuit of Smart Growth regionally.

The Metropolitan Council recognizes the importance of integrating and aligning decision-making interests for the Mississippi River Corridor Critical Area. Calling for a cohesive regional framework, the council argues that it could and should serve as facilitator and final decision-maker for consistency of community plans, plan amendments and regulations affecting the critical area corridor. The Legislature should decide between this approach and the one calling for a division of duties between the council and DNR along planning and enforcement lines.

In a February 14, 2002 letter from Ted Mondale, the council chair also suggests that the two-year critical area plan requirement be cut back to every 10 years, and linked to the existing review cycle under the Metropolitan Land Planning Act (Minnesota Statutes, sections 473.864, subd. 2 and 473.175, subd. 1). The idea has merit.

The intent of these options is to simplify and consolidate planning and review responsibilities, while preserving the goals of the Mississippi River Corridor Critical Area Order and the ultimate state interests in the corridor.

**Collaboration and communication on the Mississippi critical area.** Mississippi River stakeholders have an interest in the options and choices suggested in this report for improving management of the corridor, and ought to be given ample opportunities to weigh in on them. The survey of river interests and interviews conducted during the course of this study made one point clear: people are confused about the authorities and relationships of the various federal, state, regional and local agencies responsible for management of the Mississippi River Corridor Critical Area. There is need for information and education about the critical area order and its implications, requirements and authorities. Once the state has decided how to proceed with clarification of critical area planning and implementation authorities, it should develop a process and materials for engaging and educating those with a stake in the corridor.

#### **Options for Mississippi River Corridor Critical Area management:**

- Keep the present situation of management.
- Give the DNR clear authority and an appropriation to do critical area rules by a certain date.
- Authorize and direct the DNR to evaluate, consolidate and integrate state land use requirements for the corridor.
- Provide additional technical and financial assistance to corridor communities so plans are updated in a timely manner.
- Change the critical area management lead from the DNR to the Metropolitan Council.
- Split responsibilities between plan oversight (Metropolitan Council) and ordinance enforcement (DNR).
- Give administrative penalty order authority to the critical area manager.





Minneapolis Park and Recreation Board

Minneapolis riverfront walkway and Rice Memorial Parkway

#### Department of Natural Resources:

■ **Pros.** The department protects and enhances natural river resources, and has demonstrated a strong and consistent commitment to the critical area program. Its mission fits with the federal presence in the corridor of the National Park Service. It has extensive experience with shoreland and floodplain management, and scenic river planning. It works with the entire Mississippi River in Minnesota and is in a good position to coordinate policies upstream and downstream of the critical area.

■ **Cons.** It has little experience in highly populated urban areas, with intense development pressures. A concentrated focus on natural resource management leaves it at a disadvantage with the social, cultural and economic elements embodied in the critical areas act. Its judgment on performance-based guidelines is not always consistent.

#### Environmental Quality Board:

■ **Pros.** It is a body made up of not only the key environmental agencies, but others with different yet interdependent missions, and interested citizens. This leads to a broader discussion of issues brought before the board and allows all facets to be examined before a decision is made. It can serve in a facilitation/mediation role and has a standing water committee that could review critical area issues.

■ **Cons.** It has failed before, with lapses in overview and follow up on critical area plans and ordinances. With recent budget cuts, its level of staffing is less than that which existed early on when it was unable to aggressively administer the critical area order. Going back to it for critical area program review may send the wrong message to local governments in the corridor.

#### Metropolitan Council:

■ **Pros.** This regional body serves the metro area, including the entire critical area corridor, and has extensive experience with local government planning, ordinances and coordination. Because of its comprehensive plan review responsibilities, it could integrate critical area plan review and compliance in that existing process. It has experience in working with both the DNR and the NPS, and knows how to provide the technical and financial assistance local communities need to stay abreast. The broad range, background and experience of the citizens on the council, from environmental protection to land development, may bring a proper balance to critical area decisions.

■ **Cons.** Board members are not elected, yet their decisions may be highly political. The council is not universally accepted by communities, elected officials at various levels, or some of the general public. It balances many competing interests in its decision-making and is criticized for it. Finally, the council has not provided its planners consistent direction and support over the years to make the river a priority focus.

#### LAWS GOVERNING RIVER DEVELOPMENT

Minnesota law provides four principal acts that govern the use of lands adjacent to rivers. These include the Shoreland, Floodplain, Wild and Scenic Rivers and Critical Areas management acts. These laws establish systems for classification and regulation of lands along the state's waterways.

The Shoreland Management Act calls for the wise development of shorelands in order to preserve their economic and natural environmental values. The Floodplain Management Act seeks to protect people and property from recurrent flooding by requiring sound land use development. The Wild and Scenic Rivers Act provides a tool to retain a river's outstanding scenic, recreational, natural, historic, scientific and similar values. The Critical Areas Act provides a means of protecting important historic, cultural or esthetic values, or natural systems that perform functions of greater than local significance, through state and local partnerships in the preparation of plans and regulations for the wise use of these areas.

The statewide Shoreland Management Program has been in effect since the early 1970s. Initially, it addressed shoreland development in just unincorporated areas (counties). Later, it was expanded to include municipalities. In 1989, the rules for shoreland management for both counties and municipalities were updated and combined into one rule. At the same time, the rules provided greater guidance to shoreland development along rivers. The earlier rules treated rivers as either *natural environment* or *general development* waters. The revised rules established an extended classification for Minnesota's major rivers and streams based on land use, land cover

and intensity of development. The urban river classification applies to only 2 percent of Minnesota's river shoreland. All cities having urban river segments that were not subject to other similar zoning controls received notification to adopt shoreland standards into their local zoning ordinances in the early 1990s. Although communities listed as high priority for the adoption of the new shoreland rules have now been notified and have adopted them, others remain to be notified on a case-by-case basis dependent upon development trends and potential impacts to their shorelands. Once notified, a municipality has two years in which to adopt the statewide standards. Flexibility provisions in the rules allow for necessary adjustments, and a community is also free to develop stricter standards than those provided in the rules.

The rule governing implementation of the Shoreland Management Act provides for a water-oriented commercial district to accommodate commercial uses adjacent to water that are functionally dependent on their close proximity to water. The rule also provides a general use district for lands already developed or suitable for development with concentrated urban, particularly commercial, uses. The rule further provides "implementation flexibility," which allows a local government to adopt controls that are not in strict conformity with the standards, provided the purposes of the act are met. The special circumstances include shorelands that have been developed with an assortment of urban uses for many years and central business districts located within shorelands. To take advantage of the flexibility provision, a local government must request an alternative approach and provide the Commissioner of Natural Resources a written justification and supporting information. The provision may need additional guidance for how the commissioner should act on such requests other than to act "in accordance with the purposes of the law."

The Shoreland rule also provides for the designation of areas where land use districts and associated standards are more restrictive as trade-offs for other areas where they are less restrictive. This invites flexibility and negotiation in the management of shorelands, although the process for determining appropriate tradeoffs also may warrant additional guidance.

Communities employ planned unit developments in implementing both the Shoreland Management Act (statewide) and Mississippi River Corridor Critical Area Order. The concept of planned unit developments may involve negotiating for sufficient "goods" to offset the "bads" proposed with permitting of activities. For example, a community might allow taller than normal structures, or greater housing density, in exchange for creating more public green space along a river's edge. The concept may introduce needed flexibility into decision-making at the local level; however, the state may need additional criteria to guide communities in making such transactions.

The Shoreland rule provides no restrictions on height in either water-oriented commercial or general use districts. A 30-foot bluff setback is required in these districts, however. The lowest floor of a development must further be three feet above the flood of record, or with technical analysis, above the flood protection elevation. Finally, the Shoreland rule sets a limit of impervious surface allowed on a lot at 25 percent.

The Wild and Scenic Rivers Act establishes strict standards for setbacks and sets other regulations like minimum lot sizes generally targeted at residential development. Rules rely on specific exemptions for urban areas within river corridors. The Department of Natural Resources is in the process of modifying its rules to establish a more flexible urban land use district.

The Floodplain Management Act prohibits most development within established floodways and regulates development on floodplain fringes. The Floodplain Management rule requires all floodplain developments within flood fringe areas to be compatible with local comprehensive plans.

The Mississippi River Corridor Critical Area Order requires local plans and regulations to protect slopes greater than 18 percent and provide conditions for the development of slopes between 12 and 18 percent. New structures are regulated to ensure that riverbanks, bluffs and scenic overlooks remain in their natural state. By this measure, the new Science Museum of Minnesota should not have been built where it was. And yet, most would agree that the flexibility shown by state regulators in this instance was warranted. The challenge is to determine how flexibility can be applied fairly elsewhere without compromise of the corridor's integrity.



Minneapolis Park and Recreation Board

Aquatennial events along upper river, Minneapolis



## Agencies with Federal Regulatory Authority and Responsibility for Rivers in Urban Areas

This table presents a partial inventory of regulatory responsibilities along urban riverways, and a summary of permit regulations needed for development.

U.S. Army Corps of Engineers	The Corps of Engineers regulates work that could affect navigable waters, which are bodies of water that have historically been used for commercial navigation. The agency issues permits for the placement of structures, dredging and filling in navigable waters under section 10, Rivers and Harbors Act, 1899. They also regulate the discharge of dredged or other fill into all waters of the U.S. under section 404, Clean Water Act. No section 404 permit may be issued by the Corps of Engineers without a section 401 certification from the Minnesota Pollution Control Agency that the discharge of dredged or fill material will not violate state water quality standards. The Corps also operates and maintains a nine-foot navigation channel from North Minneapolis downstream, including operating locks and dams as well as dredging and other in-river construction to maintain the navigation channel.
National Park Service	In the Twin Cities metropolitan area, the National Park Service has responsibility for the 72-mile Mississippi National River and Recreation Area, which was designated a unit of the National Park System in 1988. The MNRRA Act mandates that the National Park Service review all federally funded or federally permitted activities in the corridor. The National Park Service has no regulatory authority, except on the less than 50 acres of islands owned by it. The remainder of the 54,000-acre MNRRA is under the jurisdiction of other federal, state and local governments, and the National Park Service manages the MNRRA in partnership with these governmental units, through their existing authorities.
U.S. Coast Guard	The U.S. Coast Guard maintains the river channel buoy system and enforces safety standards and laws related to navigation-related vessels. They enforce some pollution control laws, set bridge height standards, and inspect barges and recreational and commercial vessels.
U.S. Fish and Wildlife Service	The Fish and Wildlife Coordination Act of 1934 mandates all federal agencies to consult with the Fish and Wildlife Service on permit and license applications. Section 7 of the Endangered Species Act mandates all federal agencies to consult with the Fish and Wildlife Service to ensure that actions do not jeopardize endangered species. The Fish and Wildlife Service is a significant player in MNRRA regulatory activities. The U.S. Fish and Wildlife Service has direct management responsibility for the Minnesota Valley National Wildlife Refuge and for the Upper Mississippi National Wildlife and Fish Refuge.
Federal Energy Regulatory Commission	The Federal Energy Regulatory Commission has jurisdiction over all nonfederal hydroelectric power facilities that are located on or use water from a navigable stream, produce power that affects interstate or foreign commerce, are located on federal land, or use water impounded by a federal dam. The commission must issue a license before any such facility could be built.
Environmental Protection Agency	The Environmental Protection Agency establishes standards for water quality management, drinking water safety, solid and hazardous waste disposal, toxic substance management, air quality control and general environmental quality review. Most enforcement is delegated to the states, although the agency retains oversight and could reassert its authority if it determines a state is not doing an adequate job. The agency may veto a 404 permit, and it may exercise the lead federal role for certain cases. In Minnesota, the primary enforcement role for water quality is filled by the Minnesota Pollution Control Agency.

The Critical Areas Act rule also requires the state to review the plans and regulations for a critical area every two years after their initial approval or approval of optional updates. When the state determines that the plans and regulations have been implemented to the extent of fulfilling the regional or statewide interest in the critical area, it may modify the two-year mandatory review requirement. This has not yet happened in the Mississippi River Corridor Critical Area. Neither have plans by state agencies or the University of Minnesota been revised as required. Initial critical area plans were produced by the departments of Transportation and Natural Resources, the Pollution Control Agency, Minnesota Historical Society, Minnesota Veteran's Home Board, Minnesota Energy Agency and the University of Minnesota.

Cities are given planning and zoning authority under Minnesota Statutes, Chapter 462. The law lays out a framework for city regulation based upon a city comprehensive plan, developed by a planning commission, or other suitable planning agent, and adopted after public hearing by the city council. The comprehensive plan provides a city and its citizens the opportunity to chart the city's future. A city's regulations provide the means for carrying out that plan. For urban rivers, no greater opportunity exists than for a city to take full advantage of these tools to capitalize on its connection to the river.

In the seven-county metropolitan region, the Legislature directed the Metropolitan Council "to establish requirements and procedures to accomplish comprehensive local planning with land use controls consistent with planned, orderly and staged development and metropolitan system plans; and to provide assistance to the local governmental units and school districts within the metropolitan area for the preparation of plans and official controls appropriate for their areas and consistent with metropolitan systems plans." [Minnesota Statutes, section 473.851] The rationale given in Minnesota Statutes is that developments in one local governmental unit may affect the provision of regional capital improvements for sewers, transportation, airports, water supply and regional recreation open space. The law goes on to state that there is a need for the adoption of coordinated plans, programs and controls.

The Mississippi River Corridor Critical Area Executive Order designates the Metropolitan Council as the lead agency to:

*... coordinate the preparation, submission, review and modification of land use plans, zoning ordinances, zoning amendments, capital improvement programs and other regulations, specified in section C, which are prepared by local units of government, regional and state agencies.* [Executive Order 79-19]

However, despite being considered the lead agency, the council is required to forward all information to the Department of Natural Resources for final action.



Minneapolis Park and Recreation Board

Mill Ruins Park, Minneapolis

Another set of laws is important to note, since under certain circumstances they can stop a development. The Minnesota Historic Sites Act establishes the state historic sites network and the state register of historic places. It requires state agencies to consult with the Historical Society before carrying out any project that will affect state historic properties, including those on the National Register of Historic Places. There are several historic sites and places in Minnesota Statutes, Chapter 138, that are on rivers in urban areas. The Historic District Act, also part of Chapter 138, establishes certain historic districts and allows local units of government to provide architectural control in these areas. Again, several districts are adjacent to urban river areas.

Section 106 of the National Historic Preservation Act of 1966 establishes a federal review process by the Advisory Council on Historic Preservation to ensure that historic properties on the National Register of Historic Places are considered during any federal project planning and implementation. The National Register list includes buildings, structures, objects, sites, districts and archeological resources. The St. Anthony Mills historic area on the Mississippi in Minneapolis is on the list.

## FEDERAL URBAN RIVERS AUTHORITIES

**Federal Energy Regulatory Commission.** The Federal Energy Regulatory Commission regulates hydroelectric power under the Federal Water Power Act of 1920.

Subsequent statutes under which the commission regulates nonfederal hydroelectric power projects that affect navigable waters, occupy U.S. lands, use water or water power at a government dam, or affect the interests of interstate commerce, include the Federal Power Act, the Public Utility Regulatory Policies Act, the

Electric Consumers Protection Act of 1986, and the Energy Policy Act of 1992.

The work includes: issuing preliminary permits, project licenses and exemptions from licensing; ensuring dam safety; performing project compliance activities; investigating and assessing payments for headwater benefits; and coordinating with other agencies.

Projects or urban river stretches in the state that are currently up for relicensing include:

- St. Anthony Upper Falls dam project producing 124 megawatts of power by Xcel Energy.
- Ford dam project producing 17.9 megawatts of power by the Ford Motor Company.

Proposed or existing projects in urban areas up for initial licensing include:

- St. Anthony Falls Lower Dam proposal for 5 megawatts of power by SAF Hydroelectric.

Urban river projects currently licensed and operating:

- Crown Mill Hydro proposed for the old Crown Roller Mill building in Minneapolis for 3.4 megawatts of power.
- Little Falls on the Mississippi producing 4.7 megawatts by Minnesota Power.
- Grand Rapids on the Mississippi producing 21 megawatts by Minnesota Power.
- Brainerd on the Mississippi producing 3.3 megawatts by Potlatch Corp.
- Granite Falls on the Minnesota producing 1.2 megawatts by the city of Granite Falls.
- International Falls on the Rainy River producing 14.5 megawatts by Boise Cascade Corp.
- Sartell on the Mississippi producing 9.5 megawatts by Champion International Corp.
- St. Cloud Dam on the Mississippi producing 8 megawatts by the city of St. Cloud.
- Two small dams on the Ottetail River in Fergus Falls.

**U.S. Army Corps of Engineers.** The primary authority of the Corps of Engineers in urban rivers is any activity on navigable waters (for commercial navigation) that impacts the course, condition or location in a manner that affects the navigable capacity of the river. These activities include dredging, filling, structures in, over and under the waterway, and certain barge fleetings (Sec. 10 of Rivers and Harbor Act of 1899).

The Corps also has enforcement authority to prohibit placement of any refuse or debris in a river or on the bank that may be washed into the river and obstruct navigation (Sec. 13 of Rivers and Harbor Act). Additionally, the Corps regulates by a permit system the discharge of dredged and fill material in waterways under Section 404 of the U.S. Clean Water Act.



Minnesota Historical Society

Locks of Mississippi River, Minneapolis, MN

Of particular importance to urban rivers on the Mississippi, Minnesota and St. Croix rivers is the Corps role in operating and maintaining the nine-foot navigation channel, which in Minnesota runs on the Minnesota River below Shakopee, on the St. Croix River from Stillwater south, and on the Mississippi River from North Minneapolis to the Iowa border. In these river segments, which include many important urban areas, the Corps of Engineers is one of the dominant players in river management.

**National Park Service.** In 1988, Congress designated a 72-mile stretch of the Mississippi River through the Twin Cities as the Mississippi National River and Recreation Area. The National Park Service has direct management and regulatory authority over less than 50 of the 54,000 acres within the MNRRA. The MNRRA boundary is the same as the state critical area boundary, and the MNRRA comprehensive management plan incorporates by reference the requirements of the Mississippi River Corridor Critical Area Program.

The National Park Services works in partnership with the 25 municipalities and five counties within MNRRA, as well as state and federal agencies, nonprofit organizations, commercial interests and individuals to realize goals set forth in the comprehensive management plan. The MNRRA plan was developed through an extensive public process, recommended by the Governor of Minnesota and approved by the Secretary of Interior in 1995. In addition to adopting critical area land use requirements, the MNRRA comprehensive management plan includes policies that can be voluntarily adopted by communities to achieve a greater level of protection for the river. The MNRRA also supports existing programs such as Shoreland and Floodplain management. The National Park Service offers a variety of stewardship, education and interpretive programs, and provides cost-share funding and technical assistance for park and trail development, habitat restoration, cultural resource protection, education and interpretation, and other projects and activities that implement the MNRRA policies at the local level.



**RESPONSES TO SURVEY OF URBAN INTERESTS**

**MNRRA POLICIES FOR MISSISSIPPI RIVER CORRIDOR  
CRITICAL AREA ZONING ORDINANCES**

**AMERICAN RIVERS' PRINCIPLES FOR URBAN RIVER  
PLANNING AND MANAGEMENT**

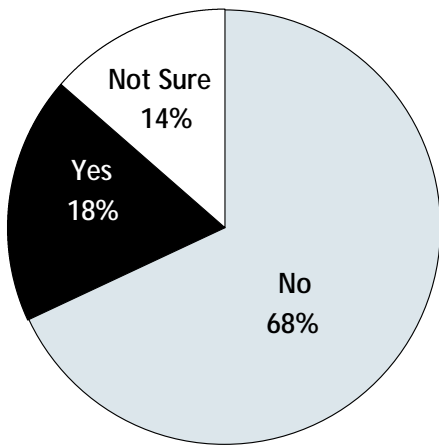
**OVERVIEW OF LAWS THAT RELATE TO URBAN RIVERS**

**OVERVIEW OF LAND AND WATER PLAN REQUIREMENTS**

## RESPONSES TO SURVEY OF URBAN INTERESTS

Minnesota Planning conducted a nonrandom survey of urban rivers interests during December 2001 and January 2002. This included posting on Minnesota Planning's Web site, as well as distribution of the survey at meetings. Respondents self-selected. Forty people responded to the survey. Although the survey results may not be considered statistically significant, they provide an interesting snapshot of the opinions of people interested and involved in river management.

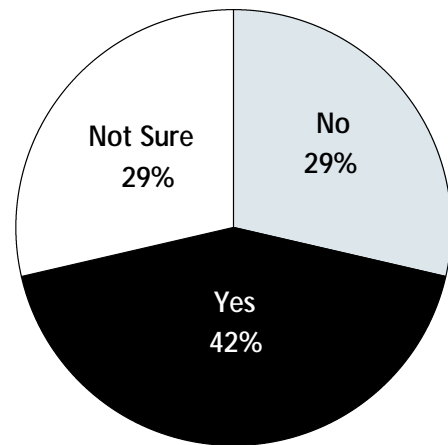
**Do you think that cities take full advantage of their connections to the rivers that flow through them? If not, what keeps them from doing so?**



### Comments:

- Whether it is city government staff or interested citizens, a city needs someone to spearhead efforts to take advantage of rivers. If a city is not somehow affected by the river (flooding, for example), citizens tend to go about their business and not pay much attention.
- More education is needed about what the river means to a community. It was and is a means of moving freight to and from a community. It is a way for people to enjoy the water both visually and recreationally, passively and actively. I think developers take advantage of land close to the river, but that might preclude others from having access to the river environment.
- Redevelopment constraints, mainly money and rigid environmental regulations. I think that equal and even better environmental outcomes could be achieved if the MPCA/EPA were empowered to operate outside of the adopted rules box.
- This is a loaded question. Of course, there are not enough connections. Buy the property, you can make the connections. Show me the money.
- Many reasons but basically as a society we are moving away from connections to the natural world – fewer fisherman, hunters, etc. More TVs and baseball fields.

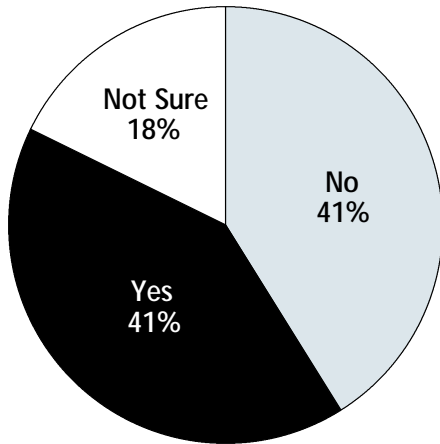
**Do you see institutional barriers to connecting central business districts to the rivers that flow through them? If so, what are these barriers and what do you think should be done about them?**



### Comments:

- I see conflicts and misunderstanding of how the river can be used. We should try to learn what the river means to a community. Then try to accommodate all of the legitimate uses of the river. Different parts of the river can be accommodating to different uses of the river.
- Short-range thinking, lack of awareness regarding environmental issues, lack of appreciation for passive recreation (e.g., walking through the woods along the river's edge).
- The perfect example is the Minneapolis decision to give the Federal Reserve the prime riverfront site – and thereby cut off the last opportunity to link downtown with the riverfront. The Postal Service was there, so the Fed wanted to be there, and the city said OK, in direct contradiction to the city's touted plans to open up connections to the river.
- All that is missing is vision of elected leaders. The opportunity is there within the existing framework.
- Current regulations (local, state, federal) do not address the need for different standards for development in urban vs. suburban vs. rural areas. Need a way to modify regulatory approach to reflect needs of CBD areas or to reflect local plans.

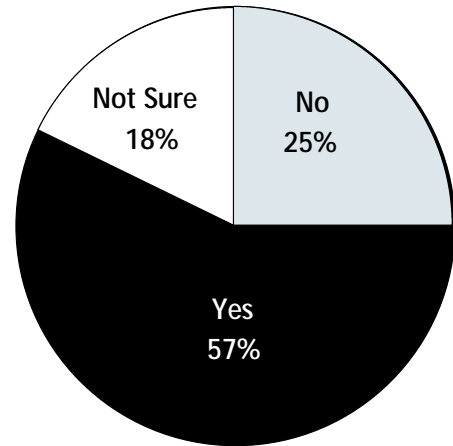
**Do you think today's pressures on Minnesota's urban rivers require new laws, standards or procedures? If so why and what would you suggest?**



**Comments:**

■ There oughta be a law! Nine times out of 10, there already is. The law is not being implemented either for budgetary reasons or political reasons, or both. Find out why the critical area rules are not being followed. This was studied and reported on at MNRRA in the early years. Much of that information is in the MNRRA management plan/EIS. Maybe new procedures are appropriate, but the laws are there.

**Do you think today's pressures on the Mississippi River in the seven-county metropolitan area require different standards or procedures than those in 1979 when the critical area order was issued? If so why?**

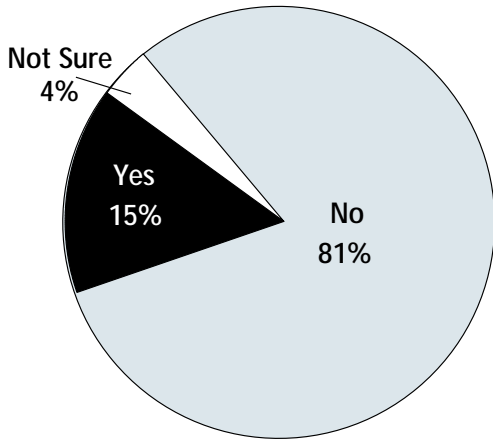


**Comments:**

- There is much more development today than in 1979.
- It does not seem to be working fully as intended.
- In 1979, communities were forced to make decisions about their critical areas along the river without full knowledge of what was actually going on and felt forced into decisions that may not have been in their best interests in the long run. Now is the time to reconsider after 20-plus years since those decisions.
- We are slowly gaining more respect for the Mississippi River in the seven-county metro area.
- Downtown riverfront revival.
- I think critical area standards are as applicable today as when they were first established.
- They need to be more stringent. They need to protect the river better.



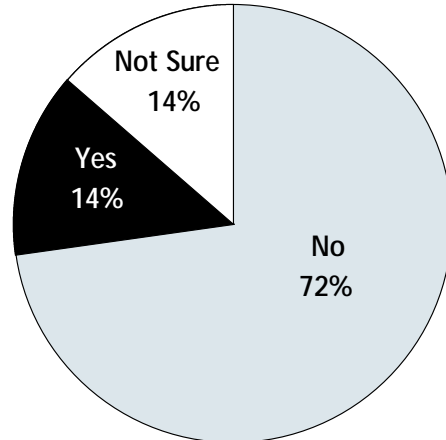
**Do you think people understand the various authorities of local, regional, state and federal agencies concerning urban rivers? If you see a lack of understanding, what's the solution?**



**Comments:**

- This is a simplistic question. Rephrased: why don't people understand what their governments are doing? The answers are obvious – there's too much to know, the level of commitment to learn is great, and there is a direct conflict between getting things done in a timely manner and spending time necessary to try to inform a largely apathetic public.
- Not only do people not understand, most agencies don't understand the applicable regulations.
- A flow chart of regulatory agencies and necessary approvals published with telephone numbers so that the public and regulated community could determine who to ask for answers.
- Consolidating the approval/permitting process.

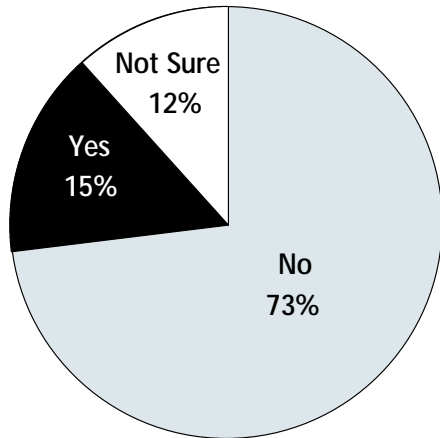
**Do you think people understand the various authorities of local, regional, state and federal agencies concerning the critical area? If you see a lack of understanding, what's the solution?**



**Comments:**

- The agencies need to understand the roles themselves.
- Establish one point for info and answers.
- They realize its regulated by everybody with nobody having much of a clue on how to regulate.
- I think it may be confusing, but I also think some checks and balances are important so that one person or agency doesn't get too far off from implementing the protection strategy.
- Although difficult to write well, a guide, handbook, Q/A document could be helpful.
- It is so complex it's hard for people who work with the system every day to understand – impossible for general public.
- It is very complex but I don't necessarily think that is a problem. It provides a system of checks and balances.
- Many of the current authorities are not recognized until a proposal is brought forward.

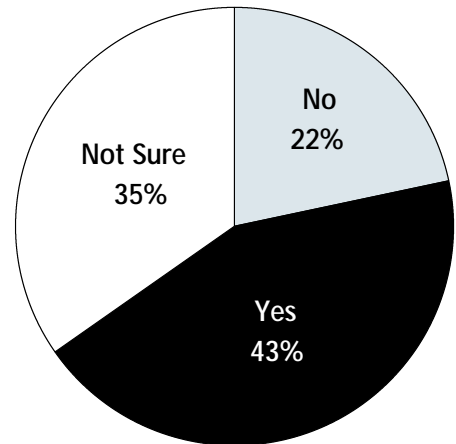
**Do you think agencies and governments understand the various authorities of local, regional and state agencies concerning the critical area? If you see a lack of understanding, what's the solution?**



**Comments:**

- Suggest that goals be established and that cities be compelled to identify how they plan on meeting them through their comprehensive planning process.
- It is easy to forget that a regional plan on a macro scale will not take the place of local planning.
- Centralize the process.
- Time, resources (\$), interest, commitment. Mostly time and resources.
- Local control.
- If they can't figure it out, maybe they shouldn't be the ones given the responsibility of protecting the river.
- Each agency seems to have different interpretation of authorities.
- I think most agencies and governments have a pretty good handle on this.
- It's just that they have their own charges and focus. They are typically not asked to coordinate and resolve conflicts. Often agencies see compromise as a loss of authority and responsibility.

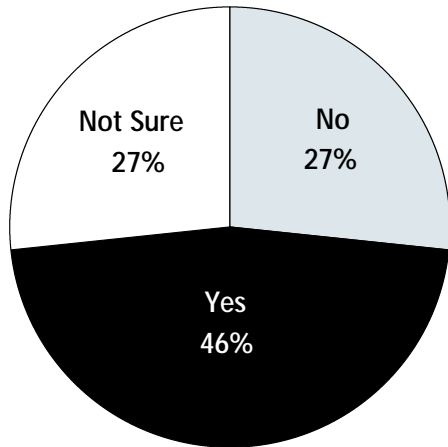
**Is enforcement of existing laws and rules a problem within river corridors? If so, why is it a problem and what's the solution?**



**Comments:**

- With the appropriate amount of political pressure, anything can be done.
- On the new urban village being built in St. Paul ... How can 20 feet of fill be placed in the floodplain for a housing project? How is the natural aesthetic view not being affected by this project?
- It takes an interagency approach, and for that to occur, several agencies need to understand that they have a primary and secondary role as it pertains to a particular law or rule. And that their secondary role complements another agency's primary role.
- Government agencies that would do the enforcement or monitoring are way underfunded. They cannot begin to truly protect Minnesota resources anymore.
- Laws from state and federal governments often conflict with the desired local use. Micromanagement kills.

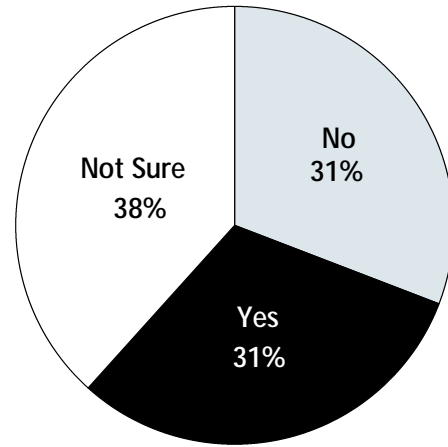
**Is enforcement of existing laws and rules a problem within the Mississippi River Corridor Critical Area? (If so, why is it a problem and what's the solution?)**



**Comments:**

- Yes it is a problem. Some agencies do not have the manpower to cover their whole jurisdiction. Rather than turning enforcement over to an agency that might not have the same direction, the Legislature should be asked to support enforcement. This is an easy solution but a difficult one to accomplish.
- Political decisions are taking precedence over environmental needs.
- Laws and rules conflict with common sense and legitimate use.
- Different people have different interpretations. They should be clarified. Some units of government and some public employees do a great job of protecting the river – some do not.
- Bad critical areas law. Poor administration by DNR – bureaucratic – they do not understand city planning and urban environmentalists. Inflexible approach by DNR.
- Need review authority at level of development proposals.
- No teeth behind it. Each LGU has ability to grant variances and regularly does so. Solution – give enforcement teeth.
- Even when regulations are in place in communities, the number of variances or modifications issued by communities can easily be at the expense of the critical area. I have no good solution for this.
- The enforcement is not strong enough or consistent enough.

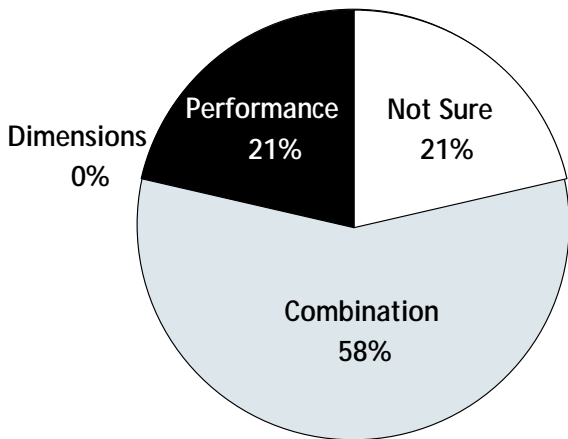
**Should a mediation process be authorized to settle differences between local and state authorities concerning management of the Mississippi River critical area? If so, who would you involve in a panel? Explain why, when and how.**



**Comments:**

- Mediation is a last resort. Mediators do not have a stake in the decision and can be arbitrary, which may not be in the best interest of the stakeholders.
- A neutral party – ALJ or mandatory mediation followed by binding arbitration.
- Another government entity will not change anything. It takes political will.
- DNR needs to have final say on natural resource issues. They are given certain regulatory responsibilities for a reason. They have a responsibility to work with others, to provide education and technical assistance and even financial assistance in some cases.
- My fear is that the environment will lose in any mediation.

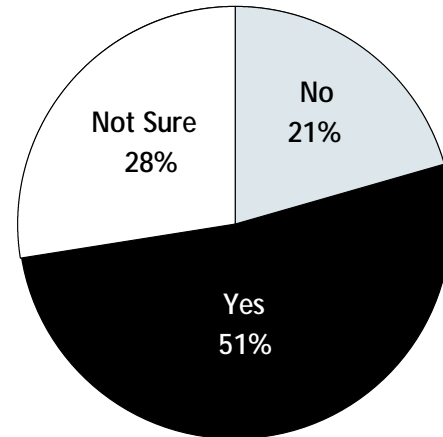
**Do you think that technical specifications affecting the critical area corridor should be performance oriented (e.g., specify the nature of an intended outcome), specify required dimensions (e.g., a specific setback or height limit), or a combination of both?**



**Comments:**

- There is nothing duller than having the whole corridor under the same plan. It is like row housing. It should be planned (if that is the right term) based on what is there now. A high profile of buildings close to the river may be fine in the downtown area and not acceptable as you get further away from the core city.
- This is hard and requires much negotiation both about what the performance goals are and how they will be achieved.
- I believe that it should be understood by all that buffers are established strictly for aesthetic purposes and not for any scientific reason.
- Flexibility in approaches to meet goals is usually important for technical specifications that cover large areas.
- Neither approach by itself can necessarily address every legitimate situation. Value judgements will always have to be made.
- Although the road to hell is paved with good intentions, specific dimensions are a sure way to kill imaginative use.
- Should be both with the dimensions as the minimum standard and the performance above and beyond.
- There are pros and cons to both. A hybrid where dimensions are cited as examples of performance standards. Perhaps thresholds for some parameters: a structure below \_\_\_# would comply; others up to \_\_\_y require additional process, larger burden of proof.
- Performance standards are OK only if more specific guidelines are included. The intent of the performance standards needs to be unambiguous.
- Performance orientated is good in concept but would be very hard to apply in practice – my opinion.

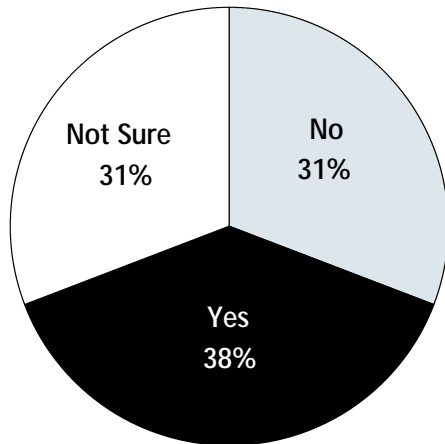
**Do you think that the Mississippi River critical area order should provide for the planned expansion of central business districts?**



**Comments:**

- Only if it does not restrict the floodplain or impede the view.
- I think each community should look at its own needs and opportunities and consider them as part of the system
- When working with planning documents one needs to keep in mind that they are living documents and changes from the plan should be expected.
- If we do not do it, the ecologically ignorant will continue to destroy Minnesota's resources.
- Emphatically, yes. All land uses must be accommodated in the appropriate locations. Unless governments choose to spend huge amounts of money buying and relocating businesses
- More flexibility within existing districts will provide enough opportunity.
- Should also provide for areas that are not in a central business district, but are nevertheless very urban.
- I don't believe that is the purpose of the act. There are plenty of pressures, money, etc... and uncertainties for development far less for river protection.
- I don't think business should expand along the river. Very limited expansion.

**Should the Legislature consider granting the state authority to adopt a Mississippi River critical area rule?**



**Comments:**

- There are existing federal regulations that should already protect the area, if followed.
- Again this is a last resort. Nothing like mandating something to get everybody mad at you. This should be handled on a cooperative basis with the stakeholders.
- To the DNR with advisories from BWSR, MPCA, Minnesota Planning.
- This is a sure method to waste a natural resource.
- May help clarify the act.

**What are your worst fears and greatest hopes for Minnesota's urban rivers? What should be done about them?**

**Comments:**

- Contamination of water, loss of wildlife and habitat due to increases in housing and commercial development.
- They could be a great recreational asset if they were cleaned up. Start putting teeth in the pollution laws and enforce them to the max. Get politics out of environmental issues.
- That the rivers be walled off from the public under the guise of revitalization of the city-river connection.
- That they are gentrified. Historical working rivers should be retained as such where unsubsidized economics justify.
- Worst fears-continued degradation, elimination of biodiversity in the rivers, inefficient management. Because Minnesota is at the headwaters of the Mississippi River, I think it is our responsibility to send water downstream that is high in quality and biodiversity. Stricter standards, overall pollutant load allocations – and education, education, education are needed. New technologies are needed to increase the efficiency of wastewater plants and other point source discharges – this take lots of money.
- Hopes: that the rivers are restored and protected. Fears: that the industries and rich folks will claim the rivers, and leave the rest of the folk out of the loop.
- Micromanagement from the federal and state levels is a nightmare. Local control is the only solution for urban and rural rivers.
- Hopes: we embrace and celebrate all water, reduce sprawl and increase greenspace. Education is the answer.

### What are your worst fears for the Mississippi River Corridor Critical Area? What should be done about them?

#### Comments:

- Only the loud are heard. Rivers and their buffers are quiet and lose out.
- Commercial development will encroach on the river to the point that the general public will not be able to enjoy it.
- Fear that the river will be made the private playground of the rich, as their condos block public access. It's not an amenity for them.
- We would go backwards on improvements already made.
- No common understanding of the goal.
- That it be precluded for mixed uses.
- Micromanagement from state, federal and environmental organizations – local control only.
- My worst fear is that local units of government start acting like the University of Minnesota with an attitude that they know best and don't need input from others. Partnering and understanding are needed to protect the whole river. University of Minnesota sins: steam plant, coal storage, underground library entrance, Coffman expansion, sheetpile walls, pipe to pile coard in other coal storage.
- Over-commercialization of this critical river.
- My greatest fear is that we will lose the precious few natural areas left on the Mississippi.

### What are your greatest hopes for the Mississippi River Corridor Critical Area? What should be done about them?

#### Comments:

- That we can accommodate all legitimate interests to their satisfaction and find that our interests are mutually inclusive.
- Limit development near the river and enact strict environmental laws to clean up the present mess.
- It should be a great asset to the citizens.
- That its existing natural amenities and ecosystems be preserved and expanded.
- Hopes: that the rivers are restored and protected.
- That the corridor could involve more engaging activities within existing central business districts without: increasing impervious surfaces, increasing flood insurance damage claims, increasing flood heights, or increasing public sector costs for private sector liabilities.
- Hope that each segment of river is thoughtfully managed to its ultimate potential. Scattered areas of exciting urban development, with large stretches kept very natural.
- I hope the river keeps the natural character it has left and that the corridor's ecological integrity is improved.
- My greatest hope is that people will recognize the real value of the river before we destroy it.



**Help point us in the right direction! We would value your views about ways to help communities better connect with urban rivers. Tell us about what has worked well and what might be improved.**

**Comments:**

- We must show why we, as a river community, have grown, while other communities have not. Those reasons will be an important step in finding solutions to our future.
- We need a board that pulls people together, like Mississippi Headwaters Board, to oversee the sections of river.
- Involve all the folks.
- Three needs: Political Commitment, Political Commitment, Political Commitment.
- Give communities and local owners control over developing or leaving natural the waterfronts they have. Local people know what they want, need and can afford.
- More opportunities for public access as opposed to privately held riverfront.
- Begin with the river as our greatest amenity. What can we add to make it a better amenity? Access is one thing ... tourist attractions are another.

**MISCELLANEOUS COMMENTS:**

- No one wants to look at a great river surrounded by industrial wastelands and storage facilities. I think the city of St. Paul is taking great strides to improve its waterfront and provide recreational opportunities.
- Most rivers get too urbanized for people to want to use them for recreation. That can mean too much pollution or too much brick, mortar and asphalt.
- Engineers have historically been taught to transfer water from point A to point B in the most time effective manner. City staff understand tangible hydraulic calculations, but have much less understanding of ecological concepts. Engineers have not been encouraged, or mandated to have conversations with ecologists, and the institutions let them abide their comfort; the decision-makers will take the obvious, lowest risk action.
- Some issues need to be addressed before the general public: what was the original goal of the critical area corridor? What measurable criteria were proposed or are being used to gauge if the original goals are being met? What further efforts are desired to be implemented within the critical area corridor and what are the new or modified goals? Are the goals achievable and what are their implications for local communities? What criteria should be used to monitor progress toward proposed goals?

## MNRRRA VOLUNTARY POLICIES FOR MISSISSIPPI RIVER CORRIDOR CRITICAL AREA ZONING ORDINANCES

The MNRRRA comprehensive management plan recommends adoption of the following voluntary policies as a minimum standard for zoning ordinances, if the local unit of government has chosen to address the MNRRRA policies in its critical area plan:

- Preserve native vegetation or encourage revegetation; use native and other compatible floodplain vegetation in redevelopment projects; develop a cooperative program for revegetating existing denuded areas along the shoreline; and use extensive native vegetation including native trees and shrubs, in the more formal landscape treatments appropriate to downtown areas.
- Protect existing wetlands and, where practical, restore degraded wetlands.
- Encourage open space land use in order to protect significant archeological resources. Provide adequate identification, evaluation, and site planning to preserve these resources.
- Preserve riverfront land for economic uses that rely on the river.
- New development in the riverfront area (within 300 feet of the ordinary high water level or within the floodplain, whichever is greater) should have a relationship to the river, a need for a river location, or the capability to enhance the river environment, reflecting the standards in the CMP (pages 16 - 18).
- If they are to be discontinued, convert inconsistent riverfront land uses causing adverse effects on the river corridor. If the land within 300 feet of the river meets criteria for open space, encourage owners to leave the space open; otherwise, appropriate private redevelopment should occur.
- Discourage development in areas containing significant wildlife habitat.
- Preserve a narrow zone along the shoreline with an undisturbed area 40 feet back from the river, or restore natural vegetation where practical along the shoreline.
- Locate expansions as far back from shoreline as possible.
- Allow minimal disturbance (selective grading and tree removal) in an additional 60-foot setback adjacent to the shoreline area for a total shoreline preservation area setback of 100 feet.
- Prohibit land disturbance along the bluff face (slopes in excess of 12 percent). Development of underground space in these areas could be appropriate if the surface of the bluff face and top are mostly undisturbed and development is not visible from the river or shoreline area as observed from the opposite bank.
- Preserve the bluff impact area (40 feet back from the bluffline) in a natural state or restore natural vegetation in order to screen development.
- Provide additional setbacks in additional 60 ft bluff preservation area for structures >30 ft tall outside of downtown to equal 100 ft from bluff line.
- Reduce visual impact and protect views of and from river and shoreline areas. If the critical area ordinance is less restrictive, maximum structure heights:
 

w/in 100 ft. of bluffline	=	30 ft
w/in 200 ft. of river	=	30 ft
w/in 300 ft of river	=	45 ft
- Certain structures could exceed these standards for safety reasons or if architecturally significant.
- Encourage shoreline area preservation and restoration by using native and other compatible floodplain vegetation in redevelopment projects; use extensive native vegetation, trees, and shrubs in landscape treatments appropriate for downtowns; and use native or natural-looking materials to stop bank erosion to the maximum extent possible. Develop and improve design guidelines for shoreline areas.
- Implement goals addressed by plan policies on wildlife habitat, biological diversity, bottomland forests, bluff prairies, woodlands and riverine habitats.
- Apply setback and height restrictions and encourage careful site design to maintain the ability to view the river from existing open space and developed areas. Avoid significantly obstructing river views with development.

- Screen development with vegetation to minimize its visibility from the river or opposite shore.
- Maintain existing public access to the river and increase access in redevelopment and new development projects if practical. Implementation is tied to implementation of open space and trails policies (CMP pages 21-25), riverfront location policies (CMP pages 16-18) and CMP policy 5 (page 25).
- Encourage local governments to adopt sustainable building practices, such as energy efficiency, in their codes for new construction and renovation work.
- Ensure consistency with water conservation laws.
- Provide easements for future trail corridors in new developments.
- Require new major private developments and all public facilities to provide appropriate public trails and river access.
- Locate barge fleeting areas at least 200 feet from any marina, and next to commercial and industrial areas, based on physical needs and applicable regulations.
- Evaluate potential noise and visual impacts before making decisions to expand or locate barge operations.
- Prohibit temporary casual mooring in the corridor except in emergencies.
- Provide uninterrupted vegetated shorelines where practical along the Mississippi and its tributary streams and ravines to preserve a natural look from the river and opposite shore and to provide connections to adjacent natural areas. Exceptions are downtown areas and existing commercial and industrial areas, but new developments in these areas should appear as natural as possible when viewed from the river using setbacks, landscape treatments and vegetative screening. Shoreline restoration is encouraged in existing commercial and industrial areas.
- Work to increase and restore habitat and biodiversity in development projects.
- Protect bottomland forests and riverine habitats.
- Encourage uninterrupted vegetated shorelines that exceed 40 feet from river to facilitate wildlife movement.
- Local governments should consult with the DNR when reviewing development projects to determine if sites contain listed threatened and endangered species.
- Comply with federal, state and local regulations to avoid floodplain & wetlands development.
- Preserve riverfront land for economic uses that rely on the river as related to riverfront location policies in the CMP (pages 16 - 18).

## AMERICAN RIVERS' PRINCIPLES FOR URBAN RIVER PLANNING AND MANAGEMENT

American Rivers, Inc., a Washington, D.C.-based rivers advocacy organization, presents these principles in its 2001 report, *River of Renewal: a Vision for Reconnecting Communities to a Living Upper Mississippi River*.

### GENERAL PRINCIPLES

#### **Recognize that ecological goals and economic development goals are mutually beneficial.**

Healthy, functioning rivers are more appealing and attractive to residents and businesses. An engaged public that enjoys riverfront features and activities will care about the long-term health of their river.

Communities are beginning to understand the allure of a more natural riverfront for residents and visitors. The economic benefits extend beyond tourism to reduced flood damage, better water quality, and reduced infrastructure costs.

At the same time, public and private development that brings people to the waterfront for events, to experience culture, shop, eat, and live, helps to build a sense of connection and stewardship for the river.

#### **Make it a priority to protect and restore natural river features and functions.**

Rivers provide vital human and natural ecosystem benefits that must be protected.

Natural rivers features such as meanders, backwaters, wetlands and gradually sloped banks serve essential ecological functions and also provide human benefits such as cleaner water and flood storage.

In some settings, particularly urban areas, it may not be possible to restore most of these features.

But even small efforts can have a positive impact. Environmental improvements can be made along even the most heavily impacted river and riverfront.

#### **Regenerate the riverfront as a human realm - for everyone.**

Rivers are a public resource, and the riverfront has a remarkable ability to break down political, social, and economic barriers – if it is designed with that goal in mind.

Even members of the community who may feel disconnected from the river deserve access and a chance to experience rivers up close and alive.

The needs of all neighborhoods, ages, cultures and traditional river users should be taken into account.

Certain people may not come to the riverfront or enjoy the river because they lack physical and visual access, or because it doesn't meet their needs in other important ways.

#### **Recognize that compromises are necessary to achieve multiple objectives along urban riverfronts.**

Urban waterfronts are a meeting ground of a complex array of sometimes competing interests.

Recreational trails and wetlands are interwoven with waterfront restaurants and industrial facilities. It is not possible – or even desirable – to focus exclusively on economic development or environmental concerns along most rivers.

Few cities could recreate a completely natural river environment. At the same time, narrow economic considerations are not an excuse for limiting public access, or compounding riverfront damage. Riverfront communities will benefit more by integrating and balancing ecological, social, and economic concerns.

#### **Make the process of designing the riverfront broadly inclusive.**

The riverfront is a public resource, and care should be taken to make riverfront planning efforts broadly participative. This goes beyond just identifying stakeholder groups, and requires reaching out to neighborhoods that may not now use the riverfront, but could.

The wishes and needs of various constituencies and neighborhoods may differ, and the riverfront will be more vibrant, inclusive, and successful if all these are taken into account. It also is essential to include regulators and developers in citizen forums to ensure that everyone is working toward the same vision and that all important considerations are on the table.

### PLANNING PRINCIPLES

It is crucial to integrate ecological considerations upfront with the important social and economic considerations that normally drive riverfront development and revitalization. The following principles should be applied throughout the planning process.

#### **Understand the city's relationship to the river, and reflect what is unique about the river and the city in the riverfront design.**

Each city has a unique relationship and history that is intertwined with its river. Minneapolis and Davenport have very different

<sup>1</sup> American Rivers, Inc. August 2001.

riverfronts, scales of development, and historic uses along their rivers of the same name.

Riverfronts should have a look and feel that evokes and celebrates their special city character and that directly relates to their unique natural history.

**Know the river ecosystem, including its historical character.**

Riverfront development should be considered in the context of the river's natural habitat and structure.

These considerations include the characteristics of the area it drains (the watershed), the floodplain, the river channel, its unique habitat types, the structure of its bed and banks; its water flows and timing (hydrology), water chemistry, and the biological needs of its wildlife (insects, fish, amphibians, reptiles, birds, and mammals).

It is also important to understand how the river's structure has been altered, and how it may change in the future.

**Think at a scale larger than the riverfront.**

The river is affected at all times by what happens in its watershed. Riverfront activity, in turn, can have impacts that extend beyond the river's edge.

It is critical to keep in mind both what impact the watershed may have on the riverfront, and the consequences of riverfront designs and activities downstream, and in the riparian zone, tributary streams, and other areas within the watershed.

**Recognize and anticipate that rivers are dynamic systems.**

It is the nature of rivers to be constantly changing. Nowhere is this more true than along the Mississippi River. For example, flood elevations in spring can exceed non-flood levels by 30 feet or more.

Allowed to function normally, the river will change its alignment, creating new back and side channels and islands. Some river sections freeze in winter, and others experience less seasonal change. The effects of changes upstream and in the surrounding watershed also must be taken into account.

**Avoid new development in the floodplain.**

Undeveloped, connected floodplains are essential to river health. New development on the riverfront, including trails and park features, should be designed to minimize impacts to the ecological function of the floodplain.

Where new development must occur, structures or facilities should be designed to (1) ensure that contaminants will not be released during flooding, (2) cause no net decrease in flood storage capacity, and (3) prevent downstream impacts.

Non-structural flood control approaches should be emphasized in cases where unavoidable development must be protected.

**Maximize public access and connections.**

Multiple, easy access points are important to draw people down to the riverfront. Points of visual access to the river from nearby commercial and residential areas are also important. Physical and visual access should not be reserved for only certain residents or businesses along the redeveloped river.

It also is important for people to be able to actually touch and interact with the river, whether wading, fishing, launching a boat, or merely sitting.

**Maximize the variety of recreational uses.**

Riverfronts can include many recreational uses from ball fields to boating, fishing, walking, and bicycling. Wildlife watching is a booming recreational interest and can be pursued anywhere. Riverfront communities should provide facilities for as many of these uses as possible.

**Celebrate and teach the environmental and cultural history of the river and the community.**

Riverfronts are rich in both human and natural history.

Ecological interpretation and education is especially meaningful and important along urban riverfronts, because so much of the original natural systems and references have been erased.

Because rivers are active and visually striking environments, they can be a powerful tool for science and nature education.

**ECOLOGICAL DESIGN PRINCIPLES**

As with planning, ecological considerations should be incorporated directly into riverfront facilities and features.

Designing with the river and its natural processes in mind ensures that parks, trails, public plazas, homes, and commercial spaces along the riverfronts will create minimal new damage to rivers. In many cases, these designs also help to improve water quality, physical integrity, and wildlife habitat.

Equally important, ecologically based designs are appealing to people and bring them into more meaningful contact with the river and nature.



**Preserve natural river features and functions.**

Sensitive natural features such as wetlands, tributary stream outlets, riparian forests, old growth trees, geologic and topographic features, bluffs and steep slopes, seeps and springs, among others, should be identified and protected from development.

**Buffer sensitive natural areas.**

Buffers between these sensitive areas and development should be designed to protect ecological integrity, and to enhance connectivity between wildlife habitats. Designed correctly, buffers can protect water quality and protect sensitive habitats from disturbance.

**Restore riparian and in-stream habitat.**

Many riverfront areas also are prime areas for restoration, including floodplains, tributary streams, wetlands, riparian vegetation communities (e.g., grasses and forests), and stream banks.

Based on ecological goals for the riverfront, missing or altered natural processes (e.g., channel meanders and natural timing and duration of over bank floods) and structures (e.g., in-stream woody debris) should be identified and new objectives set for restoration.

Research should be conducted on upstream and downstream natural communities to identify likely restoration areas and habitat types along the riverfront that might be used by fish, birds, and other animals of concern. These areas should be viewed in the context of the larger river system as a whole (e.g., smaller feeding or nursery areas related to larger upstream or downstream habitats).

**Use non-structural alternatives.**

Engineered structures like flood levees should be minimized with preference given to natural floodplain storage, riparian wetland restoration, and infiltration areas to reduce storm runoff volumes.

Natural bank slopes and vegetation should be used to stabilize riverbanks and prevent erosion instead of riprap, concrete or steel walls, or other techniques.

**Reduce hardscapes.**

Many riverfront redevelopments actually increase the amount of hard or paved surfaces, loading increased runoff with concentrations of contaminants that collect on these surfaces in urban areas.

Riverfront designs should explicitly strive to reduce the overall area that is covered with impervious surface, use permeable or semi-porous materials wherever possible, including trail surfaces, and intersperse hard surfaces with “softscapes” where rain and snowmelt can collect and infiltrate into the soil.

**Manage stormwater on-site and use non-structural approaches wherever possible.**

Even narrow riverfront areas can contribute significant amounts of stormwater runoff and urban contaminants. Ecologically sensitive riverfronts should capture, store, and infiltrate, or otherwise naturally treat and release smaller amounts of stormwater.

Systems like treatment wetlands can provide wildlife habitat and aesthetic values in addition to effective stormwater management. These should be used in preference to stormwater pipes and other structural systems, most of which send high volumes of untreated stormwater directly to the river.

**Balance recreational and public access goals with river protection and restoration.**

Riverfront communities should provide facilities for as many recreational uses as possible, while balancing potential use conflicts (e.g. jet skis and bird watching platforms) and the impacts of overuse on the river corridor and its wildlife.

**Incorporate information about how rivers work and the relationship of the city and the river through history into the design of riverfront features, public art, and interpretive information.**

Creative public art pieces and performance art should be employed to bring people to the river and engage their curiosity to walk along the riverfront.

Riverfronts also should employ way finding and other signage systems that reflect unique characteristics of the river (e.g. a backwater) using materials that locally are prevalent or representative.

# OVERVIEW OF LAWS THAT RELATE TO URBAN RIVERS

## PURPOSE

### SHORELAND MANAGEMENT ACT

M.S. 103F.201 REGULATORY PURPOSE OF SHORELAND PROTECTION

To promote the policies in section 103A.201 and chapter 116, it is in the interest of the public health, safety, and welfare to:

- Provide guidance for the wise development of shorelands of public waters and thus preserve and enhance the quality of surface waters.
- Preserve the economic and natural environmental values of shorelands.
- Provide for the wise use of water and related land resources of the state.

### FLOODPLAIN MANAGEMENT ACT

M.S. 103F.105 FLOODPLAIN MANAGEMENT POLICY

The legislature finds:

- A large portion of the state's land resources is subject to recurrent flooding by overflow of streams and other watercourses causing loss of life and property, disruption of commerce and governmental services, unsanitary conditions, and interruption of transportation and communications, all of which are detrimental to the health, safety, welfare, and property of the occupants of flooded lands and the people of this state.
- The public interest necessitates sound land use development as land is a limited and irreplaceable resource, and the floodplains of this state are a land resource to be developed in a manner which will result in minimum loss of life and threat to health, and reduction of private and public economic loss caused by flooding.

It is the policy of this state to reduce flood damages through floodplain management, stressing nonstructural measures such as floodplain zoning and floodproofing, flood warning practices, and other indemnification programs that reduce public liability and expense for flood damages.

### CRITICAL AREAS ACT

M.S. 116G.02 POLICY

The legislature finds that the development of certain areas of the state possessing important historic, cultural, or esthetic values, or natural systems which perform functions of greater than local significance, could result in irreversible damage to these resources, decrease their value and utility for public purposes, or unreasonably endanger life and property. The legislature therefore determines that the state should identify these areas of critical concern and assist and cooperate with local units of government in the preparation of plans and regulations for the wise use of these areas.

### WILD AND SCENIC RIVERS ACT

M.S. 103F.305 SCENIC RIVER PROTECTION POLICY

The legislature finds that certain of Minnesota's rivers and their adjacent lands possess outstanding scenic, recreational, natural, historical, scientific and similar values. It is in the interest of present and future generations to retain these values, and a policy of the state, and an authorized public purpose to preserve and protect these rivers.

**OVERVIEW OF LAWS THAT RELATE TO URBAN RIVERS**

**PLAN REQUIREMENTS**

SHORELAND MANAGEMENT ACT	FLOODPLAIN MANAGEMENT ACT	CRITICAL AREAS ACT	WILD AND SCENIC RIVERS ACT
Does not apply.	Does not apply.	<p>M.S. 116G.07 PREPARATION, REVIEW, AND APPROVAL OF PLANS AND REGULATIONS</p> <p>M.S. 116G.08 EXCEPTIONS</p> <p>M.S. 116G.09 FAILURE PREPARE AND SUBMIT PLANS AND REGULATIONS</p> <p>M.S. 116G.10 UPDATING AND REEVALUATION OF PLANS AND REGULATIONS</p> <p>RULE 4410.8900 PLANS AND REGULATIONS FOR CRITICAL AREAS</p> <p><b>Planning process stages.</b> The initial critical area plan and any subsequent update and reevaluation shall explicitly record the following stages of the critical area planning process:</p> <ul style="list-style-type: none"> <li>■ The evaluation of existing conditions and trends, including a description of any change in each of the elements of the plan and a comparison between the intended and actual results of any adopted local, regional, or state programs and regulations.</li> <li>■ The evaluation of alternative futures, including the major problems and opportunities associated with each alternative.</li> <li>■ The formulation of objectives based on the evaluation of existing conditions and alternative futures. The objectives shall be measurable short-range steps toward goals expressed in state law, by the regional development commission and in the standards and guidelines specified in the order of designation. When the objectives differ substantially from those previously adopted, the predicted consequences shall be compared.</li> <li>■ The formulation of programs and regulations designed to achieve the objectives. The programs shall specify the schedule and sequence of actions and development to be undertaken by individual public agencies. The regulations shall be sufficiently specific to provide public agencies with the basis for evaluating individual development permit applications.</li> </ul> <p><b>Factors to be addressed.</b> The critical areas planning process shall specifically address the following factors:</p>	<p>RULE 6105.0070 PROCEDURE FOR INCLUDING A RIVER: MANAGEMENT PLANS</p> <p><b>In general.</b> For each river proposed to be included in the wild and scenic rivers system, the commissioner shall prepare a management plan. The plan shall:</p> <ul style="list-style-type: none"> <li>■ Give emphasis to the preservation and protection of the area's scenic, recreational, natural, historic, and similar values.</li> <li>■ Place no unreasonable restrictions upon compatible, preexisting, economic uses of particular tracts of land.</li> </ul> <p><b>Contents of plan.</b> Each management plan shall include:</p> <ul style="list-style-type: none"> <li>■ The proposed classification of the river or appropriate segments.</li> <li>■ The proposed land use district boundaries which shall not exceed 320 acres per each mile of river on both sides (not each side) of the river.</li> <li>■ The proposed methods for preserving the river and its adjacent lands.</li> <li>■ The proposed regulations for local land use control. These shall be consistent with the river classification, but may differ from the standards and criteria of parts 6105.0010 to 6105.0250 to the extent necessary to take account of the particular attributes of the area.</li> <li>■ The proposed regulations, if any, for water surface use of the river.</li> <li>■ The proposed plan for recreational management within the land use district.</li> <li>■ The proposed plan for administration of the management plan.</li> </ul>

*continued on page 17*

**OVERVIEW OF LAWS THAT RELATE TO URBAN RIVERS**

**PLAN REQUIREMENTS** *continued*

SHORELAND MANAGEMENT ACT	FLOODPLAIN MANAGEMENT ACT	CRITICAL AREAS ACT	WILD AND SCENIC RIVERS ACT
		<p>■ The elements of regional or statewide interest identified in the recommendation to designate the critical area.</p> <p>■ The standards and guidelines to be followed in preparing and adopting plans and regulations as specified in the order of designation.</p> <p>■ Any other relevant physical, social, or economic element as permitted by state law.</p> <p>RULE 4410.9000 PREPARATION OF CRITICAL AREA PLANS AND REGULATIONS</p> <p><b>Requirement.</b> When a critical area has been designated, plans and regulations to govern the use of the critical area shall be prepared, unless acceptable plans and regulations exist.</p> <p><b>Responsibility for preparation.</b> When no plans or regulations for the critical area exist at the time of the order of designation, the plans and regulations shall be prepared by the following:</p> <p>■ Each local unit of government with jurisdiction within the critical area and the existing authority to develop and enact plans and regulations.</p> <p>■ Or, the regional development commission with jurisdiction within the critical area when requested within 30 days of notice of the order of designation by a local unit of government with jurisdiction within the critical area.</p> <p>■ Or, the board when requested within 30 days of notice of the order of designation by a local unit of government with jurisdiction within the critical area, when no regional development commission exists.</p> <p><b>Time for preparation.</b> A local unit of government shall prepare the plans and regulations within six months of notice of the order of designation. A regional development commission shall prepare the plans and regulations within six months of the request from the local unit of government.</p> <p>When the local unit of government or regional development commission requests a time extension for the preparation of plans and regulations, the board may grant the time extension when it determines that the local unit of government or regional development commission</p> <p style="text-align: right;"><i>continued on page 18</i></p>	

**OVERVIEW OF LAWS THAT RELATE TO URBAN RIVERS**

**PLAN REQUIREMENTS** *continued*

SHORELAND MANAGEMENT ACT	FLOODPLAIN MANAGEMENT ACT	CRITICAL AREAS ACT	WILD AND SCENIC RIVERS ACT
		<p>is making a conscientious attempt to develop the plans and regulations, and that the project is of a magnitude that precludes the completion, review, and adoption of the plans and regulations within the time limits established in these rules.</p> <p><b>Reimbursement of costs.</b></p> <p><b>State agency assistance.</b></p> <p><b>Public participation.</b> The preparation process shall include adequate opportunity for participation by the general public, property owners, nonowner users of land, and appropriate officials or representatives of local, regional, state, and federal government agencies. The appropriate regional development commission may appoint an advisory committee consisting of representatives of the above interests to guide the planning process. Public hearing with adequate notice shall be held.</p> <p>RULE 4410.9100 REVIEW AND APPROVAL OF CRITICAL AREA PLANS AND REGULATIONS</p> <p>RULE 4410.9500 UPDATE AND REEVALUATION OF PLANS AND REGULATIONS</p> <p><b>Optional update.</b></p> <p><b>Mandatory review.</b> The board shall review the plans and regulations for a critical area every two years after one of the following: the date of the board's initial approval of the plans and regulations, or the board's approval of an optional update of plans and regulations, pursuant to subpart 1.</p> <p>The board shall review the plans and regulations and any recommended changes for update and approval in the same manner as for approval of the original plans and regulations. When the board determines that the plans and regulations for the critical area have been implemented to the extent of fulfilling the regional or statewide interest in such critical area, the board may modify the two-year mandatory review requirement.</p>	



# OVERVIEW OF LAWS THAT RELATE TO URBAN RIVERS

URBAN-RELATED DISTRICTS OR DESIGNATIONS ALLOWED			
<p><b>SHORELAND MANAGEMENT ACT</b></p> <p>RULE 6120.3200 CRITERIA FOR LAND USE ZONING DISTRICT DESIGNATION</p> <p>Special Protection District</p> <p>Residential District</p> <p>High Density Residential District</p> <p>Water Oriented Commercial District</p> <p>General Use District</p>	<p><b>FLOODPLAIN MANAGEMENT ACT</b></p> <p>RULE 6120.5800 ZONING</p> <p>Floodplain District</p> <p>Land Adjacent to and Outside the Floodplain</p>	<p><b>CRITICAL AREAS ACT</b></p> <p>EXECUTIVE ORDER 79-19</p> <p>Urban Diversified District</p> <p>Urban Developed District</p> <p>Urban Open Space District</p>	<p><b>WILD AND SCENIC RIVERS ACT</b></p> <p>RULE 6105.0090 LAND USE DISTRICTS</p> <p>Scenic</p> <p>Recreational</p>
INTENT OF DISTRICT DESIGNATIONS			
<p>RULE 6120.3200 CRITERIA FOR LAND USE ZONING</p> <p>A special protection district is intended to be used for two basic purposes. The first purpose is to limit and properly manage development in areas that are generally unsuitable for development or uses due to flooding, erosion, limiting soil conditions, steep slopes, or other major physical constraints. A second purpose is to manage and preserve areas with special historical, natural, or biological characteristics.</p> <p>A residential district is primarily intended to allow low to medium density seasonal and year-round residential uses on lands suitable for such uses. It is also intended to prevent establishment of various commercial, industrial, and other uses in these areas that cause conflicts or problems for residential uses. Some nonresidential uses with minimal impacts on residential uses are allowed if properly managed under conditional use procedures.</p> <p>A high density residential district is intended for use on lands with heterogeneous mixes of soils, vegetation, and topography that are not well suited to residential development using standard, lot-block subdivisions. This approach enables such areas to be developed, often even with higher than lot-block densities, while also avoiding and preserving unsuitable terrain and soils. Other compatible uses such as residential planned unit development, surface water-oriented commercial, multiple unit single-family, parks, historic sites, and semipublic, are also allowed, primarily as conditional uses.</p> <p>A water-oriented commercial district is intended to be used only to provide for existing or future commercial uses adjacent to water resources that are functionally dependent on such close proximity.</p> <p>A general use district is intended to be used only for lands already developed or suitable for development with concentrated urban, particularly commercial, land uses. It should not generally be used on natural environment lakes or remote river classes. Several other intensive urban uses such as industrial and commercial planned unit development are allowed in this district if handled as conditional uses.</p>	<p>RULE 6120.5800 ZONING: LAND USES PERMITTED IN FLOODWAY AND FLOOD FRINGE AREAS</p> <p><b>Permitted uses within the floodway or between levels.</b> Local zoning ordinances may designate specified uses as permitted or special permit uses provided such uses have a low flood damage potential and will not materially obstruct flood flows or increase velocities or stages of the regional flood. However, uses that are likely to cause pollution of waters, as defined in Minnesota Statutes 1969, section 115.01, are prohibited unless adequate safeguards approved by the state water pollution control agency are provided. All other uses are prohibited including storage of any potentially hazardous materials which if subject to flooding may become buoyant, flammable, explosive, or may be injurious to human, animal, or plant life. Permitted uses must not be detrimental to the uses permitted in adjoining districts.</p> <p>Lands outside of the floodplain:</p> <ul style="list-style-type: none"> <li>■ All floodplain developments within designated flood fringe areas shall be compatible with local comprehensive plans.</li> <li>■ Floodplain developments shall not adversely affect the efficiency or unduly restrict the capacity of the channels or floodways of any tributaries to the main stream, drainage ditches, or any other drainage facilities or systems.</li> </ul>	<p>EXECUTIVE ORDER 79-19</p> <p>In order to manage the river corridor consistent with its natural characteristics and its existing development, the following guidelines are established for each corridor district:</p> <ul style="list-style-type: none"> <li>■ <b>Urban diversified district.</b> The lands and waters within this district shall be used and developed to maintain the present diversity of commercial, industrial, residential and public uses of the lands, including existing transportation use of the river; to protect historical sites and areas, natural scenic and environmental resources; and to expand public access to and enjoyment of the river. New commercial, industrial, residential and other uses may be permitted if they are compatible with these goals.</li> <li>■ <b>Urban developed district.</b> The lands and waters within this district shall be maintained largely as residential areas. The expansion of existing and development of new industrial, commercial and other non-residential or non-recreational uses shall be limited to preserve and enhance the residential character of this district.</li> <li>■ <b>Urban open space district.</b> The lands and waters within this district shall be managed to conserve and protect the existing and potential recreational, scenic, natural and historic resources and uses within this district for the use and enjoyment of the surrounding region. Open space shall be provided in the open river valley lands for public use and the protection of unique natural and scenic resources. The existing transportation role of the river in this district shall be protected.</li> </ul>	<p>RULE 6105.0060 RIVERS ELIGIBLE FOR INCLUSION IN RIVER SYSTEM</p> <p><b>General characterization and classification.</b> To be eligible for inclusion in the Minnesota wild and scenic rivers system, a river or segment of a river, and its adjacent lands must possess outstanding scenic, recreational, natural, historical, scientific, or similar values. The river or its segments shall be classified into one or more of the three classes of rivers: wild, scenic, and recreational. Each river shall be managed so as to preserve and protect the values which qualify it for designation and classification.</p> <p>Scenic rivers are those rivers that exist in a free-flowing state and with adjacent lands that are largely undeveloped.</p> <p>Recreational rivers are those rivers that may have undergone some impoundment or diversion in the past and that may have adjacent lands which are considerably developed, but that are still capable of being managed so as to further the purposes of this act.</p>

# OVERVIEW OF LAWS THAT RELATE TO URBAN RIVERS

## ALLOWED LAND USES

### SHORELAND MANAGEMENT ACT

RULE 6120.3200 CRITERIA FOR LAND USE ZONING DISTRICT DESIGNATION

- Residential planned unit developments
- Single residential
- Commercial planned unit development (Limited expansion of a commercial planned unit development involving up to six additional dwelling units or sites may be allowed as a permitted use provided the provisions of part 6120.3800, subpart 2, are satisfied.)
- Surface water oriented commercial (as accessory to a residential planned unit development.)
- Public, semipublic
- Parks and historic sites
- Duplex, triplex, quad residential

### FLOODPLAIN MANAGEMENT ACT

RULE 6120.5800 ZONING: LAND USES PERMITTED IN FLOODWAY AND FLOOD FRINGE AREAS

- Permitted uses within the floodway or between levels:
- Uses having a low flood damage potential including agricultural uses, recreational uses, parking lots, loading areas, storage yards, airport landing strips, certain sand and gravel operations, water control structures, navigation facilities, and other open space uses.
  - Channel and harbor connections to public waters, constructed under authority of Minnesota Statutes 1969, chapter 105.
  - Public utility facilities and water oriented industries.
- Development of flood fringe areas adjacent to and outside of floodways:
- Residential
  - Commercial
  - Manufacturing and industrial
  - Public utilities, roads and bridges
- All floodplain developments within designated flood fringe areas shall be compatible with local comprehensive plans.

### CRITICAL AREAS ACT

EXECUTIVE ORDER 79-19

Not listed specifically as permitted, conditional, or prohibited uses in the Standards and Guidelines. In addition to the uses referenced in the guidelines for each Corridor District in B2 and the specific standards and guidelines in C, Standards and Guidelines B1 outlines that the Mississippi River Corridor shall be managed as a multiple-purpose resource. B1 references such uses as transportation, barging and fleeting areas in appropriate locations, conservation of resources, a variety of urban uses where appropriate, water supply, and receiving stream for properly treated effluents. C 4, 5, 6, 7, and 8 provide guidelines for water surface uses, industrial and commercial developments, mining, open space, recreation, utilities, transportation, and capital improvements.

### WILD AND SCENIC RIVERS ACT

A variety of land uses are allowed in many WSR municipalities, as detailed in MN Rules for each specific community within the management plan for each river. Many municipalities reflect the General Development or Recreational Development standards from the Shoreland Management Rules at the time of WSR designation.

# OVERVIEW OF LAWS THAT RELATE TO URBAN RIVERS

LOT WIDTH			
<p><b>SHORELAND MANAGEMENT ACT</b></p> <p><b>Single Residential</b> Sewer: 100 Feet, Unsewered: 75 Feet</p> <p><b>Duplex Residential</b> Sewer: 150 Feet, Unsewered: 115 Feet</p> <p><b>Triplex Residential</b> Sewer: 200 Feet, Unsewered: 150 Feet</p> <p><b>Quad Residential</b> Sewer: 250 Feet, Unsewered: 190 Feet</p> <p><b>Commercial, Industrial, Public and Semipublic Uses (without water-oriented needs):</b></p> <ul style="list-style-type: none"> <li>■ Must be located on lots or parcels without public waters frontage.</li> <li>■ Or, if located on lots or parcels with public waters frontage, must either be set back double the normal ordinary high water level setback.</li> <li>■ Or, be substantially screened from view from the water by vegetation or topography, assuming summer, leaf-on conditions.</li> </ul>	<p><b>FLOODPLAIN MANAGEMENT ACT</b></p> <p>Does not apply.</p>	<p><b>CRITICAL AREAS ACT</b></p> <p>Does not apply.</p>	<p><b>WILD AND SCENIC RIVERS ACT</b></p> <p>Minimum lot widths are specified in MN Rules for each WSR community within the management plan for each river. Many municipalities reflect the General Development or Recreational Development standards for sewer and nonsewer areas from the Shoreland Management Rules at the time of WSR designation.</p> <p>Smaller minimum lot widths may be allowed for approved planned cluster developments or inconsistent plats in accordance with requirements in MN Rules, parts 6105.0140 or 6105.0230.</p>
WATER SETBACK			
<p>Unsewered: 100 Feet Sewered: 50 Feet</p>	<p>Does not apply.</p>	<p>In addition to the purposes of A and general guidelines of B1 and B2:</p> <ul style="list-style-type: none"> <li>■ Prepare plans and regulations to protect bluffs greater than 18% and to provide conditions for the development of bluffs between 18% and 12% slopes.</li> <li>■ Structure site and location shall be regulated to ensure that riverbanks, bluffs and scenic overlooks remain in their natural state, and to minimize interference with views of and from the river, except for specific uses requiring river access.</li> </ul>	<p>Minimum setbacks are specified in MN Rules for each WSR community within the management plan for each river. Many municipalities reflect the General Development or Recreational Development standards from the Shoreland Management Rules at the time of WSR designation.</p>
BLUFF SETBACK			
<p>30 Feet</p>	<p>Does not apply.</p>	<p>In addition to the purposes of A and general guidelines of B1 and B2:</p> <ul style="list-style-type: none"> <li>■ Prepare plans and regulations to protect bluffs greater than 18% and to provide conditions for the development of bluffs between 18% and 12% slopes.</li> <li>■ Structure site and location shall be regulated to ensure that riverbanks, bluffs and scenic overlooks remain in their natural state, and to minimize interference with views of and from the river, except for specific uses requiring river access.</li> </ul>	<p>Minimum setbacks are specified in MN Rules for each WSR community within the management plan for each river. Many municipalities reflect the General Development or Recreational Development standards from the Shoreland Management Rules at the time of WSR designation.</p>

# OVERVIEW OF LAWS THAT RELATE TO URBAN RIVERS

## HEIGHT RESTRICTIONS

SHORELAND MANAGEMENT ACT	FLOODPLAIN MANAGEMENT ACT	CRITICAL AREAS ACT	WILD AND SCENIC RIVERS ACT
<p>25 Feet in Residential</p>	<p>Does not apply.</p>	<p>Each local unit of government and state agency shall prepare plans and regulations to protect and preserve the aesthetic qualities of the river corridor, which provide for the following considerations:</p> <p><b>Site Plans.</b> Site plans shall be required to meet the following guidelines:</p> <ul style="list-style-type: none"> <li>■ Site plans shall include standards to ensure that structure, road, screening, landscaping, construction placement, maintenance, and storm water runoff are compatible with the character and use of the river corridor in that district.</li> <li>■ Site plans shall provide opportunities for open space establishment and for public viewing of the river corridor whenever applicable, and shall contain specific conditions with regard to buffering, landscaping, and revegetation.</li> </ul> <p><b>Structures.</b> Structure site and location shall be regulated to ensure that riverbanks, bluffs and scenic overlooks remain in their natural state, and to minimize interference with views of and from the river, except for specific uses requiring river access.</p>	<p>Scenic River: 35 Feet</p> <p>Recreational River: 35 Feet</p>

## HIGH WATER ELEVATION

<p>RULE 6120.3300 ZONING PROVISIONS</p> <p>The lowest floor must be at least three feet above the flood of record, if data are available.</p> <p>If data are not available, by placing the lowest floor at least three feet above the ordinary high water level, or by conducting a technical evaluation to determine effects of proposed construction upon flood stages and flood flows and to establish the flood protection elevation.</p>	<p>RULE 6120.5700 MINIMUM FLOODPLAIN MANAGEMENT STANDARDS FOR LOCAL ZONING ORDINANCES</p> <p>The flood protection elevations shall correspond to a point not less than one foot above the water surface profile associated with the regional flood plus any increases in flood stages attributable to encroachments on the floodplain established under subpart 4, item A. The flood protection elevations shall be clearly lettered at identifiable positions on the official zoning district map consistent with the water surface profile of the regional flood, or the profile shall be attached to and made part of the official zoning district map.</p>	<p>EXECUTIVE ORDER 79-19</p> <p>The Mississippi River Corridor shall be managed in accordance with other applicable state and federal laws.</p> <p>Prepare a floodplain ordinance if it does not have a floodplain ordinance in effect.</p>	<p>Does not apply.</p>
---	--	---	------------------------

## SLOPE RESTRICTIONS

<p>Does not apply.</p>	<p>Does not apply.</p>	<p>Prepare plans and regulations to protect bluffs greater than 18% and to provide conditions for the development of bluffs between 18% and 12% slopes.</p> <p>Structure site and location shall be regulated to ensure that riverbanks, bluffs and scenic overlooks remain in their natural state, and to minimize interference with views of and from the river, except for specific uses requiring river access.</p>	<p>No structures allowed on slopes greater than 13% unless they can comply with criteria in sanitary provisions in 6105.0120.</p>
------------------------	------------------------	---	---

# OVERVIEW OF LAWS THAT RELATE TO URBAN RIVERS

## SHORE IMPACT ZONE, VEGETATION MANAGEMENT, AND IMPERVIOUS SURFACES

### SHORELAND MANAGEMENT ACT

#### 6120.3300 ZONING PROVISIONS

**Shoreland alterations.** Vegetative alterations and excavations or grading and filling necessary for the construction of structures and sewage treatment systems under validly issued permits for these facilities are exempt from the vegetative alteration standards in this subpart and separate permit requirements for grading and filling. However, the grading and filling conditions of this subpart must be met for issuance of permits for structures and sewage treatment systems. Alterations of vegetation and topography must be controlled by local governments to prevent erosion into public waters, fix nutrients, preserve shoreland aesthetics, preserve historic values, prevent bank slumping, and protect fish and wildlife habitat. Public roads and parking areas, as regulated by subpart 5, are exempt from the provisions of this part.

Removal or alterations of vegetation, except for forest management or agricultural uses as provided for in subparts 7 and 8, is allowed according to the following standards:

Intensive vegetation clearing within the shore and bluff impact zones and on steep slopes is not allowed. Intensive vegetation clearing outside of these areas is allowed if the activity is consistent with the forest management standards in subpart 8.

Limited clearing of trees and shrubs and cutting, pruning, and trimming of trees to accommodate the placement of stairways and landings, picnic areas, access paths, livestock watering areas, beach and watercraft access areas, and permitted water-oriented accessory structures or facilities, as well as providing a view to the water from the principal dwelling site, in shore and bluff impact zones and on steep slopes is allowed, provided that:

- The screening of structures, vehicles, or other facilities as viewed from the water, assuming summer, leaf-on conditions, is not substantially reduced.

- Along rivers, existing shading of water surfaces is preserved.

- The above provisions are not applicable to the removal of trees, limbs, or branches that are dead, diseased, or pose safety hazards.

### FLOODPLAIN MANAGEMENT ACT

### CRITICAL AREAS ACT

#### EXECUTIVE ORDER 79-19

**Vegetation management.** In rural open space, urban developed and urban open space districts, the following standards shall apply:

On developed islands, public recreation lands, the slope or face of bluffs within 200 feet of the normal ordinary high water mark of the river, and within the area 40 feet landward from blufflines, clear cutting shall not be permitted.

On all other lands within these districts, clear cutting shall be guided by the following provisions:

- Clear cutting shall not be used as a cutting method where soil, slope, or other watershed conditions are fragile and subject to injury.

- Clear cutting shall be conducted only where clear-cut blocks, patches, or strips are, in all cases, shaped and blended with the natural terrain.

- The size of clear-cut blocks, patches, or strips shall be kept at the minimum necessary.

- Where feasible all clear cuts shall be conducted between September 15 and May 15. If natural regeneration will not result in adequate vegetative cover, areas in which clear cutting is conducted shall be replanted to prevent erosion and to maintain the aesthetic quality of the area. Where feasible, replanting shall be performed in the same spring, or the following spring.

The selective cutting of trees greater than 4" in diameter may be permitted by local units of government when the cutting is appropriately spaced and staged so that a continuous natural cover is maintained.

In urban diversified district:

- On the slope or face of bluffs within areas 40 feet landward from established blufflines, clear cutting shall not be permitted.

- The selective cutting of trees greater than 4" in diameter may be permitted by local units of government when the cutting is appropriately spaced and staged so that a continuous natural cover is maintained.

### WILD AND SCENIC RIVERS ACT

#### RULE 6105.0150 VEGETATIVE CUTTING

**In general.** On lands within 200 feet of the normal high water mark of wild rivers, 150 feet of the normal high water mark of scenic rivers, 100 feet of the normal high water mark of recreational rivers and lands within 100 feet of the normal high water mark of tributaries designated in the management plan and on lands 40 feet landward of the bluffline on wild rivers, 30 feet landward of the bluffline on scenic rivers, and 20 feet landward of the bluffline on recreational rivers, the following standards shall apply:

- Clear cutting, except for any authorized public services such as roads and utilities, shall not be permitted.

- Selective cutting of trees in excess of four inches in diameter at breast height is permitted provided that cutting is spaced in several cutting operations and a continuous tree cover is maintained, uninterrupted by large openings. In cases where the existing tree cover has been interrupted by large openings in the past, selective cutting should be performed so as to maintain a continuous tree cover in the remaining wooded areas.

The above cutting provisions will not be deemed to prevent:

- The removal of diseased or insect-infested trees, or of rotten or damaged trees that present safety hazards.

- Pruning understory vegetation, shrubs, plants, bushes, grasses, or from harvesting crops, or cutting suppressed trees or trees less than four inches in diameter at breast height.

**Clear cutting restrictions.** Clear cutting anywhere in wild, scenic, or recreational river land use districts is subject to the following standards and criteria:

- Clear cutting shall not be used as a cutting method where soil, slope, or other watershed conditions are fragile and subject to injury.

- Clear cutting shall be conducted only where clear-cut blocks, patches, or strips are, in all cases, shaped and blended with the natural terrain.

- The size of clear-cut blocks, patches, or strips shall be kept at the minimum necessary.

*continued on page 24*



# OVERVIEW OF LAWS THAT RELATE TO URBAN RIVERS

## SHORE IMPACT ZONE, VEGETATION MANAGEMENT, AND IMPERVIOUS SURFACES *continued*

SHORELAND MANAGEMENT ACT	FLOODPLAIN MANAGEMENT ACT	CRITICAL AREAS ACT	WILD AND SCENIC RIVERS ACT
<p>Use of fertilizer and pesticides in the shoreland management district must be done in such a way as to minimize runoff into the shore impact zone or public water by the use of earth, vegetation, or both.</p> <p>Impervious surface coverage of lots not to exceed 25 percent of the lot area.</p>	<p>Does not apply.</p>	<p>These vegetation management standards and criteria shall not prevent the pruning and cutting of vegetation to the minimum amount necessary for the construction of bridges and roadways and for the safe installation, maintenance and operation of essential services and utility transmission services which are permitted uses.</p> <ul style="list-style-type: none"> <li>■ Prepare regulations for management of vegetative cutting.</li> </ul> <p>Each local unit of government and state agency shall prepare plans and regulations to protect and preserve the aesthetic qualities of the river corridor, which provide for the following considerations:</p> <p><b>Site Plans.</b> Site plans shall be required to meet the following guidelines:</p> <ul style="list-style-type: none"> <li>■ Site plans shall include standards to ensure that structure, road, screening, landscaping, construction placement, maintenance, and storm water runoff are compatible with the character and use of the river corridor in that district.</li> <li>■ Site plans shall provide opportunities for open space establishment and for public viewing of the river corridor whenever applicable, and shall contain specific conditions with regard to buffering, landscaping, and revegetation.</li> </ul> <p><b>Structures.</b> Structure site and location shall be regulated to ensure that riverbanks, bluffs and scenic overlooks remain in their natural state, and to minimize interference with views of and from the river, except for specific uses requiring river access.</p> <p><b>Existing Development.</b> Local plans and regulations shall include provisions to:</p> <ul style="list-style-type: none"> <li>■ Retain existing vegetation and landscaping.</li> <li>■ Manage undeveloped islands in their natural state.</li> </ul>	<ul style="list-style-type: none"> <li>■ Where feasible all clear cuts shall be conducted between September 15 and May 15. If natural regeneration will not result in adequate vegetative cover, areas in which clear cutting is conducted shall be replanted to prevent erosion and to maintain the aesthetic quality of the area. Where feasible, replanting shall be performed in the same spring, or the following spring.</li> </ul>

# OVERVIEW OF LAWS THAT RELATE TO URBAN RIVERS

## ENFORCEMENT MECHANISMS

SHORELAND MANAGEMENT ACT	FLOODPLAIN MANAGEMENT ACT	CRITICAL AREAS ACT	WILD AND SCENIC RIVERS ACT
<p>RULE 6120.3900 ADMINISTRATION</p> <p>Local governments must provide for the administration and enforcement of their shoreland management controls by establishing permit procedures for building construction, installation of sewage treatment systems, and grading and filling.</p>	<p>RULE 6120.5900 SUPPLEMENTAL STANDARDS AND CRITERIA FOR FLOODPLAIN MANAGEMENT</p> <p>Supplemental measures for floodplain management should be included in local governmental comprehensive floodplain management programs and adopted or provided in addition to local zoning ordinances when sufficient technical data and resources are available for their effectuation. All local governmental units shall provide for control of the development and use of floodplains in flood hazard areas by adopting the following specific regulations and measures:</p> <ul style="list-style-type: none"> <li>■ Subdivision regulations</li> <li>■ Building codes</li> <li>■ Sanitary regulations</li> <li>■ Warning signs and public information regulations</li> </ul> <p>RULE 6120.5900 SUPPLEMENTAL STANDARDS AND CRITERIA FOR FLOODPLAIN MANAGEMENT</p> <p>To fulfill the intent of Minnesota Statutes 1969, section 104.03, every local governmental unit with flood hazard areas and a floodplain management program shall submit to the commissioner by March 30 an annual report outlining and summarizing the previous year's activity and progress in floodplain management activities on a form to be provided by the commissioner. The report shall include information as to:</p> <ul style="list-style-type: none"> <li>■ Progress in the acquisition of technical floodplain information, including a summary of any flood crest elevations, cross sectional data and maps or illustrative material prepared by or for the local governmental unit.</li> <li>■ Progress in floodplain management program administration, including a summary of zoning permits issued, subdivision plats approved, building permits issued, variances granted, enforcement action, etc.</li> </ul> <p>Flood warning and information sources, including a summary of flood warning systems established or implemented, emergency plans prepared, and public informational reports and studies concerning various aspects of local floodplain management.</p>	<p>M.S. 116G.09 FAILURE TO PREPARE AND SUBMIT PLANS AND REGULATIONS</p> <p>Except as otherwise provided in section 116G.08, if any local unit of government fails to prepare plans and regulations that are acceptable to the board within one year of the order designating an area or areas of critical concern within its jurisdiction, the board shall prepare and, after conducting a public hearing in the manner provided in chapter 14 at a location convenient to those persons affected by such plans and regulations, adopt such plans and rules applicable to that government's portion of the area of critical concern as may be necessary to effect the purposes of sections 116G.01 to 16G.14. If such plans and rules are adopted, they shall apply and be effective as if adopted by the local unit of government. Notice of any proposed order issued under this section shall be given to all units of government having jurisdiction over the area of critical concern.</p> <p>Plans and rules adopted by the board under this section shall be administered by the local unit of government as if they were part of the local ordinance.</p> <p>At any time after the preparation and adoption of plans and rules by the board, a local unit of government may submit plans and regulations pursuant to section 116G.07 which, if approved by the board as therein provided, supersede any plans and rules adopted under this section.</p> <p>If the board determines that the administration of the local plans and regulations are inadequate to protect the state or regional interest, the board may institute appropriate judicial proceedings to compel proper enforcement of the plans and regulations.</p> <p>RULE 4410.9600 JUDICIAL ENFORCEMENT OF PLANS AND REGULATIONS</p> <p>When the board determines that the administration of the local plans and regulations is inadequate to protect the state or regional interests, the board may institute appropriate judicial proceedings to compel proper enforcement of the plans and regulations.</p>	<p>RULE 6105.0220 IMPLEMENTATION OF PROPOSED MANAGEMENT PLAN</p> <p>Adoption of the management plan, and adoption or amendment of local ordinances to comply with the management plan, shall be carried out pursuant to the procedures described in Laws of Minnesota 1973, chapter 271, sections 5 and 6.</p> <p>On deeming it necessary to expedite the preservation and protection of the designated river, the commissioner may request the local authority to initially implement the land use controls described in the adopted management plan by passing an interim zoning resolution, providing such a resolution would be otherwise lawful.</p> <p>RULE 6105.0230 REVIEWS AND CERTIFICATION OF LOCAL LAND USE DECISIONS</p> <p><b>Procedure established.</b> In order to ensure that the standards herein are not nullified by unjustified exceptions in particular cases, and to promote uniformity in the treatment of applications for such exceptions, a review and certification procedure is hereby established for certain local land use decisions. These certain decisions consist of any decisions which directly affect the use of land within a wild, scenic, or recreational river land use district.</p> <p><b>Compliance with decision guides.</b> No such action shall be effective unless and until the commissioner has certified that the action complies with the Minnesota Wild and Scenic Rivers Act, the statewide standards and criteria, and the management plan.</p>

# OVERVIEW OF LAWS THAT RELATE TO URBAN RIVERS

## STATE VS. LOCAL ROLES AND RESPONSIBILITIES

### SHORELAND MANAGEMENT ACT

RULE 6120.3200 CRITERIA FOR LAND USE ZONING DISTRICT DESIGNATION

These minimum standards and criteria apply to those shorelands of public waters of the state which are subject to local government land use controls. They are intended to be incorporated into local government shoreland management controls. Each local government is responsible for administration and enforcement of its shoreland management controls adopted in compliance with these standards and criteria. Nothing in these standards and criteria shall be construed as prohibiting or discouraging a local government from adopting and enforcing controls that are more restrictive.

Counties, and those cities designated by the commissioner in consultation with the appropriate county, must adopt or amend land use controls to bring them into substantial compliance with these standards and criteria within two years of being notified by the commissioner.

Local governments may, under special circumstances and with the commissioner's approval, adopt shoreland management controls that are not in strict conformity with these minimum standards and criteria, provided the purposes of Minnesota Statutes, sections 103F.201 to 103F.221, are satisfied.

**Criteria.** The land use zoning districts established by local governments must be based on considerations of:

- Preservation of natural areas.
- Present ownership and development of shoreland areas.
- Shoreland soil types and their engineering capabilities.
- Topographic characteristics.
- Vegetative cover.
- In-water physical characteristics, values, and constraints.
- Recreational use of the surface water.
- Road and service center accessibility.
- Socioeconomic development needs and plans as they involve water and related land resources.
- The land requirements of industry which, by its nature, requires location in shoreland areas.
- The necessity to preserve and restore certain areas having significant historical or ecological value.

*continued on page 27*

### FLOODPLAIN MANAGEMENT ACT

RULE 6120.5400 LOCAL DUTIES

Submit to the commissioner for review a list of available flood data, floodplain maps, and degree of flood damage potential for each watercourse having flood hazards.

Adopt or amend a floodplain management ordinance which meets these minimum standards and criteria for floodplain management, upon the determination of the commissioner that sufficient technical information is available for the delineation of floodplains and floodways on a watercourse.

Submit proposed floodplain management ordinances to the commissioner for review and approval before adoption.

Administer and enforce floodplain management ordinances upon adoption; and submit to the commissioner for approval any amendments to floodplain management ordinances before adoption.

RULE 6120.5500 COMMISSIONER'S DUTIES

Establish statewide standards for management of floodplain areas which apply to private and governmental uses located therein.

Determine the availability of sufficient technical information for the delineation of floodplains and floodways on a watercourse.

Upon request, assist the local governmental unit in the drafting of a floodplain management ordinance which meets the provisions of Minnesota Statutes 1969, chapter 104 and the minimum standards set forth herein. This assistance may include, but not be limited to, creation of specific guidelines to be used locally in the formulation of reasonable regulations and other floodplain management practices based on sound technical data and consistent with state standards and community land use needs.

Review and approve floodplain management ordinances prior to adoption by the local governmental unit.

Where sufficient information is not available, cooperate to the fullest practical extent with appropriate federal agencies and local governmental units in securing adequate technical information which can be used for the delineation of floodplains and floodways along the state's watercourses.

*continued on page 27*

### CRITICAL AREAS ACT

EXECUTIVE ORDER 79-19

**Responsibility.** The standards and guidelines provided herein shall be:

- Followed by the local units of government when preparing or updating plans, and/or modifying regulations.
- Followed by state agencies, and regional agencies for permit regulation and in developing plans with their jurisdiction.
- Followed by the Metropolitan Council for reviewing plans, regulations, and development permit applications.
- Followed by the Council [now DNR] for approving plans, regulations, and development permit applications.

The passages that should be reviewed in their entirety to accurately reflect the State vs. Local Roles and Responsibilities on the Mississippi River Critical Area Corridor today are:

- M.S. sec. 116G.07 to 116G.151
- RULE 4410.9000 to 4410.9900
- EXECUTIVE ORDER 79-19 C, D, E, F, G and H

### WILD AND SCENIC RIVERS ACT

M.S. 103F.321 ADMINISTRATION AND RULES

**Administration.** The commissioner shall administer the wild and scenic rivers system. The commissioner shall conduct studies, develop criteria for classification and designation of rivers, designate rivers for inclusion within the system, manage the components of the system, and adopt rules to manage and administer the system.

**Shoreland rules.** The commissioner shall adopt statewide minimum standards and criteria for the preservation and protection of shorelands within the boundaries of wild, scenic, and recreational rivers.

M.S. 103F.325 DESIGNATION PROCEDURE

**Management plan.** For each river proposed to be included in the wild and scenic rivers system, the commissioner shall prepare a management plan, without unreasonable restrictions upon compatible, preexisting, economic uses of particular tracts of land, to preserve and enhance the values that cause the river to be proposed for inclusion in the system.

The plan shall:

- Give primary emphasis to the area's scenic, recreational, natural, historical, scientific and similar values.
- State the proposed classification of the river and segments of the river.
- Designate the boundaries of the area along the river to be included within the system, which may not include more than 320 acres per mile on both sides of the river.
- Include proposed rules governing the use of public lands and waters within the area, which may differ from statewide rules to the extent necessary to take account of the particular attributes of the area.

The plan may include proposed standards and criteria adopted under section 103F.321 for local land use controls that differ from statewide standards and criteria to the extent necessary to take account of the particular attributes of the area.

# OVERVIEW OF LAWS THAT RELATE TO URBAN RIVERS

## STATE VS. LOCAL ROLES AND RESPONSIBILITIES *continued*

SHORELAND MANAGEMENT ACT	FLOODPLAIN MANAGEMENT ACT	CRITICAL AREAS ACT	WILD AND SCENIC RIVERS ACT
<p><b>Designation of zoning districts.</b> Local governments with adopted land use zoning districts in effect on the date of adoption of parts 6120.2500 to 6120.3900 may continue to use the districts until revisions are proposed. When amendments to zoning districts on lakes are considered, local governments, at least for all the shoreland within the community of the public water involved and preferably for all shoreland areas within the community, must revise existing zoning district and use provisions to make them substantially compatible with the framework in subpart 4. On a river, zoning districts and use provisions for all shoreland on both sides within the same class in the community must be revised to make them substantially compatible with the framework in subpart 5. If the same river class is contiguous for more than a five-mile segment, only the shoreland for a distance of 2.5 miles up and down stream or to the class boundary, if closer, need be evaluated. When an interpretation question arises about whether a specific land use fits within a category in subpart 4 or 5, the question must be resolved through procedures in local government official controls and state statutes.</p> <p>RULE 6120.3000 SHORELAND MANAGEMENT CLASSIFICATION</p> <p>The commissioner shall classify all public waters in accordance with the following criteria:</p> <ul style="list-style-type: none"> <li>■ Size and shape.</li> <li>■ Amount and type of existing development.</li> <li>■ Road and service center accessibility.</li> <li>■ Existing natural characteristics of the waters and shorelands.</li> <li>■ State, regional, and local plans and management programs.</li> <li>■ Existing land use restrictions.</li> <li>■ Presence of significant historic sites.</li> </ul>	<p>Periodically review and upgrade floodplain management criteria based on new hydrologic, hydraulic, and other technical methodologies.</p> <p>Disseminate to local governmental units, whenever available, technical information including information of federal programs involving floodplain areas, educational materials, and other material useful in carrying out a floodplain management program.</p> <p>Survey the enforcement of floodplain management ordinances.</p> <p>Coordinate federal, state, and local floodplain management activities in the state.</p>		

# OVERVIEW OF LAND AND WATER PLAN REQUIREMENTS

## PURPOSE

METROPOLITAN LAND PLANNING ACT	LOCAL WATER PLANNING LAW (nonmetro counties)	METROPOLITAN LOCAL WATER PLANNING	STORMWATER MANAGEMENT
<p>M.S. 473.851 LEGISLATIVE FINDINGS AND PURPOSE</p> <p>The legislature finds and declares that the local governmental units within the metropolitan area are interdependent, that the growth and patterns of urbanization within the area create the need for additional state, metropolitan and local public services and facilities and increase the danger of air and water pollution and water shortages, and that developments in one local governmental unit may affect the provision of regional capital improvements for sewers, transportation, airports, water supply, and regional recreation open space. Since problems of urbanization and development transcend local governmental boundaries, there is a need for the adoption of coordinated plans, programs and controls by all local governmental units and school districts in order to protect the health, safety and welfare of the residents of the metropolitan area and to ensure coordinated, orderly and economic development. Therefore, it is the purpose of sections 462.355, subdivision 4, 473.175, and 473.851 to 473.871 to (1) establish requirements and procedures to accomplish comprehensive local planning with land use controls consistent with planned, orderly and staged development and the metropolitan system plans, and (2) to provide assistance to local governmental units and school districts within the metropolitan area for the preparation of plans and official controls appropriate for their areas and consistent with metropolitan system plans.</p>	<p>RULE 9300.0020 PURPOSES OF PLANNING PROCESS AND SCOPE OF PLAN</p> <p><b>Purposes.</b> The purposes of a comprehensive water plan are to:</p> <ul style="list-style-type: none"> <li>■ Identify existing and potential problems and opportunities for the protection, management, and development of water and related land resources.</li> <li>■ Develop objectives and carry out a plan of action to promote sound hydrologic management of water and related land resources, effective environmental protection, and efficient management.</li> </ul> <p>M.S. 103B.311 COUNTY WATER PLANNING AND MANAGEMENT</p> <p><b>County duties.</b> Each county is encouraged to develop and implement a comprehensive water plan. Each county that develops and implements a plan has the duty and authority to:</p> <ul style="list-style-type: none"> <li>■ Prepare and adopt a comprehensive water plan that meets the requirements of this section and section 103B.315.</li> <li>■ Review water and related land resources plans and official controls submitted by local units of government to assure consistency with the comprehensive water plan.</li> <li>■ Exercise any and all powers necessary to assure implementation of comprehensive water plans.</li> </ul>	<p>M.S. 103B.201 METROPOLITAN WATER MANAGEMENT PROGRAM AND PURPOSE</p> <p>The purposes of the water management programs required by sections 103B.205 to 103B.255 are to:</p> <ul style="list-style-type: none"> <li>■ Protect, preserve, and use natural surface and ground water storage and retention systems.</li> <li>■ Minimize public capital expenditures needed to correct flooding and water quality problems.</li> <li>■ Identify and plan for means to effectively protect and improve surface and ground water quality.</li> <li>■ Establish more uniform local policies and official controls for surface and ground water management.</li> <li>■ Prevent erosion of soil into surface water systems.</li> <li>■ Promote ground water recharge.</li> <li>■ Protect and enhance fish and wildlife habitat and water recreational facilities.</li> <li>■ Secure the other benefits associated with the proper management of surface and ground water.</li> </ul>	<p>M.S. 444.075 WATERWORKS SYSTEMS, MAIN SEWERS, SEWAGE DISPOSAL PLANTS</p> <p><b>Definitions.</b> For purposes of this section, the term “municipality” means a home rule charter or statutory city, except a city of the first class, or a town that is not in an orderly annexation process on October 3, 1989. The term “governing body” means the town board with respect to towns.</p> <p><b>Authorization.</b> Any municipality may build, construct, reconstruct, repair, enlarge, improve, or in any other manner obtain:</p> <ul style="list-style-type: none"> <li>■ Waterworks systems, including mains, valves, hydrants, service connections, wells, pumps, reservoirs, tanks, treatment plants, and other appurtenances of a waterworks system.</li> <li>■ Sewer systems, sewage treatment works, disposal systems, and other facilities for disposing of sewage, industrial waste, or other wastes.</li> <li>■ Storm sewer systems, including mains, holding areas and ponds, and other appurtenances and related facilities for the collection and disposal of storm water, all hereinafter called facilities, and maintain and operate the facilities inside or outside its corporate limits, and acquire by gift, purchase, lease, condemnation, or otherwise any and all land and easements required for that purpose. The authority hereby granted is in addition to all other powers with reference to the facilities otherwise granted by the laws of this state or by the charter of any municipality. The authority granted to municipalities which have territory within a watershed which has adopted a watershed plan pursuant to section 103B.231 shall be exercised, with respect to facilities acquired following the adoption of the watershed plan, only for facilities which are not inconsistent with the watershed plan. The authority granted to municipalities which have adopted local water management plans pursuant to section 103B.235 shall be exercised, with respect to facilities acquired following the adoption of a local plan, only for facilities which are not inconsistent with the local plan. Counties, except counties in the seven-county metropolitan area, shall have the same authority granted to municipalities by this subdivision except for areas of the county organized into cities and areas of the county incorporated within a sanitary district established by special act of the legislature.</li> </ul>



# OVERVIEW OF LAND AND WATER PLAN REQUIREMENTS

## PLAN REQUIREMENTS

### METROPOLITAN LAND PLANNING ACT

M.S. 473.859 COMPREHENSIVE PLAN CONTENT

**Contents.** The comprehensive plan shall contain objectives, policies, standards and programs to guide public and private land use, development, redevelopment and preservation for all lands and waters within the jurisdiction of the local governmental unit through 1990 and may extend through any year thereafter which is evenly divisible by five. Each plan shall specify expected industrial and commercial development, planned population distribution, and local public facility capacities upon which the plan is based. Each plan shall contain a discussion of the use of the public facilities specified in the metropolitan system statement and the effect of the plan on adjacent local governmental units and affected school districts. Existing plans and official controls may be used in whole or in part following modification, as necessary, to satisfy the requirements of sections 462.355, subdivision 4, 473.175, and 473.851 to 473.871. Each plan may contain an intergovernmental coordination element that describes how its planned land uses and urban services affect other communities, adjacent local government units, the region, and the state, and that includes guidelines for joint planning and decision making with other communities, school districts, and other jurisdictions for siting public schools, building public facilities, and sharing public services.

Each plan may contain an economic development element that identifies types of mixed use development, expansion facilities for businesses, and methods for developing a balanced and stable economic base.

The comprehensive plan may contain any additional matter which may be included in a comprehensive plan of the local governmental unit pursuant to the applicable planning statute.

**Land use plan.** A land use plan shall include the water management plan required by section 103B.235, and shall designate the existing and proposed location, intensity and extent of use of land and water, including lakes, wetlands, rivers, streams, natural drainage courses, and adjoining land areas that affect water natural resources, for agricultural, residential, commercial, industrial and other public and private purposes, or any combination of such purposes.

### LOCAL WATER PLANNING LAW (nonmetro counties)

M.S. 103B.311 COUNTY WATER PLANNING AND MANAGEMENT

**Water plan requirements.** A comprehensive water plan must:

- Cover the entire area within a county.
- Address water problems in the context of watershed units and ground water systems.
- Be based upon principles of sound hydrologic management of water, effective environmental protection, and efficient management.
- Be consistent with comprehensive water plans prepared by counties and watershed management organizations wholly or partially within a single watershed unit or ground water system.
- The comprehensive water plan must specify the period covered by the comprehensive water plan and must extend at least five years but no more than ten years from the date the board approves the comprehensive water plan. Comprehensive water plans that contain revision dates inconsistent with this section must comply with that date, provided it is not more than ten years beyond the date of board approval. A two-year extension of the revision date of a comprehensive water plan may be granted by the board, provided no projects are ordered or commenced during the period of the extension.

Existing water and related land resources plans, including plans related to agricultural land preservation programs developed pursuant to chapter 40A, must be fully utilized in preparing the comprehensive water plan. Duplication of the existing plans is not required.

Watershed district and intercounty joint powers board plans and rules. A county must incorporate into its comprehensive water plan any existing plans and rules adopted by a watershed district or intercounty joint powers board having jurisdiction wholly or partly within the county. A county may change the plans and rules it incorporates if the county demonstrates in its comprehensive water plan why the changes are necessary and if the changes are agreed to by each county that is:

*continued on page 30*

### METROPOLITAN LOCAL WATER PLANNING

M.S. 103B.231 WATERSHED PLANS

**General standards.** The watershed management plan must specify the period covered by the plan and must extend at least five years but no more than ten years from the date the board approves the plan. Plans that contain revision dates inconsistent with this section must comply with that date, provided it is not more than ten years beyond the date of board approval.

The plan must be reviewed for consistency with an adopted county ground water plan, and revised to the degree necessary to become compliant with the ground water plan no later than two years after adoption by the county. A one-year extension may be granted by the board. Upon the request of a watershed management organization, the county shall provide a written statement that:

- Identifies any substantial inconsistencies between the watershed plan and the ground water plan and any substantial adverse effects of the watershed plan on the ground water plan.
- Evaluates, estimates the cost of, and recommends alternatives for amending the watershed plan to rectify any substantial inconsistencies and adverse effects.

The plan shall contain the elements required by subdivision 6. Each element shall be set out in the degree of detail and prescription necessary to accomplish the purposes of sections 103B.205 to 103B.255, considering the character of existing and anticipated physical and hydrogeologic conditions, land use, and development and the severity of existing and anticipated water management problems in the watershed.

Existing plans of a watershed management organization shall remain in force and effect until amended or superseded by plans adopted under sections 103B.205 to 103B.255.

Watershed management organizations shall coordinate their planning activities with contiguous watershed management organizations and counties conducting water planning and implementation under sections 103B.101, and 103B.301 to 103B.355.

### STORMWATER MANAGEMENT

RULE 7077.0277 STORM WATER PROJECT PLAN

The stormwater project plan must be prepared and signed by a professional engineer registered in the state of Minnesota.

**Contents.** A stormwater project plan must address items listed in the amount of detail that is appropriate to describe the project accurately.

- A complete description of the stormwater collection system, stormwater treatment system if existent, and the identified need in the project service area.
- A complete description of the project service area including the number of acres served, the estimated flow, and a description of the watershed.
- A complete description of the project including location, best management practices to be implemented for the use of stormwater treatment, estimated construction, annual operation and maintenance, and equipment replacement costs.
- A description of the long-term maintenance plan.
- An estimate of the reduction in pollutants.

**Storm water project plan supplement.** The following items must be submitted to the commissioner with the stormwater project plan under subpart 2:

- A complete list of addresses used for public notice purposes and listed on a form provided by the agency.
- A summary of the information presented and public comments received at a public hearing, required under subpart 4, and the action taken to address those comments.
- A formal resolution of the municipality's governing body adopting the stormwater project plan.
- A list of ordinances and intermunicipal agreements necessary for the successful implementation and administration of the project.
- A completed environmental worksheet.

# OVERVIEW OF LAND AND WATER PLAN REQUIREMENTS

## PLAN REQUIREMENTS *continued*

METROPOLITAN LAND PLANNING ACT	LOCAL WATER PLANNING LAW (nonmetro counties)	METROPOLITAN LOCAL WATER PLANNING	STORMWATER MANAGEMENT
<p>A land use plan shall contain a protection element, as appropriate, for historic sites, the matters listed in the water management plan required by section 103B.235, and an element for protection and development of access to direct sunlight for solar energy systems.</p>	<ul style="list-style-type: none"> <li>■ Responsible for the appointment of a manager serving on the watershed board.</li> <li>■ Represented on the joint powers board.</li> </ul> <p><b>Scope of plans.</b> Comprehensive water plans must include:</p> <ul style="list-style-type: none"> <li>■ A description of the existing and expected changes to physical environment, land use, and development in the county.</li> <li>■ Available information about the surface water, ground water, and related land resources in the county, including existing and potential distribution, availability and quality.</li> <li>■ Use objectives for future development, use, and conservation of water and related land resources, including objectives that concern water quality and quantity, and sensitive areas, wellhead protection areas, high priority areas for wetland preservation, enhancement, restoration, and establishment, stormwater management for developing areas, and related land use conditions, and a description of actions that will be taken in affected watersheds or ground water systems to achieve the objectives.</li> <li>■ A description of potential changes in state programs, policies, and requirements considered important by the county to management of water resources in the county.</li> <li>■ A description of conflicts between the comprehensive water plan and existing plans of other local units of government.</li> <li>■ A description of possible conflicts between the comprehensive water plan and existing or proposed comprehensive water plans of other counties in the affected watershed units or ground water systems.</li> <li>■ A program for implementation of the plan that is consistent with the plan's management objectives and includes schedules for amending official controls and water and related land resources plans of local units of government to conform with the comprehensive water plan, and the schedule, components, and expected state and local costs of any projects to implement the comprehensive water plan that may be proposed, although this does not mean that projects are required by this section.</li> <li>■ A procedure for amending the comprehensive water plan.</li> </ul>	<p><b>Contents.</b> The plan shall:</p> <ul style="list-style-type: none"> <li>■ Describe the existing physical environment, land use, and development in the area and the environment, land use, and development proposed in existing local and metropolitan comprehensive plans.</li> <li>■ Present information on the hydrologic system and its components, including drainage systems previously constructed under chapter 103E, and existing and potential problems related thereto.</li> <li>■ State objectives and policies, including management principles, alternatives and modifications, water quality, and protection of natural characteristics.</li> <li>■ Set forth a management plan, including the hydrologic and water quality conditions that will be sought and significant opportunities for improvement.</li> <li>■ Describe the effect of the plan on existing drainage systems.</li> <li>■ Identify high priority areas for wetland preservation, enhancement, restoration, and establishment and describe any conflicts with wetlands and land use in these areas.</li> <li>■ Describe conflicts between the watershed plan and existing plans of local government units.</li> <li>■ Set forth an implementation program consistent with the management plan, which includes a capital improvement program and standards and schedules for amending the comprehensive plans and official controls of local government units in the watershed to bring about conformance with the watershed plan.</li> </ul>	<ul style="list-style-type: none"> <li>■ A certification from the appropriate county or watershed management organization assuring that the stormwater project plan is consistent with the comprehensive local water plan.</li> </ul>