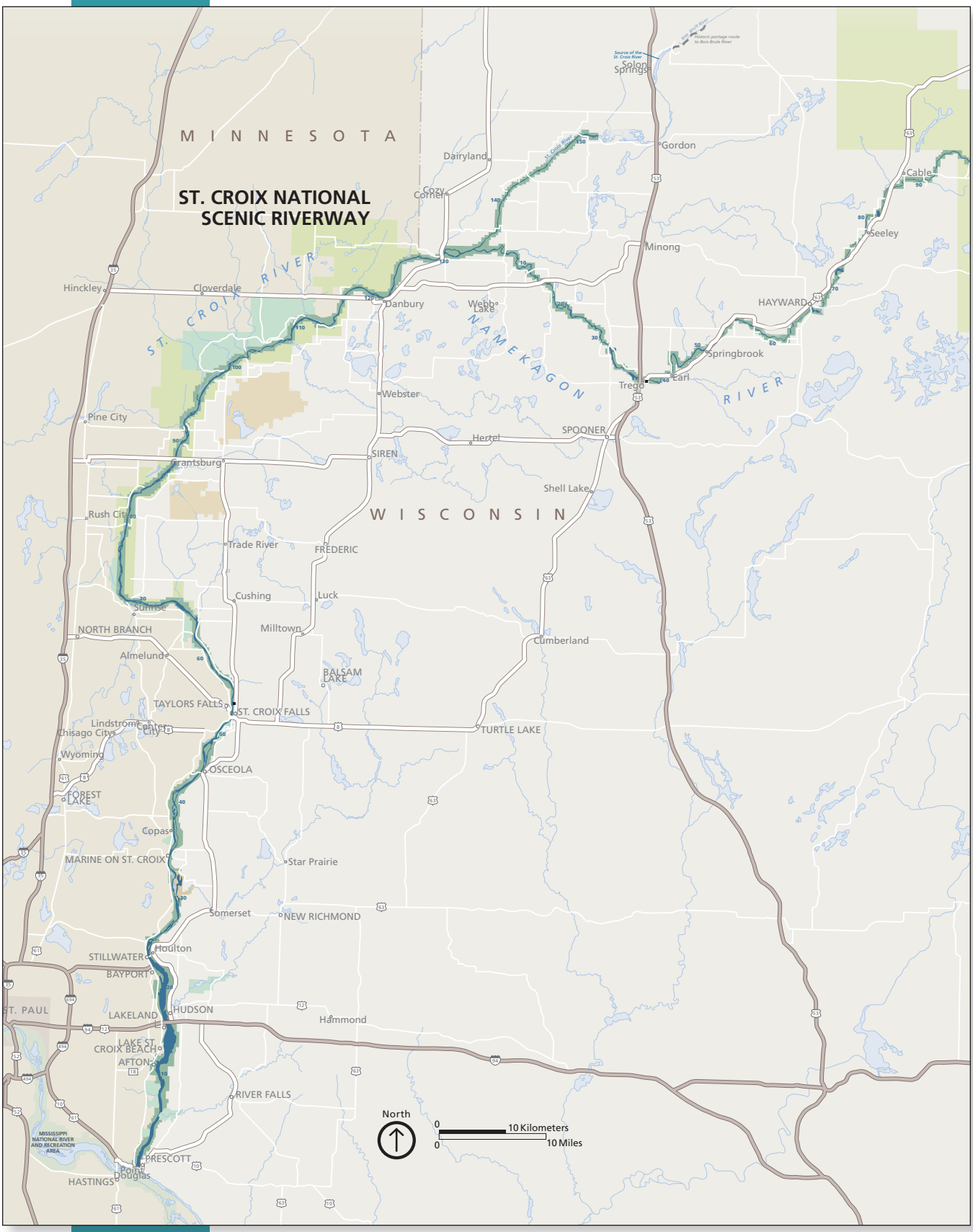
NATIONAL PARK SERVICE • U.S. DEPARTMENT OF THE INTERIOR

Foundation Document

St. Croix National Scenic Riverway

Minnesota and Wisconsin

September 2017


MINNESOTA
WISCONSIN
ST. CROIX NATIONAL SCENIC RIVERWAY
ST. CROIX RIVER
NAMEKAGON RIVER
Source of the St. Croix River
Solon Springs
Gordon
Dairyland
Cozy Corner
Cable
Seeley
Minong
Hinckley
Cloverdale
Danbury
Webb Lake
HAYWARD
Springbrook
Trego
Earl
Webster
Pine City
SPOONER
Hertel
SIREN
Grantsburg
Shell Lake
Rush City
Trade River
FREDERIC
Cushing
Luck
Sunrise
NORTH BRANCH
Milltown
Cumberland
Almelund
BALSAM LAKE
TAYLORS FALLS
ST. CROIX FALLS
Lindstrom
Center City
Chisago City
TURTLE LAKE
Wyoming
OSCEOLA
FOREST LAKE
Copas
MARINE ON ST. CROIX
Star Prairie
Somerset
NEW RICHMOND
Houlton
STILLWATER
BAYPORT
ST. PAUL
LAKELAND
HUDSON
Hammond
LAKE ST. CROIX BEACH
AFTON
RIVER FALLS
MISSISSIPPI NATIONAL RIVER AND RECREATION AREA
PRESCOTT
Point Douglas
HASTINGS
North
0
10 Kilometers
0
10 Miles

Contents

Mission of the National Park Service

The National Park Service (NPS) preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The National Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

The NPS core values are a framework in which the National Park Service accomplishes its mission. They express the manner in which, both individually and collectively, the National Park Service pursues its mission. The NPS core values are:

- **Shared stewardship:** We share a commitment to resource stewardship with the global preservation community.
- **Excellence:** We strive continually to learn and improve so that we may achieve the highest ideals of public service.
- **Integrity:** We deal honestly and fairly with the public and one another.
- **Tradition:** We are proud of it; we learn from it; we are not bound by it.
- **Respect:** We embrace each other's differences so that we may enrich the well-being of everyone.

The National Park Service is a bureau within the Department of the Interior. While numerous national park system units were created prior to 1916, it was not until August 25, 1916, that President Woodrow Wilson signed the National Park Service Organic Act formally establishing the National Park Service.

The national park system continues to grow and comprises more than 400 park units covering more than 84 million acres in every state, the District of Columbia, American Samoa, Guam, Puerto Rico, and the Virgin Islands. These units include, but are not limited to, national parks, monuments, battlefields, military parks, historical parks, historic sites, lakeshores, seashores, recreation areas, scenic rivers and trails, and the White House. The variety and diversity of park units throughout the nation require a strong commitment to resource stewardship and management to ensure both the protection and enjoyment of these resources for future generations.

The arrowhead was authorized as the official National Park Service emblem by the Secretary of the Interior on July 20, 1951. The sequoia tree and bison represent vegetation and wildlife, the mountains and water represent scenic and recreational values, and the arrowhead represents historical and archeological values.

In 1968, the Wild and Scenic Rivers Act (WSRA) (16 USC 1271-1287; Public Law (PL) 90-542) was signed into law. The act declared, as a matter of national policy, "that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved in free-flowing condition, and . . . they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations" (16 USC 1271). To accomplish this goal, the act established a national wild and scenic rivers system (16 USC 1272).

The National Park Service is one of the four federal land-managing agencies with wild and scenic river management responsibilities. Wild and scenic rivers administered by the Secretary of the Interior through the National Park Service may flow wholly or partly within the boundaries of existing national park system units, or may constitute new and separate units of the national park system. These congressionally designated wild and scenic rivers are part of both the national park system and the national wild and scenic rivers system (16 USC 1281(c)). Other congressionally designated rivers are administered by the National Park Service in partnership with state and nongovernmental organizations. Some of these partnership rivers are considered part of the national park system and the national wild and scenic rivers system, while others are explicitly excluded in their enabling legislation from inclusion in the national park system and are only included in the national wild and scenic rivers system. Other wild and scenic rivers are designated by Secretarial action (16 USC 1273(a)(ii)) for inclusion in the national wild and scenic rivers system, but are administered by a state agency, with limited NPS responsibilities. Additionally, some NPS units have river protection language in their enabling legislation that is similar or identical to some provisions of the Wild and Scenic Rivers Act, although these rivers are not included in the national wild and scenic rivers system.

The National Park Service conducts congressionally authorized studies (16 USC 1276) of rivers for potential inclusion in the national wild and scenic rivers system, and also evaluates rivers within park units for wild and scenic eligibility and suitability as part of its ongoing planning activities.

Introduction

Every unit of the national park system will have a foundational document to provide basic guidance for planning and management decisions—a foundation for planning and management. The core components of a foundation document include a brief description of the park as well as the park's purpose, significance, fundamental resources and values, and interpretive themes. The foundation document also includes special mandates and administrative commitments, an assessment of planning and data needs that identifies planning issues, planning products to be developed, and the associated studies and data required for park planning. Along with the core components, the assessment provides a focus for park planning activities and establishes a baseline from which planning documents are developed.

A primary benefit of developing a foundation document is the opportunity to integrate and coordinate all kinds and levels of planning from a single, shared understanding of what is most important about the park. The process of developing a foundation document begins with gathering and integrating information about the park. Next, this information is refined and focused to determine what the most important attributes of the park are. The process of preparing a foundation document aids park managers, staff, and the public in identifying and clearly stating in one document the essential information that is necessary for park management to consider when determining future planning efforts, outlining key planning issues, and protecting resources and values that are integral to park purpose and identity.

While not included in this document, a park atlas is also part of a foundation project. The atlas is a series of maps compiled from available geographic information system (GIS) data on natural and cultural resources, visitor use patterns, facilities, and other topics. It serves as a GIS-based support tool for planning and park operations. The atlas is published as a (hard copy) paper product and as geospatial data for use in a web mapping environment. The park atlas for St. Croix National Scenic Riverway can be accessed online at: http://insideparkatlas.nps.gov/.

Part 1: Core Components

The core components of a foundation document include a brief description of the park, park purpose, significance statements, fundamental resources and values, and interpretive themes. These components are core because they typically do not change over time. Core components are expected to be used in future planning and management efforts.

Brief Description of the Park

St. Croix National Scenic Riverway (often abbreviated the "Riverway" or "park" in this document) is located in northwest Wisconsin and eastern Minnesota and is a unit of the national park system administered by the National Park Service.

Relatively free-flowing and unpolluted, the Namekagon and St. Croix Rivers flow through some of the most scenic and least developed country in the Upper Midwest. In 1968, Congress established the St. Croix National Scenic Riverway, which includes the Namekagon River, as one of the original eight rivers protected under the national Wild and Scenic Rivers Act. In 1972, the Lower St. Croix National Scenic Riverway was added to the system. Together they form the 230-mile-long park that offers outdoor enthusiasts a chance to enjoy a variety of recreation opportunities within easy reach of Minneapolis-St. Paul and other metropolitan areas of the upper Midwest. The last 25 miles of the St. Croix River are not part of the park, but are part of the national wild and scenic rivers system. This 25-mile stretch is administered by the States of Minnesota and Wisconsin and is described in the appended "Outstandingly Remarkable Values" document.

The Namekagon is diverse in character with sedate stretches flowing along marshes and scrub, and rocky stream segments higher up that offer views framed by hairpin turns and towering pines. Within Pacwawong and Phipps flowages, a naturally broad portion of the river was dammed during the logging era and provides a more lake-like experience. Except in the few places where roads come close to the river, signs of civilization are largely absent, replaced by the sounds of riffles flowing, turtles dropping into the water, and birdsong. The river is tinted dark brown from tannins, in contrast to the dark greens of the conifer trees. Wild rice in the lake-like Pacwawong flowage waves in the breeze. As the Namekagon descends through the pine barrens to its confluence with the Upper St. Croix River, the corridor widens. Deciduous trees begin to dominate, animals tend to be observed at a greater distance, the banks of the river are lower in places, and geologic features are not prominent.

People of diverse cultures have lived along the St. Croix and Namekagon Rivers for more than 12 millennia, taking advantage of abundant natural resources. Several cultural themes describe human life along the Riverway after the final retreat of the glaciers at the end of the most recent ice age. These themes can be found throughout the Riverway and include American Indian heritage, fur trade, logging, recreation, and conservation.

The Riverway's St. Croix River segment begins below the Gordon Dam, Wisconsin, and flows for 155.5 miles to the Mississippi River at Prescott, Wisconsin. A narrow, shallow St. Croix ripples and flows through Wisconsin for its first 25 miles; it then broadens and becomes the border river between Minnesota and Wisconsin. For most of its length it glides through a wide valley with low banks formed by the glaciers that scoured these watersheds thousands of years ago. A dam in St. Croix Falls, Wisconsin, backs water up 10 miles creating a lake-like flowage.

About one mile below the St. Croix Falls hydroelectric dam, the river flows through the Dalles, a rocky gorge 70 to 100 feet deep in places. It is a place of dramatic scenery bordered by two state parks, one in Wisconsin and one in Minnesota. Downstream of the Dalles, the St. Croix River widens and shallows as it passes between high, wooded banks.

The National Park Service holds title to 25,087 acres (27%) within the current boundaries of the Riverway; 804 acres (.01%) are owned by other federal agencies; 14,642 acres (16%) are privately owned with scenic easements purchased by the National Park Service that prevent future development of this land inconsistent with protecting scenic values; and 52,216 acres (56%) are private, state, or other public lands managed by counties or townships.

Visitors access the Riverway at more than 60 landings in two states, along 230 miles of the St. Croix and Namekagon Rivers. The valley has a distinct feel, and the river towns add to that character. The park and state partners have worked with local communities to implement zoning regulations to maintain this character and maintain the scenic and aesthetic experience of users and visitors.

Most river use occurs from mid-May through mid-October, with the majority of use between June and mid-August. Heaviest use takes place on weekends. Recreation includes canoeing, inner-tubing, boating, watching wildlife, hiking, hunting, fishing, and picnicking. The nature of the river dictates the watercraft it can accommodate; some stretches of river are suitable only for canoes or small fishing boats while larger boats can navigate the flowages and the last 30 miles of the Riverway. Camping is permitted at primitive shoreline sites. Recreational vehicle areas and developed campsites are available in state parks or private campgrounds near the Riverway. Riverway recreation is lighter during the shoulder seasons of spring and fall, and very light in the winter when activities are focused on snowshoeing, cross-country skiing, ice fishing, and birding.

Climate change is an insidious threat to the resources protected by the Riverway. The impacts on the wide diversity of natural and cultural resources of the Riverway are yet to be understood. Riverway staff is dedicated to understanding, documenting, and responding to climate change by reducing the carbon footprint of administration and of visitors, providing awareness of climate change through education, maintaining ongoing research and monitoring of these changes, and initiating climate change adaptation according to NPS-issued guidance.

Park Purpose

The purpose statement identifies the specific reason(s) for establishment of a particular park. The purpose statement for St. Croix National Scenic Riverway was drafted through a careful analysis of its enabling legislation and the legislative history that influenced its development. The park was established when the enabling legislation, the Wild and Scenic Rivers Act, was signed into law on October 2, 1968 (see appendix A for enabling legislation and legislative acts). The purpose statement lays the foundation for understanding what is most important about the park.

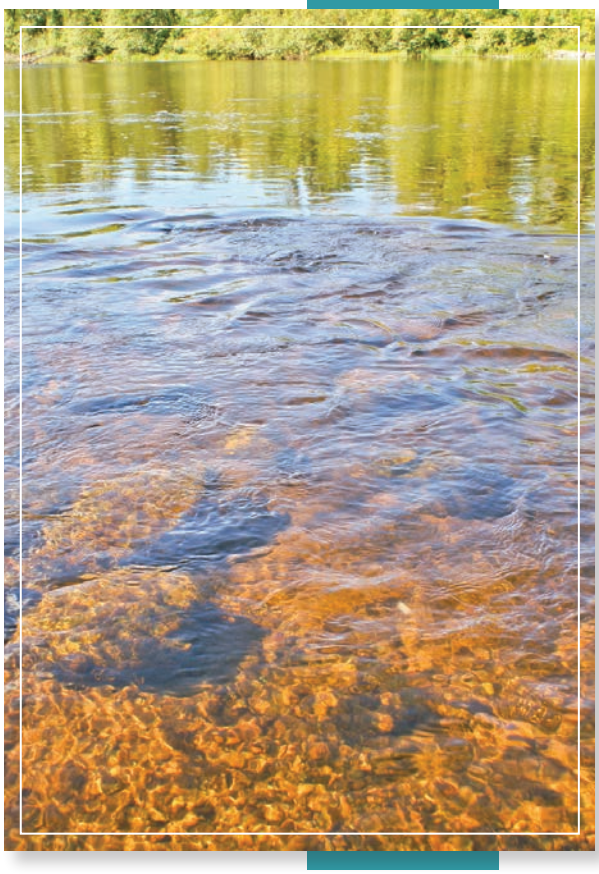
The purpose of the St. Croix National Scenic Riverway is to preserve, protect, and enhance the values of the St. Croix and Namekagon Rivers and their immediate environment for the benefit and enjoyment of present and future generations. The values for which the Riverway has been designated as a wild and scenic river are its free-flowing character, exceptional water quality, and the aquatic, riparian, recreational, cultural/historic, geologic, scenic, and aesthetic values present in the rivers.

Park Significance

Significance statements express why a park's resources and values are important enough to merit designation as a unit of the national park system. These statements are linked to the purpose of the St. Croix National Scenic Riverway and are supported by data, research, and consensus. Statements of significance describe the distinctive nature of the park and why an area is important within a global, national, regional, and systemwide context. They focus on the most important resources and values that will assist in park planning and management.

The following significance statements have been identified for the St. Croix National Scenic Riverway. (Please note that the sequence of the statements does not reflect the level of significance.)

- **Water Quality.** The St. Croix and Namekagon Rivers have excellent water quality throughout their reaches. They have been recognized as national wild and scenic rivers and receive the distinction of "Outstanding Resource Waters" in both Wisconsin and Minnesota, a rare triple designation. The water quality of the rivers is an important contributing factor to their inclusion into the national wild and scenic rivers system and is the critical medium that sustains the essential habitats the park provides for its aquatic species.
- **Free Flow.** The Riverway protects one of the last undeveloped, large floodplain rivers in the upper Mississippi River system. The Namekagon and the St. Croix function unimpeded for considerable distances as they have for millennia, influenced by natural processes as they meander, flood, and migrate through the river corridor. Few dams, diversions, channelizations, or other modifications encumber the rivers, allowing for excellent connectivity between upstream and downstream reaches, and creating stable substrates for aquatic life. As they grow and change in character from their headwaters to their confluence with the Mississippi, the Namekagon and St. Croix Rivers are superlative examples of how rivers are meant to function.
- **Mussel Diversity.** The Riverway is home to more than 40 species of freshwater mussels—one of the greatest assemblages of these fascinating and sensitive aquatic organisms in the United States. A rare example of an intact river-dependent group of animals, all of the mussel species that existed in the corridor before European settlement are present there today. The sheer abundance of mussels in the Riverway plays a critical role in maintaining the excellent water quality of the St. Croix-Namekagon river system by filtering water and cycling aquatic nutrients. The exceptional diversity of mussels in the Riverway provides invaluable opportunities to learn more about these important and declining organisms.
- **Ecological Corridor.** The St. Croix and Namekagon Rivers serve as an uncommon, nearly completely protected north-south corridor that supports large populations of diverse flora and fauna. The richness of wet and dry habitats that are protected by the park, ranging from wetlands to forests to prairies, provides critical aquatic and terrestrial habitats for fish, insects, birds, and mammals. An important component of the Mississippi River flyway, the river transitions from a cold-water river to a warm-water river before ending in a glacially formed riverine lake. The linear connectivity and dramatic changes in condition along the Riverway further sustain its impressive aquatic, terrestrial, and transitional resources and values.



- **Human History.** It is possible to witness centuries of history related to river use throughout the Riverway. More than 200 American Indian and European American cultural sites have been identified within the boundary. Of particular significance are sites related to prehistoric peoples, the history of the Ojibwe (1670–present), recreational history, and structures in the river related to logging and navigation history. The resources of the river and its connection to the north woods have made it economically and culturally important to humans for thousands of years, and it continues to appeal to people in the present.

- **Recreational Opportunities.** The Riverway offers exceptional primitive camping experiences along its 255 miles, including the opportunity for multiday and even multiweek float trips that are not common in the United States. There are many places on the river where visitors can be immersed in a scenic and aesthetic landscape for days at a time with few indications of the modern world. It provides an important opportunity to experience natural quiet and a sense of solitude. The Riverway remains one of the few truly wild and scenic rivers located within an hour's drive of a major urban center. With paddling challenges appropriate for beginners as well as experts in remote settings, the Riverway is one of the most accessible primitive riverine experiences in the nation.

- **River Conservation History.** The protected Riverway embodies the history of river conservation efforts in the United States. It was one of the original eight rivers designated under the Wild and Scenic Rivers Act and remains a place where legal precedents related to river protection and management are set. Prime examples of the Riverway's past and present significance to river conservation policy include court decisions that established that recreation is a valid public use of a river system and that scenic beauty is a statutory right. This was the first instance of the Wild and Scenic Rivers Act being used to halt a construction process. The first interstate state park in the country was also established along the St. Croix in 1895, setting a model for multijurisdictional riverine cooperation and protection.

- **Geology.** The geologic story of the St. Croix National Scenic Riverway is rich. Evidence of the Midcontinent Rift and the Cambrian, Ordovician, and Pleistocene periods can be seen. The Midcontinent Rift occurred about one billion years ago when the North American continent began to split apart. Lava flowed from the rift and cooled, forming basalt, an igneous rock. Sedimentary rock, including Cambrian sandstones and Ordovician carbonate, was laid down when the area was covered by a vast inland sea 500 million years ago. The torrential outflow from Glacial Lake Duluth about 10,000 years ago at the end of the Pleistocene ice ages exposed the basalt formed during the Midcontinent Rift and the sandstones formed during the Cambrian and Ordovician periods. Potholes and moraines were formed by the retreat of the glaciers.

- **Scenery.** Most of the Riverway is classified as scenic under the Wild and Scenic Rivers Act for its minimally developed landscape and primitive riverine environment. The upper reaches provide an intimate experience. Much of the upper rivers are a series of riffles and pools. Hillsides supporting pine and oak or low-lying marshes border the river. The river is much wider in the lower reaches and provides panoramic views of the St. Croix Valley and dramatic high bluffs. Historic river towns contribute to the exceptional visual experiences here.

Fundamental Resources and Values

Fundamental resources and values (FRVs) are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to warrant primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance. Fundamental resources and values are closely related to a park's legislative purpose and are more specific than significance statements. For a designated wild and scenic river, the fundamental resources and values are those that have been identified as outstandingly remarkable values (ORVs) related to the Riverway. The ORVs are described in more detail and recorded in a separate ORV report in appendix C.

Fundamental resources and values help focus planning and management efforts on what is truly significant about the park. One of the most important responsibilities of NPS managers is to ensure the conservation and public enjoyment of those qualities that are essential (fundamental) to achieving the purpose of the park and maintaining its significance. If fundamental resources and values are allowed to deteriorate, the park purpose and/or significance could be jeopardized.

The following fundamental resources and values have been identified for St. Croix National Scenic Riverway:

- **Free-Flowing Condition.** The longest scenic riverway east of the Mississippi River, the St. Croix and Namekagon flow through seven counties in Wisconsin and three counties in Minnesota. Although influenced by hydroelectric dams, remnant logging structures, and historic water control features that once supported more extensive river navigation, the Riverway flows freely throughout most of its reaches and remains one of the last undeveloped, large floodplain rivers in the upper Mississippi River System.

- **Water Quality.** The water quality of the St. Croix and Nameakgon Rivers is an important and fragile river value. The states of Wisconsin and Minnesota both recognize the Riverway as an exceptional resource, deserving of protection. Wisconsin has designated the entire Namekagon and St. Croix Rivers from their headwaters to north Hudson as Outstanding Resource Water. From north Hudson to the confluence with the Mississippi, Wisconsin identifies the St. Croix as Exceptional Resource Water. Minnesota has designated the entire St. Croix River as Outstanding Resource Value Water. The results of long-term monitoring affirm the Riverway's remarkable high water quality. The upper St. Croix River between Norway and Nelson's Landing has been identified as near U.S. Environmental Protection Agency reference conditions with waters relatively unimpacted. Good management and continued monitoring are critical to protect high water quality where it currently exists and enhance it where it may be declining.

- **Aquatic Resources (mussel and fish diversity).** The St. Croix and Namekagon Rivers provide one of the most extensive and exemplary aquatic species assemblages within the Upper Mississippi River basin and contains healthy naturally reproducing populations of 41 native freshwater mussels and 100 native fish species. The St. Croix-Namekagon river system contributes significantly to the freshwater biodiversity of the planet and contains 5 federally listed mussel species. Mussels also play an important role in filtering water and cycling nutrients, contributing to the relatively unimpacted water quality of the St. Croix-Namekagon river system.

- **Cultural Resources.** The continuum of human occupation along the St. Croix and Namekagon Rivers encompasses diverse cultures and uses. People have lived along the rivers for at least 12 millennia, since the final retreat of the glaciers at the end of the most recent ice age, taking advantage of the abundant natural resources. Cultural themes include American Indian heritage, fur trade, logging, recreation, and conservation.

- **Geology of the Dalles and Glacial Potholes.** The iconic Dalles is a globally rare geologic feature and the single most identifiable natural element of the Riverway. This 70- to 100-foot-deep basalt gorge was formed by erosion from the torrential outflow of Glacial Lake Duluth. The Dalles contains more glacial potholes in a smaller area than any other location in the world, including the world's deepest example of this geological phenomenon. The Dalles is a place where basalt lava that flows from the inner earth, sedimentary Tunnel City sandstone, and glacial potholes can all be seen together.
- **Recreation.** The Riverway provides an escape from modern civilization, increasingly so as one travels upstream. From day trips to multiday adventures, users can engage in recreational experiences such as primitive camping in a big river system within a relatively unimpaired ecological setting. Downriver, a readily accessible range of recreational activities can be enjoyed, such as visits to view, hike, and climb within the Dalles in the first interstate park in the nation; paddleboat outings; picnicking in view of beautiful sandstone bluffs at the Osceola day use area; camping on islands; and boating and waterskiing on the lower river.
- **Riparian Resources.** Unlike rivers that have been manipulated to serve the needs of industry and commerce, the St. Croix and Namekagon Rivers remain connected to their floodplain. As a result, both rivers have high quality riparian zones. These riparian zones are very high in biodiversity. Some within the Riverway support rare plants, rare birds, and imperiled natural communities.
- **Scenic–Aesthetic Values.** The aesthetic features of the St. Croix and Namekagon Rivers offer a unique sense of time and place with authentic opportunities to engage the senses, including the touch of cool water, the smells of campfires and of pine trees in the sun, the sounds of birds and rapids, and the sight of wildlife. A dynamic range of colors, textures, landforms, and historic and cultural sights provides visitors with a sense of anticipation as they round the bend in a canoe or kayak or drive into the valley.
- **Rare Upland Habitats.** Pine barrens, oak savannahs, bedrock glades, and shortgrass sand prairies are globally rare and unique plant communities protected within the park boundary. These natural communities are actively managed and contribute to the Riverway's scenic and ecological diversity and significance.

Related Resources

The resources and values protected by the St. Croix National Scenic Riverway do not end at the boundaries of the park. Many of the resources extend into lands owned and managed by other entities in the watershed and the region. These resources are important in telling the story of the Riverway and in enhancing resource protection efforts. Resources related to the Riverway include:

- The St. Croix Watershed. Activities throughout the 7,700-square-mile area that feeds the river can influence and impact the river's fundamental resources and values.
- State parks, state forests, county forests, state natural areas, county parks, and nonprofit land conservancies in and adjacent to the park's boundary. These public areas manage resources similar to those found within the Riverway boundary and are partners in resource protection.
- Related cultural resources beyond the boundaries of the park, but representative of the story of the human use of the river.

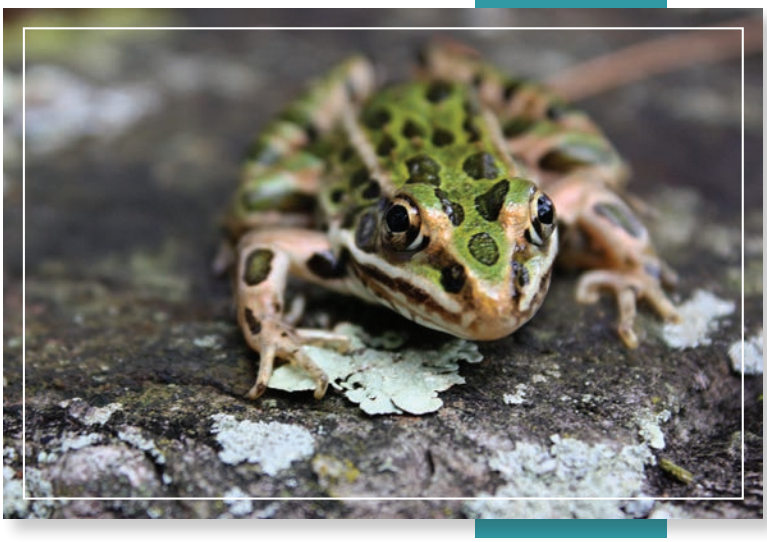
Interpretive Themes

Interpretive themes are often described as the key stories or concepts that visitors should understand after visiting a park. They define the most important ideas or concepts communicated to visitors about a park unit. Themes are derived from, and should reflect, park purpose, significance, resources, and values. The set of interpretive themes is complete when it provides the structure necessary for park staff to develop opportunities for visitors to explore and relate to all park significance statements and fundamental resources and values.

Interpretive themes are an organizational tool that reveal and clarify meaning, concepts, contexts, and values represented by park resources. Sound themes are accurate and reflect current scholarship and science. They encourage exploration of the context in which events or natural processes occurred and the effects of those events and processes. Interpretive themes go beyond a mere description of the event or process to foster multiple opportunities to experience and consider the park and its resources. These themes help explain why a park story is relevant to people who may otherwise be unaware of connections they have to an event, time, or place associated with the park.

The following interpretive themes have been identified for St. Croix National Scenic Riverway in its 2005 long-range interpretive plan:

- **Geology and Hydrology.** The St. Croix and Namekagon Rivers reflect the current climate and recent happenings, but the St. Croix Valley reveals and reflects its turbulent past as a glacial outlet. Powerful geologic forces of volcanism, glaciation, and erosion created visible features in the valley through which the river flows, influencing the plants and animals that live there.
- **Ecological Crossroads.** The Riverway retains qualities of a pristine riverine environment within the complex convergence of three major biomes—prairie, deciduous hardwood forest, and coniferous forest—that intersect to create a rich yet fragile diversity of habitats for plants and animals. The protected, linear nature of the Riverway provides a refuge and a corridor for movement for a diversity of wildlife including some threatened and endangered species. The protection of habitat for endangered or threatened species helps to maintain the natural systems on which all flora and fauna depend.
- **River of Life.** The St. Croix and Namekagon are dynamic, resilient floodplain rivers that sustain a variety of life as they drain, interact with, and change the landscape they run through. Below the water surface there is an enigmatic world that few visitors see or appreciate, dependent on high water quality and bursting with life including species of fish, aquatic insects, and mussels that are both common and rare.



- **A Fragile Place.** Despite past resilience, increasing numbers of nonnative species, expanding urban development, water and air pollutants, and climate change increasingly threaten to diminish the quality of the natural and scenic resources the Riverway was established to preserve. Protecting a river involves care for the entire watershed—the lands and waters that drain into it—not just the river alone.

- **Human Highway and Home.** The change in people's relationship to the river valley from harvest and manipulation toward valuing the river valley's own unique characteristics, is demonstrated in the history of human use and public attitude toward these rivers. The history of these rivers is a regional and international story of a homeland and battleground for American Indians; an outpost for the European fur trade; and the river and valley as a source of wealth, destruction, and homes for the expanding United States and its people. Through time, many people have fulfilled their needs for physical, economic, and spiritual survival through their interaction with the St. Croix and Namekagon Rivers. The Riverway landscape bears witness to the people who came before us through, towns, farms, historic structures, ruins, vegetative changes, and discarded objects.

- **Wild River Recreation.** The Riverway offers opportunities for physical challenges and spiritual renewal through a diversity of recreational activities such as canoeing, kayaking, boating, fishing, camping, and hiking in a natural and sustainable setting close to a major metropolitan area. The Riverway includes scenic and varied landscapes, creating a setting to enjoy recreational opportunities while seeking the essence of nature, and solitude and contemplation away from the hectic pace of urban living.

- **Conservation.** People treasured the existing scenic beauty and recreational opportunities of the St. Croix and Namekagon Rivers enough to protect them from further development as part of the landmark legislation of the original Wild and Scenic Rivers Act in 1968. The national environmental and conservation movement to protect special places with significant natural and cultural resources is reflected in the efforts of many individuals and groups to save the St. Croix and Namekagon Rivers as places to visit, enjoy, and cherish. St. Croix National Scenic Riverway is part of the larger national park system—areas set aside to preserve, protect, and restore this nation's natural and cultural treasures as an inheritance for future generations.

Part 2: Dynamic Components

The dynamic components of a foundation document include special mandates and administrative commitments and an assessment of planning and data needs. These components are dynamic because they will change over time. New special mandates can be established and new administrative commitments made. As conditions and trends of fundamental resources and values change over time, the analysis of planning and data needs will need to be revisited and revised, along with key issues. Therefore, this part of the foundation document will be updated accordingly.

Special Mandates and Administrative Commitments

Many management decisions for a park unit are directed or influenced by special mandates and administrative commitments with other federal agencies, state and local governments, utility companies, partnering organizations, and other entities. Special mandates are requirements specific to a park that must be fulfilled. Mandates can be expressed in enabling legislation, in separate legislation following the establishment of the park, or through a judicial process. They may expand on park purpose or introduce elements unrelated to the purpose of the park. Administrative commitments are, in general, agreements that have been reached through formal, documented processes, often through memorandums of agreement. Examples include easements, rights-of-way, arrangements for emergency service responses, etc. Special mandates and administrative commitments can support, in many cases, a network of partnerships that help fulfill the objectives of the park and facilitate working relationships with other organizations. They are an essential component of managing and planning for St. Croix National Scenic Riverway.

Special Mandates

- The park unit was one of eight original rivers designated under the Wild and Scenic Rivers Act (WSRA; Public Law 90-542); all provisions of the Act apply. A complete text of the WSRA is located in appendix A.
- The 1972 WSRA amendment added the segment from St. Croix Falls to the confluence with the Mississippi River, provided that the upper 27 miles be federally administered and the lower 25 miles be state administered. Therefore, the Riverway is divided into a federally-administered zone (the upper 230 miles) and a state-administered zone (the last 25 miles) under 2(a)ii of the WSRA. Within the last 25 miles, the Minnesota and Wisconsin departments of natural resources (MN DNR and WI DNR, respectively) have primary management responsibility with the National Park Service as a partner.
- Designation required a joint development plan ("Final Cooperative Management Plan") be done with the states of Wisconsin and Minnesota and included caveats to allow continued maintenance of navigational aids by the U.S. Coast Guard or the Secretary of the Army and to provide for the continued administration by the states of hatcheries and state parks.
- Hunting and fishing are allowed subject to state regulation per the WSRA, though the superintendent has discretion to close areas for resource protection reasons.
- The National Park Service owns the waters of the river, but not the riverbed—riverbed ownership is determined by state law. This is important for resources that are found in the riverbed (mussels and cultural resources in particular).

- Eight Anishinaabe or Ojibwe bands have off-reservation treaty rights for hunting, fishing, and gathering within the Riverway. Approximately 136 acres of the reservation of the St. Croix Chippewa Indians of Wisconsin (the formal name for this band of Ojibwe) are within the boundaries of the upper Riverway near Danbury, Wisconsin. In addition, several Ojibwe tribes have off-reservation hunting, fishing, and gathering treaty rights (multiple treaties apply).
- Several portions of the river are also classified as Outstanding Resource Waters and Exceptional Resource Waters by the states of Minnesota and Wisconsin. These classifications carry various protection standards for the river.

Administrative Commitments

- St. Croix National Scenic Riverway administers 877 scenic easements on privately owned land to protect viewsheds in the corridor. These are cataloged and managed by the resource protection division and the lands specialist.
- There are many agencies, organizations, and individuals both within and outside the Riverway that affect its management and use. These include the Upper St. Croix Management Commission, the Lower St. Croix Management Commission, the states of Minnesota and Wisconsin, 11 counties, multiple municipalities, the U.S. Fish and Wildlife Service, the U.S. Forest Service, private landowners, and others. The National Park Service is responsible for cooperation and coordination with all of these groups.
- The National Park Service has entered into numerous agreements for management of the Riverway. For a summary of these, please see appendix B.

Assessment of Planning and Data Needs

Once the core components of part 1 of the foundation document have been identified, it is important to gather and evaluate existing information about the park's fundamental resources and values, and develop a full assessment of the park's planning and data needs. The assessment of planning and data needs section presents planning issues, the projects that will address these issues, and the associated information requirements, such as resource inventories and data collection, including GIS data.

There are three sections in the assessment of planning and data needs:

1. identification of key issues and associated planning and data needs
2. analysis of fundamental resources and values
3. identification of planning and data needs (including spatial mapping activities or GIS maps)

The analysis of fundamental resources and values and identification of key issues leads up to and supports the identification of planning and data collection needs.

Identification of Key Issues and Associated Planning and Data Needs

This section considers key issues to be addressed in planning and management and therefore takes a broader view over the primary focus of part 1. A key issue focuses on a question that is important for a park. Key issues often raise questions regarding park purpose and significance and fundamental resources and values. For example, a key issue may pertain to the potential for a fundamental resource or value in a park to be detrimentally affected by discretionary management decisions. A key issue may also address crucial questions that are not directly related to purpose and significance, but which still affect them indirectly. Usually, a key issue is one that a future planning effort or data collection needs to address and requires a decision by NPS managers.

The following are key issues for the Riverway and the associated planning and data needs to address them:

- **Water Quality Threats.** The water quality of the St. Croix and Namekagon Rivers is a function of the health of their watersheds. Most threats to water quality arise from outside the park boundary from development, agricultural run-off, and other non-point sources. To protect the park's water quality the National Park Service must strengthen and maintain relationships with a wide variety of partners that have regulatory or stewardship responsibilities in the watershed.

- **Staffing Level Not Proportional to Park Needs.** Current staffing is not adequate to fulfill necessary resource management, law enforcement, maintenance, education and outreach, and other responsibilities integral to the mission of the Riverway. In particular, operating the park with insufficient staff has started to compromise the ability to protect and manage resources and provide adequate visitor services. Base budgets for similar Midwest river parks (Buffalo National River, Ozark National Scenic Riverways) are 30% to 40% greater than that of the St. Croix National Scenic Riverway, even though the St. Croix has more river miles.

- **Easement Management.** There are more than 877 scenic easements owned by the federal government on private lands within Riverway boundaries. These easements limit development rights of property owners in areas such as building structures, using property for commercial purposes, and alteration of vegetation. They require regular monitoring and meetings with easement holders, handling easement violations, and coordination with state and local agencies with zoning authority. The lands program at the Riverway is only one staff person who has collateral duties for other programs as well.

- **Visitor Use.** There are minimal constraints to visitor use due to a combination of few law enforcement staff, complex land ownership, and the variety of uses and access points along the river corridor. In some locations on busy weekends, there is a high volume of visitors. On the river itself, there are conflicts among tubers, anglers, paddlers, and small motorboat users. There are also related conflicts at river landing locations, as they fill up with multiple users and equipment. In some locations, there are inappropriate activities, such as the use of all-terrain vehicles. The resulting impacts include littering, crowding, threats to visitor safety, and bank erosion. Enhanced visitor use management would benefit the visitor experience and resource protection. The park staff does not currently have the ability to reliably count visitors along the 230-mile corridor, and there is a need for overall visitation data including location, visitor counts, and related resource impacts. Visitor use data and visitor use management planning are important needs to help resolve this key parkwide issue.

- **Lack of Understanding of NPS Identity and Ownership.** Due to the length of the Riverway and the complexity of its land ownership, visitors are often confused about land ownership, regulations, and appropriate recreational uses such as hunting and fishing. Likewise, different and sometimes confusing zoning ordinances and noise restrictions are applied and enforced, sometimes inconsistently, along the river corridor. Examples include slow and no-wake zones and camping rules. In addition, the identity and visibility of the National Park Service is weak, and only a small percentage of Riverway visitors stop at the park visitor centers, limiting the ability for staff to educate visitors on uses and regulations. The dispersed nature of visitation along the linear Riverway is not optimal for interpretive services such as visitor centers, campfire programs, and conducted exploration activities. Some visitors use outfitters to visit the Riverway, and there is a need to improve messaging about the Riverway regulations and resource management. Planning and data needs associated with this issue include updating commercial use authorization practices, developing a commercial services strategy, improving NPS identity along the river corridor by completing a sign plan, improving access by completing an accessibility plan, and strengthening the park's online / social media presence. In addition, a partnership strategy could be developed to better define roles, responsibilities, and shared opportunities among the many partners along the Riverway.

- **Need for Improved Partnerships and Coordination with Other Land and Water Managers.** The Riverway maintains several active partnerships and desires to improve relationships with other potential partners. There is a need for better coordination, communication, cooperation, and integrated management and planning between the National Park Service and other federal, state, and local governments. Existing staff are engaged at the federal and state level, but are not as engaged with local municipalities unless specific issues arise. The relationships with the towns of St. Croix Falls and Taylors Falls are strong, while others could be enhanced. Tribal consultation is mostly limited to compliance issues, rather than proactive relationship-building. The length of the Riverway and limited staff make it difficult to make connections and build strong relationships with local governments, communities, school districts, and other entities. Staff time required to visit all partners along the river is considerable; travel time takes away from other important duties as well.

- **Need for Expanded Capacity to Engage Volunteers.** Volunteers are an untapped resource. St. Croix National Scenic Riverway could benefit from the use of more volunteers, but to use and manage them effectively more funding and staff resources must be committed to supervise the work of volunteers.

- **Climate Change.** Increases in mean annual temperature (+3.5°F–5.5°F by 2070), slight increases in mean annual precipitation (+3%–6% by 2070), increases in extreme heat events, and increases in storm frequency and intensity are projected for the region due to climate change. These changes in climate will have far-reaching impacts on the St. Croix and Namekagon Rivers, local aquifers, and aquatic environments at St. Croix National Scenic Riverway. Impacts on terrestrial habitats are also expected. Changes in species composition, increases in wildfire frequency, and increases in invasive species are possible, along with impacts (e.g., flood and erosion events) on cultural resources and facilities within the Riverway. Adapting to the impacts of climate change will require park managers to continue to learn from the past, but be forward-looking, anticipating plausible and sometimes unprecedented conditions based on observations from monitoring and projections from regional climate models. The National Park Service is instructed to incorporate climate considerations in decision processes and management planning as parks consider adaptation options that may deviate from traditional practices.

Analysis of Fundamental Resources and Values

The fundamental resource or value analysis table includes current conditions, potential threats and opportunities, planning and data needs, and selected laws and NPS policies related to management of the identified resource or value.

Fundamental Resource or Value	Free-Flowing Condition
Related Significance Statements	• Free Flow
Current Conditions and Trends	**Conditions** • Three hydropower dams exist on the river within the designated stretches. The dam at St. Croix Falls was authorized in 1903 and predates federal and state regulatory authorities. Flows are managed according to a voluntary 2006 memorandum of understanding between the Wisconsin Department of Natural Resources and the Northern States Power Company. • Historic resources such as logging dams, wing dams, jetties, stone walls, and levees exist and impact free flow. • No large-scale water withdrawals occur except the King plant in the state-administered zone. • Riparian landowners have small-scale withdrawals, as do local fire departments. • Bank stabilization projects, seasonal docks exist. • Bridges and piers: 46 bridges (47th under construction). **Trends** • Stable impacts on free flow; no additional impacts are envisioned. • Pier removal/reduction happens on an ad-hoc basis. • St Croix Falls, Trego, Hayward Flowage are all filling with sediment. • St. Croix County is the fastest growing county in Wisconsin, possibly leading to additional water needs.
Threats and Opportunities	**Threats** • Possibility of additional water withdrawals to meet water needs of the region (for example, in St. Croix County, Wisconsin, and White Bear Lake, Minnesota). • Impact of emerald ash borer on stands of black ash is a significant threat. There could be repercussions to river hydrology should these stands be lost. • Congressional intervention could occur to construct additional bridges (for example, U.S. Highway 8 and Minnesota State Trunk Highway 70 projects); future impacts are uncertain. • Under drought conditions, withholding more water from the Namekagon is possible, possibly affecting flows downstream. • Increase in mean annual temperature and extreme heat events, along with increases in storm frequency and intensity projected for the region due to climate change, will probably influence discharge and seasonal flows of the St. Croix and Namekagon Rivers. **Opportunities** • As bridges are rebuilt, there is an opportunity to continue to reduce the number of overall piers in the river. • Logging dams could be allowed to deteriorate, depending on a determination of significance, which would improve flow. • Dam removal to improve flow is unlikely in the foreseeable future, but possible if dams become obsolete.
Related Resources and Values	• Hayward and Trego are Federal Energy Regulatory Commission-licensed hydropower dams within the Riverway. The St. Croix Falls Dam is not licensed by the commission. All impact the free flow of the river.

Fundamental Resource or Value	Free-Flowing Condition
Existing Data and Plans Related to the FRV	• *General Management Plan: Upper St. Croix and Namekagon Rivers* (1998). • *Cooperative Management Plan: Lower St. Croix National Scenic Riverway* (2002). • At present, there are four U.S. Geological Survey flow gauges at the Riverway, Leonard's (Namekagon) and Riverside, St. Croix Falls, and Stillwater (all on the St. Croix). They are funded through a variety of mechanisms. • Ruins of a Forgotten Highway: Survey and Documentation of Historic Water Control Features (2015). This report is focused on the St. Croix, south of St. Croix Falls/Taylors Falls.
Data and/or GIS Needs	• Develop an inventory and status of structures in the river that are impeding free flow, including dams, diversions, bridges, and historic/cultural resources. • Obtain and interpret physical parameters related to weather and the river. • Conduct LiDAR data mapping (both bathymetric and surface). • Data consolidation, gap analysis, and development of monitoring protocols for water resources.
Planning Needs	• Water resources management plan (update). • Cultural resources management plan. • Determine if National Park Service should pursue a federal water right for the river.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	**Laws, Executive Orders, and Regulations That Apply to the FRV** • Wild and Scenic Rivers Act • Clean Water Act • "National Flood Insurance Program" (44 CFR 60) • Executive Order 11514, "Protection and Enhancement of Environmental Quality" • Executive Order 11988, "Floodplain Management" • Executive Order 12088, "Federal Compliance with Pollution Control Standards" **NPS Policy-level Guidance (NPS *Management Policies 2006* and Director's Orders)** • NPS *Management Policies 2006* (§4.3.4) "National Wild and Scenic Rivers System" • Director's Order 77-2: *Floodplain Management* • Director's Order 46: *Wild and Scenic River Management* • Directors Order 77-1: *Wetland Protection* • Special Directive 93-4, "Floodplain Management, Revised Guidelines for National Park Service Floodplain Compliance" (1993) • NPS *Natural Resource Management Reference Manual 77*

Fundamental Resource or Value	Water Quality
Related Significance Statements	• Water Quality
Current Conditions and Trends	**Conditions** • The National Park Service conducts monthly physicochemical water quality monitoring at 10 sites along the Riverway but not in tributaries. The states do some monitoring in tributaries. • Good water quality overall, but some reaches (32%) are classified as impaired by more than one pollutant. • Water is boatable and swimmable with occasional algal blooms. • Benthic algae mats may be on the increase. • Fecal coliform has not been an issue often. • There is no water quality expert on staff. • Water quality is dependent on activities and resources throughout the watershed. **Trends** • Declining water quality (see the outstandingly remarkable values report in appendix C). • Impaired for nutrients, polychlorinated biphenyls, and mercury. • Improved quality since the Clean Water Act was enacted. • Measuring for a greater variety of pollutants results in more findings of impairment.
Threats and Opportunities	**Threats** • Development: impervious areas, agricultural runoff, and deposition of air pollutants. • Increased conversions to tillable land as farmers elect not to continue Conservation Reserve Program; this leads to more sediment and more agricultural chemical runoff. • Timber production can lead to denuding, erosion. • Sewage overflows and sewer discharges from communities is a possible threat. • Chemicals of emerging concern, such as microplastics and hormones. • Industrial development in the region, such as hydraulic fracturing sand and gravel mining, may impact water quality if erosion, spills, or leaks occur. • Spills from oil pipeline crossings. • Climate change impacts on water and air temperature may threaten cold water species. This is an uncertain threat for the water quality in the river. • Cranberry marshes withdraw water from the Namekagon River; increases could threaten the river over time. • Increase in mean annual temperature and extreme heat events, along with increases in storm frequency and intensity projected for the region due to climate change, will probably influence a range of water quality parameters (e.g., stream temperature, turbidity, nutrients, bacteria, dissolved oxygen) threatening cold water species. **Opportunities** • Information needs: find where the cold water sources/springs may be to protect cold water species. • Continue working with regulatory authorities to improve water treatment plants. • Improve relationship with the Natural Resources Conservation Service to address agriculture-related concerns.

Fundamental Resource or Value	Water Quality
Existing Data and Plans Related to the FRV	• Water quality monitoring occurs at 10 sites and has for several years. • *General Management Plan: Upper St. Croix and Namekagon Rivers* (1998). • *Cooperative Management Plan: Lower St. Croix National Scenic Riverway* (2002). • Water Resources Management Plan, St. Croix National Scenic Riverway (1997). • "Predicted surface water methylmercury concentrations in National Park Service Inventory and Monitoring Program Parks." Last modified February 20, 2015. U.S. Geological Survey. Wisconsin Water Science Center, Middleton, WI.
Data and/or GIS Needs	• Obtain and interpret physical parameters related to weather and the river. • Data consolidation, gap analysis, and development of monitoring protocols for water resources. • Inventory of erosion problem areas for potential/prioritized rehabilitation efforts.
Planning Needs	• Water resources management plan (update). • Spill response plan.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	**Laws, Executive Orders, and Regulations That Apply to the FRV** • Wild and Scenic Rivers Act • Clean Water Act • Executive Order 11514, "Protection and Enhancement of Environmental Quality" • Executive Order 11988, "Floodplain Management" • Executive Order 12088, "Federal Compliance with Pollution Control Standards" • Endangered Species Act of 1973, as amended • "National Flood Insurance Program" (44 CFR 60) • National Invasive Species Act • Lacey Act, as amended • Federal Noxious Weed Act of 1974, as amended • Clean Air Act (42 USC 7401 et seq.) • Executive Order 13112, "Invasive Species" • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" **NPS Policy-level Guidance (NPS *Management Policies 2006* and Director's Orders)** • NPS *Management Policies 2006* (§1.4) "Park Management" • NPS *Management Policies 2006* (§1.6) "Cooperative Conservation Beyond Park Boundaries" • NPS *Management Policies 2006* (§4.3.4) "National Wild and Scenic Rivers System" • Director's Order 77-2: *Floodplain Management* • Director's Order 46: *Wild and Scenic River Management* • Directors Order 77-1: *Wetland Protection* • Special Directive 93-4, "Floodplain Management, Revised Guidelines for National Park Service Floodplain Compliance" (1993) • NPS *Natural Resource Management Reference Manual 77*

Fundamental Resource or Value	Aquatic Resources
Related Significance Statements	• Mussel Diversity • Ecological Corridor
Current Conditions and Trends	**Conditions** • Good condition; intact faunal system. • Travel restrictions are in place to slow the spread of invasive zebra mussels. • Sampling to determine presence of invasive species. • Partnering with the U.S. Fish and Wildlife Service to address invasive species. • Dams block passage for fish and mussels. • Benthic algae mats may be increasing. • There is no water quality expert on staff. • Toxics have been detected in surface waters, fish, eagles, dragonfly larvae, and sediments collected in and near the Riverway. Some contaminants such as mercury and polychlorinated biphenyls are at levels in fish from the St. Croix River that are not safe for human consumption. Lead and perfluorocarbons are especially elevated in eaglet blood at the Lower St. Croix National Scenic Riverway. • Many of these resources are impacted by activities outside the park. **Trends** • Monitoring since 1998 indicates stable populations for the most part. Some mussel populations in monitored areas are experiencing a decrease in juvenile recruitment. • Native mussel species—including 5 federally endangered and 17 state-listed species—are threatened by water pollutants, sedimentation, the spread of the zebra mussels, loss of habitat, direct human impacts, and fluctuation of water flows caused by hydropower operations. • Invasive (Asian) carp have been captured in the last 25 miles of the St. Croix River.
Threats and Opportunities	**Threats** • Aquatic and semiaquatic nonnative species include zebra mussels, rusty crayfish, garlic mustard, and purple loosestrife. Nonnative upland species that can affect aquatic resources through reduced cover and increased erosion include spotted knapweed, Grecian foxglove, honeysuckle, and buckthorn. • Invasive species threaten mussels and fish. • Zebra mussels have been found in the river below Stillwater. • Invasive carp have been captured in the state-administered zone and are likely to impact the park; moving upstream. • Eurasian water milfoil has impacted impoundment areas. • Sediment increases (especially fine sediments) threaten some habitat areas for mussels. • Mercury and other toxic pollutants accumulate in the food chain and can affect both wildlife and human health. Sources of atmospheric mercury include byproducts of coal-fired combustion, municipal and medical incineration, and mining operations. • Coal-fired power plants and vehicle exhaust are believed to be major contributors to air quality impacts regionally in the midwestern United States. Both sources have reduced emissions regionally in the past decade to reduce ozone and fine particles. These reductions should also reduce deposition of air pollutants at the Riverway. • Increase in mean annual temperature and extreme heat events, along with increases in storm frequency and intensity projected for the region due to climate change, will probably influence a range of aquatic resources including increases in invasive species and sedimentation.

Fundamental Resource or Value	Aquatic Resources
Threats and Opportunities	**Opportunities** • A barrier at the mouth of the St. Croix to limit upstream travel of invasive carp (sonic barrier) is under consideration. • Continue partnering with the U.S. Fish and Wildlife Service and others. • Continue working with the St. Croix Interagency Basin Planning Team on interagency efforts. • Long-term potential to remove dams to improve passage for fish and other species. • The park is currently assessing in-park mercury levels in water and dragonfly larvae samples via a citizen science project. Results from 2013 show average mercury concentration was highest at Norway Point on the St. Croix River.
Existing Data and Plans Related to the FRV	• Water resources plan developed in 1997 is not used regularly and needs updating. • *General Management Plan: Upper St. Croix and Namekagon Rivers* (1998). • *Cooperative Management Plan: Lower St. Croix National Scenic Riverway* (2002). • Land and water use guidelines. • GIS database of mussels and host fish is under development by park partners. • National Park Service, Air Resources Division. "Air Quality Conditions & Trends by NPS Units: Saint Croix NSR." National Park Service. Denver, CO. • "Predicted surface water methylmercury concentrations in National Park Service Inventory and Monitoring Program Parks." Last modified February 20, 2015. U.S. Geological Survey. Wisconsin Water Science Center, Middleton, WI.
Data and/or GIS Needs	• Data consolidation, gap analysis, and development of monitoring protocols for aquatic resources. • Impact assessment and monitoring of toxic contaminants on aquatic organisms. • Obtain and interpret physical parameters related to weather and the river.
Planning Needs	• Water resources management plan (update). • Aquatic resources management plan.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	**Laws, Executive Orders, and Regulations That Apply to the FRV** • Wild and Scenic Rivers Act • Endangered Species Act of 1973, as amended • National Invasive Species Act • Lacey Act, as amended • Federal Noxious Weed Act of 1974, as amended • Clean Water Act • Clean Air Act (42 USC 7401 et seq.) • Executive Order 13112, "Invasive Species" • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" **NPS Policy-level Guidance (NPS *Management Policies 2006* and Director's Orders)** • NPS *Management Policies 2006* (§1.6) "Cooperative Conservation Beyond Park Boundaries" • NPS *Management Policies 2006* (§4.1) "General Management Concepts" • NPS *Management Policies 2006* (§4.1.4) "Partnerships" • NPS *Management Policies 2006* (§4.4.1) "General Principles for Managing Biological Resources" • NPS *Management Policies 2006* (§4.7.2) "Weather and Climate"

Fundamental Resource or Value	Cultural Resources
Related Significance Statements	• Ecological Corridor • Human History • River Conservation History

Current Conditions and Trends	**Conditions**
	• Conditions vary from good to poor for cultural resources.
	• Archeological sites have not been fully inventoried.
	• There are two national historic landmarks that touch / are within the park boundary—the St. Croix Boom Site and the St. Croix Recreation Demonstration Area.
	  • The Boom Site's national significance is associated with the lumbering story and the use of the St. Croix to transport logs from the north country. It is north of Stillwater, east of Minnesota State Highway 95.
	  • The recreation demonstration area is now within St. Croix State Park, and was developed as a 1930s New Deal project to rehabilitate cutover land and to develop the area for recreational use.
	• Limited information exists on cultural resources at the park; the last archeological survey for the upper part of the river was 1978. Other surveys have been done on a case-by-case basis.
	• Logging-related sites are mostly known, but do not have good documentation of significance, especially the water control features.
	• One rock art site on the Lower St. Croix has active vandalism (petroglyph is being carved and painted).
	• Most of the cabins (historic recreation) are not maintained actively and are deteriorating.
	• Navigational resources are not fully inventoried; a project is being developed to complete an inventory.
	• Tribal consultation is mostly limited to compliance issues, rather than proactive relationship-building.
	• Wild rice and sturgeon are included as cultural resources due to their association with the Ojibwe. The National Park Service has no active management of these resources. A locational assessment has taken place. The state programs actively manage sturgeon. Sturgeon are being reintroduced above the dam and there may be a new fishing (catch and release) program.
	• The NPS Submerged Resources Center and the Midwest Archeological Center have been engaged in review of the lower St. Croix's water control features as a system.
	• Historic dams: the tops have been removed for safety; the remaining structures have stayed in place.
	• There is an active cemetery within the boundaries of the park.
	• Museum collections and archival storage is reaching capacity.
	Trends
	• Increasing awareness of cultural resources at the park due to the outstandingly remarkable values report, the foundation document planning efforts, and submerged cultural resource studies.
	• Most resources experience deterioration over time due to passive management.

Fundamental Resource or Value	Cultural Resources
Threats and Opportunities	**Threats** • Theft and vandalism at historic cabins (taking doors and light fixtures, breaking windows). • Natural deterioration by the river and the weather are the primary threats to cultural resources. • Navigational features on the lower river are impacted by boaters (accidental collisions) and collectors (intentional removal). • Some metal detecting occurs in the park; removal of historic objects may be occurring. • Increase in mean annual temperature and extreme heat events, along with increase in storm frequency and intensity projected for the region due to climate change could increase flood and erosion events, increase wildfire frequency, and increase invasive species, impacting cultural resources. • Lack of staff dedicated to cultural resources due to retirement of cultural resource specialist in 2015. **Opportunities** • Increased interpretive focus on human history of the Riverway. • Evaluation/study of logging and navigational history for its potential for a historic district listing in the National Register of Historic Places or as a national historic landmark.
Related Resources and Values	• Some archeological sites are only partially within the boundary and cannot be adequately protected unless the landowner is willing to be a partner in preservation.
Existing Data and Plans Related to the FRV	• Known archeological sites have been inventoried. • An archeological survey (1977–79) for the Riverway and archeological investigation for the lower Riverway (1981–83) exist. Numerous other archeological investigations on a project-by-project basis. • List of Classified Structures database and associated landscapes is populated; these are national register-eligible (one in good condition, others fair to poor). • *General Management Plan: Upper St. Croix and Namekagon Rivers* (1998). • *Cooperative Management Plan: Lower St. Croix National Scenic Riverway* (2002). • Land and water use guidelines. • Ethnographic overview (2001) • *Time and the River: A History of the Saint Croix : a Historic Resource Study of the Saint Croix National Scenic Riverway* (history/historic resources) (2002). • Scope of Collection Statement (2010). • Collection management plan (1994). • *Special Study Report: Army Corps of Engineers Involvement with the St. Croix and Namekagon Rivers* (2015). • *Ruins of a Forgotten Highway: Survey and Documentation of Historic Water Control Features* (2015). This report is focused on the St. Croix, south of St. Croix Falls/Taylors Falls.
Data and/or GIS Needs	• Study of logging and water control features. • Conduct LiDAR data mapping. • Enhance monitoring of archeological resources. • Complete burial mound inventory. • Develop resource baseline inventories and monitoring strategies, especially for historic structures and associated cultural landscapes and for resources culturally significant to the Ojibwe (sturgeon, wild rice). • Update the ethnographic overview.

Fundamental Resource or Value	Cultural Resources
Planning Needs	• Cultural resources management plan. • Space management strategy and future needs assessment for museum collections and archival storage. • Tribal communications strategy.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	**Laws, Executive Orders, and Regulations That Apply to the FRV** • Antiquities Act of 1906 • Historic Sites Act of 1935 • National Historic Preservation Act of 1966, as amended (54 USC §300101 et seq.) • American Indian Religious Freedom Act of 1978 • Archaeological Resources Protection Act of 1979 • Native American Graves Protection and Repatriation Act of 1990 • Executive Order 11593, "Protection and Enhancement of the Cultural Environment" • Executive Order 13007, "Indian Sacred Sites" • "Curation of Federally-Owned and Administered Archaeological Collections" (36 CFR 79) • "Protection of Historic Properties"(36 CFR 800) • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" **NPS Policy-level Guidance (NPS *Management Policies 2006* and Director's Orders)** • NPS *Management Policies 2006* (chapter 5) "Cultural Resource Management" • Director's Order 28: *Cultural Resource Management* • Director's Order 28A: *Archeology*

Fundamental Resource or Value	Geology of the Dalles and Glacial Potholes
Related Significance Statements	• Scenery
Current Conditions and Trends	**Conditions** • Erosion changes the geologic features slowly over time. • The Dalles is a major visitor attraction. • The National Park Service is working with the State of Wisconsin to do additional geologic mapping; very limited information to date. **Trends** • Stable; limited ability of the National Park Service to manage.
Threats and Opportunities	**Threats** • Very few threats, generally. • Vandalism can and has impacted significant features. • Mining for gravel and for the sand that is used in hydraulic fracturing is happening in the region and could impact the geology of the park. • Increase in storm frequency and intensity projected for the region due to climate change could increase flood and erosion events, impacting geological resources. **Opportunities** • LiDAR data collection could increase understanding of the geology of the park. • Increased awareness and enforcement to limit vandalism.
Related Resources and Values	• The NPS Ice Age National Scenic Trail produces informational material on the many geologic resources in Wisconsin. The western terminus of the trail is in Wisconsin Interstate State Park and portions of the trail are within the Riverway boundary. • State park systems highlight geologic features through their programming and trail system.
Existing Data and Plans Related to the FRV	• *General Management Plan: Upper St. Croix and Namekagon Rivers* (1998). • *Cooperative Management Plan: Lower St. Croix National Scenic Riverway* (2002). • Land and water use guidelines.
Data and/or GIS Needs	• Large-scale geologic mapping (for both bedrock and surficial) is desired for the park, especially from Osceola upstream.
Planning Needs	• None identified.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	**Laws, Executive Orders, and Regulations That Apply to the FRV** • Wild and Scenic Rivers Act • Clean Water Act • Executive Order 11514: "Protection and Enhancement of Environmental Quality" • Executive Order 11988: "Floodplain Management" • Executive Order 12088: "Federal Compliance with Pollution Control Standards" • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and other Natural and Cultural Resources" • "National Flood Insurance Program" (44 CFR 60) **NPS Policy-level Guidance (NPS *Management Policies 2006* and Director's Orders)** • NPS *Management Policies 2006* (§4.6.1) "Protection of Surface Waters and Groundwaters" • NPS *Management Policies 2006* (§4.6.2) "Water Rights" • NPS *Management Policies 2006* (§4.6.4) "Floodplains" • NPS *Management Policies 2006* (§4.8.1.1) "Shorelines and Barrier Islands" • Director's Order 77-2: *Floodplain Management* • Special Directive 93-4, "Floodplain Management, Revised Guidelines for National Park Service Floodplain Compliance" (1993)

Fundamental Resource or Value	Recreation
Related Significance Statements	• Ecological Corridor • Human History • Recreational Opportunities • Scenery
Current Conditions and Trends	**Conditions** • Many types of recreation take place in the park: canoeing, kayaking, motorboating and fishing in the summer; skiing, snowshoeing, and ice fishing in the winter; and hiking and other activities year-round. • There are no NPS access fees for the river for any recreation activities. • Many access points for people to enter the rivers and the park. • It is unclear how many people use the rivers each year. • Motor boating is allowed throughout the Riverway but conditions do not permit it in many locations. • Many commercial use authorizations exist (33 in 2015). • Some segments of the North Country and Ice Age National Scenic Trails cross the park. **Trends** • Anecdotal evidence that use is increasing in some places. • Anecdotal evidence that some types of use are increasing (tubing, stand-up paddleboarding, log rolling, etc.). • Anecdotal evidence that inappropriate behavior is increasing at some locations and is causing conflicts with other users. • Anecdotal evidence that there is increasing desire for car camping and decreasing interest in primitive camping nationally. • Some walk-in / paddle-in sites have been informally converted to drive-in camping by parking along township road rights-of-way.
Threats and Opportunities	**Threats** • User conflict is a concern at some locations. • The Stillwater Islands area is a focal point for user conflict due to volume of use and many types of users. • Carrying capacity of recreational users is a concern, particularly for tubers in conjunction with anglers and paddlers and at certain campsites (for example, Howell). • Conflicts between river users and riparian area owners have occurred as people move off the river to recreate. • Inability to maintain trail system with current staffing. • Unconstrained high visitor use and inappropriate behavior (alcohol, excessive noise) in some locations. • Increase in mean annual temperature and extreme heat events, along with storm frequency and intensity projected for the region due to climate change, could impact visitation seasons, recreational opportunities and visitor safety. **Opportunities** • "Active fitness" initiatives could incorporate river recreation activities. • Actively manage the commercial use authorizations to ensure the programs offered are the right activities at the right numbers.
Related Resources and Values	• State parks and forests offer additional recreational opportunities. • River towns offer recreation and provide stopover points for people recreating on the river.

Fundamental Resource or Value	Recreation
Existing Data and Plans Related to the FRV	• A river user count program was started for the Riverway but has been paused since 2002. The program was repeated on the Namekagon in 2015. • *Cooperative Management Plan: Lower St. Croix National Scenic Riverway* (2002). • *General Management Plan: Upper St. Croix and Namekagon Rivers* (1998). • Park Visitation and Climate Change. Park-specific Brief. Saint Croix National Scenic River (2015). • Visitor study completed in 1999.
Data and/or GIS Needs	• Conduct gap analysis of data related to visitor use (numbers and activities); develop protocols for inventory and monitoring of visitor use. • Conduct additional sound monitoring. • Undertake formal scenic inventory. • Complete sensory inventories and assessments.
Planning Needs	• Visitor use and commercial services management plan. • Sign plan (underway). • Park marketing and outreach plan. • Soundscape management plan. • Long-range interpretive plan. • Trail management plan.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	**Laws, Executive Orders, and Regulations That Apply to the FRV** • Americans with Disabilities Act / Architectural Barriers Act • Wild and Scenic Rivers Act • Friends of Yosemite v. Kempthorne opinion 3/27/2008 (Merced WSR ruling) • Paleontological Resource Preservation Act 2009 • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and other Natural and Cultural Resources" **NPS Policy-level Guidance (NPS *Management Policies 2006* and Director's Orders)** • NPS *Management Policies 2006* (chapter 2) "Park System Planning" • Director's Order 6: *Interpretation and Education* • Director's Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* • Director's Order 17: *National Park Service Tourism* • Director's Order 42: *Accessibility for Visitors with Disabilities in National Park Service Programs and Services* • Director's Order 46: *Wild and Scenic Rivers* • Director's Order 48B: *Commercial Use Authorizations* • Director's Order 50C: *Public Risk Management Program* • Director's Order 78: *Social Science*

Fundamental Resource or Value	Riparian Resources
Related Significance Statements	• Ecological Corridor • Recreational Opportunities
Current Conditions and Trends	**Conditions** • Generally very good condition and well protected within the park. • Many of these areas are within the maximum protection resource zone in the park. • Several rare riparian natural communities that exist along the river have been designated as state natural areas. • Rare birds and plants inhabit these state natural areas. • Approximately 150 campsites along the river could impact riparian habitats through trampling, erosion, and waste. • Land within the riparian corridor is mixed. Federal, state, local and private ownership all exist. Monitoring is limited. • Park staff members float portions of the river each year to remove invasive species (especially purple loosestrife). **Trends** • Habitats seem stable, but are not actively monitored by the National Park Service, except for annual breeding bird surveys and rare plant surveys conducted every five years. • Trails and trail connections are proposed on a regular basis and could increase. • From 2004 to 2013, the trend in nitrogen concentrations (a threat to riparian vegetation) in precipitation at the Riverway remained relatively unchanged.
Threats and Opportunities	**Threats** • Invasive species decrease biodiversity. They include rusty crayfish, spotted knapweed, garlic mustard, purple loosestrife, Grecian foxglove, honeysuckle, and buckthorn. • Increase in mean annual temperature and extreme heat events, along with storm frequency and intensity projected for the region due to climate change, could impact riparian habitat. • More water diversions could greatly impact riparian communities. • Trails are sometimes proposed to pass through fragile areas. New recreational uses such as biking could impact these areas. • Staff shortages impact ability to actively monitor and manage. • Horse use on some trails may have negative impacts. • Impact of emerald ash borer on black ash stands is a significant threat. The repercussions on river hydrology should these stands be lost is uncertain. • Atmospheric nitrogen deposition levels in the park are above critical loads for lichen and forest vegetation types, suggesting they are at risk for harmful effects. Prairies and wetland areas are sensitive to nutrient enrichment effects of excess nitrogen from deposition and run-off, which can help invasive plant species to grow faster and out-compete native vegetation adapted to lower nitrogen conditions. Garlic mustard is an invasive nonnative species of high concern at the park and may have a competitive advantage over native plant species in its ability to use multiple forms of nitrogen. **Opportunities** • Scenic easements protect riparian habitats to some extent, though these easements are generally located on uplands. Extending easements to riparian areas could be an opportunity for additional protection. • Increased mapping and GIS based data on what riparian communities exist and where they exist.

Fundamental Resource or Value	Riparian Resources
Threats and Opportunities	**Opportunities (continued)** • Increased educational/interpretive outreach about the riparian communities and why they are important. • Consult with the states to determine what monitoring information they may have for the state natural areas within the Riverway boundary, especially those with rare riparian natural communities. Partner with them and other public land management agencies and private nonprofits to protect these sensitive habitats and increase monitoring information. • Move any campsites and trails that are negatively impacting these resources to a more appropriate location.
Existing Data and Plans Related to the FRV	• Breeding bird monitoring data. • Rare plant monitoring data. • Campsite monitoring data. • The Wisconsin and Minnesota Natural Heritage Inventory database may have information on locations identified as having Riparian FRVs and should be checked. • *General Management Plan: Upper St. Croix and Namekagon Rivers* (1998). • *Cooperative Management Plan: Lower St. Croix National Scenic Riverway* (2002). • Land and water use guidelines. • Ongoing regional air quality monitoring for atmospheric deposition, visibility, and ozone.
Data and/or GIS Needs	• Riparian habitat inventory. • Data consolidation, gap analysis, and development of monitoring protocols for water resources. • Obtain and interpret physical parameters related to weather and the river. • Conduct LiDAR data mapping (both bathymetric and surface).
Planning Needs	• Water resources management plan (update). • Trail management plan.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	**Laws, Executive Orders, and Regulations That Apply to the FRV** • Wild and Scenic Rivers Act • Endangered Species Act of 1973, as amended • National Invasive Species Act • Lacey Act, as amended • Federal Noxious Weed Act of 1974, as amended • Clean Water Act • Clean Air Act (42 USC 7401 et seq.) • Executive Order 13112, "Invasive Species" • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" **NPS Policy-level Guidance (NPS *Management Policies 2006* and Director's Orders)** • NPS *Management Policies 2006* (§1.6) "Cooperative Conservation Beyond Park Boundaries" • NPS *Management Policies 2006* (§4.1) "General Management Concepts" • NPS *Management Policies 2006* (§4.1.4) "Partnerships" • NPS *Management Policies 2006* (§4.4.1) "General Principles for Managing Biological Resources" • NPS *Management Policies 2006* (§4.7.2) "Weather and Climate" • Director's Order 46: *Wild and Scenic River Management* • Director's Order 77-1: *Wetland Protection* • NPS *Natural Resource Management Reference Manual 77*

Fundamental Resource or Value	Scenic–Aesthetic Values
Related Significance Statements	• Recreational Opportunities • Scenery
Current Conditions and Trends	**Conditions** • The sensory experience along the river varies greatly from the headwaters to the confluence, based on the physical properties of the river itself. In some areas, proximity to urban areas, industrial uses, and suburban development have an effect on the experience. • The sensory experience changes dramatically based on the season. Visitors have very different experiences at different times of the year. • The lower St. Croix valley has a distinct feel, and the river towns add to that character. • The park and state partners have worked with local communities to implement zoning regulations to maintain this character and maintain the scenic and aesthetic experience of users and visitors. • Viewsheds are protected through an extensive scenic easement program. • Night skies are generally good and quality improves greatly as you move away from the urban areas. • Night skies in remote areas are very good. • Viewshed analysis for required reviews under the Wild and Scenic Rivers Act (section 7 reviews) are done on a case-by-case basis. • The unique nature of the brown tannin-filled waters of the Namekagon and St. Croix is retained. • The sound environment is generally quiet but varies widely segment to segment; monitoring at two locations revealed some intrusions. • Pine / north woods smells and wet smells dominate the olfactory experience. • The park's scenic views are sometimes affected by pollution-caused haze. **Trends** • In general, the watershed is developing over time, resulting in a changing visitor experience, from a more natural experience to an increasingly human-influenced environment. • Scenic views are deteriorating through invasive plants, increased development, and utilities (cell towers). • The sound environment is degraded in some locations through overflights, mining activities, and other development outside the boundary.
Threats and Opportunities	**Threats** • Ongoing development of the region is the biggest threat to the sensory environment in the park. • Changes to zoning ordinances that could result in increased scale of development. This would change the viewshed and the visitor experience. • Logging of county forests adjacent to the river could change the visitor experience visually and aurally. • Cell towers outside boundary could degrade the visual experience by inserting modern features into a natural landscape. • Light pollution degrades night skies in some locations near urban areas. At night, air pollution scatters artificial light, increasing the effect of light pollution on the night sky. • Coal-fired power plants and vehicle exhaust are believed to be major contributors to air quality impacts in the midwestern United States. Both sources have reduced emissions regionally in the past decade to reduce ozone and fine particles. These reductions should also reduce pollution-caused haze at the Riverway.

Fundamental Resource or Value	Scenic–Aesthetic Values
Threats and Opportunities	**Opportunities** • Partner with organizations interested in preserving the character of the river valley and limiting development. • Conduct more assessments and inventories to determine baseline condition and monitor change. • Increase monitoring of scenic easements. • Work cooperatively with other federal and state air quality agencies and local stakeholders to reduce air quality impacts in the park from sources of air pollution. Partnering with nearby developers, planners, and those interested in preserving the character of the river valley could similarly help increase awareness about the importance of park air quality and scenic views. • Expand interpretive and educational tools to communicate the connections between scenic views, air quality/pollution, climate change, sensitive park resources (water quality/aquatics/riparian/upland), recreation, human health, and other associated resources.
Existing Data and Plans Related to the FRV	• Baseline sound data have been collected at two points. Results documented existing sound levels and modeled natural sound levels. • Scenic analyses were conducted for the Stillwater Bridge Section 7(a) review. • *General Management Plan: Upper St. Croix and Namekagon Rivers* (1998). • *Cooperative Management Plan: Lower St. Croix National Scenic Riverway* (2002). • Land and water use guidelines. • Ongoing regional air quality monitoring for atmospheric deposition, visibility, and ozone as an ongoing data collection effort outside the park that benefits the park. • Geospatial model that shows sky quality based on the amount of human-caused light that is detectible in the night sky.
Data and/or GIS Needs	• Conduct viewshed mapping. • Undertake formal scenic inventory. • Conduct additional sound monitoring. • Complete sensory inventories and assessments. • Professional boundary survey and marking. • Inventory of erosion problem areas for potential/prioritized rehabilitation efforts.
Planning Needs	• Land protection plan (update). • Soundscape management plan. • Visual resource management plan.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	**Laws, Executive Orders, and Regulations That Apply to the FRV** • Wild and Scenic Rivers Act • Clean Air Act (42 USC 7401 et seq.) **NPS Policy-level Guidance (NPS *Management Policies 2006* and Director's Orders)** • Director's Order 47: *Soundscape Preservation and Noise Management* • NPS *Management Policies 2006* (§4.9) "Soundscape Management" • NPS *Management Policies 2006* (§1.6) "Cooperative Conservation Beyond Park Boundaries" • NPS *Management Policies 2006* (§4.7) "Air Resource Management" • NPS *Management Policies 2006* (§4.10) "Lightscape Management"

Fundamental Resource or Value	Rare Upland Habitats
Related Significance Statements	• Ecological Corridor • Scenery
Current Conditions and Trends	**Conditions** • Degraded natural systems due to fire suppression in the past that has resulted in the introduction of invasive species. • Home to species that do not use the riparian areas. • Some of these habitats (pine barrens, prairies, glades) are rare in the region. • The National Park Service uses mechanical removal/restoration, followed by prescribed fire, followed by active management to control these environments; the activity level for these projects is minimal compared with overall needs. • Some partnerships exist to restore these areas cooperatively with other landowners. **Trends** • Change in successional patterns over time due to logging, change in fire regime, and climate change. • Habitats becoming increasingly rare due to limited ability to restore the areas, development outside the boundary, and other activities.
Threats and Opportunities	**Threats** • Invasive plants decrease biodiversity and include spotted knapweed, Kentucky bluegrass, brome grass, garlic mustard, honeysuckle, and buckthorn. • Increase in mean annual temperature and extreme heat events, along with storm frequency and intensity projected for the region due to climate change, could alter the composition of terrestrial species and increase wildfire frequency and invasive species. • Natural succession is a threat to pristine and restored area. • Sugar maple (*Acer saccharum*) trees found in park are sensitive to acidification effects of excess sulfur and nitrogen deposition. • Adjacent resources are threatened by development. • Atmospheric nitrogen deposition levels in the park are above critical loads for lichen and forest vegetation types, suggesting they are at risk for harmful effects. Prairies and wetland areas are sensitive to nutrient enrichment effects of excess nitrogen from deposition and run-off which can help invasive plant species to grow faster and out-compete native vegetation adapted to lower nitrogen conditions. **Opportunities** • Desire to increase restoration efforts to control invasive species and restore disturbed areas. Reintroduction of large mammals to assist in management of succession in cooperation with adjacent landowners, understanding that the National Park Service does not have the land base to sustain or contain large mammals such as bison. • Partner with adjacent landowners for large restoration projects in priority areas. • Additional outreach to adjacent landowners about the habitats of mutual interest on their property.
Existing Data and Plans Related to the FRV	• Baseline inventory of these habitats with geolocations is largely intact. • Fire management plan and long-term burn plan appendix guides the fire strategy. • Implementation plans for restorations at targeted locations. • A preliminary survey was completed that revealed many degraded locations. • *General Management Plan: Upper St. Croix and Namekagon Rivers* (1998). • *Cooperative Management Plan: Lower St. Croix National Scenic Riverway* (2002). • Land and water use guidelines. • Ongoing regional air quality monitoring for atmospheric deposition, visibility, and ozone.

Fundamental Resource or Value	Rare Upland Habitats
Data and/or GIS Needs	• Obtain and interpret physical parameters related to weather and the river.
Planning Needs	• Fire management plan / long-term burn plan (update). • Site-specific restoration plans.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	**Laws, Executive Orders, and Regulations That Apply to the FRV** • Wild and Scenic Rivers Act • Endangered Species Act of 1973, as amended • National Invasive Species Act • Lacey Act, as amended • Federal Noxious Weed Act of 1974, as amended • Clean Water Act • Clean Air Act (42 USC 7401 et seq.) • Executive Order 13112, "Invasive Species" • Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources" **NPS Policy-level Guidance (NPS *Management Policies 2006* and Director's Orders)** • NPS *Management Policies 2006* (§1.6) "Cooperative Conservation Beyond Park Boundaries" • NPS *Management Policies 2006* (§4.1) "General Management Concepts" • NPS *Management Policies 2006* (§4.1.4) "Partnerships" • NPS *Management Policies 2006* (§4.4.1) "General Principles for Managing Biological Resources" • NPS *Management Policies 2006* (§4.7.2) "Weather and Climate" • NPS *Natural Resource Management Reference Manual 77*

Planning and Data Needs

The planning and data needs listed here are directly related to protecting fundamental resources and values, park significance, and park purpose, as well as addressing key issues. To successfully undertake a planning effort, information from sources such as inventories, studies, research activities, and analyses may be required to provide adequate knowledge of park resources and visitor information. Such information sources have been identified as data needs. Geospatial mapping tasks and products are included in data needs.

Items considered of the utmost importance were identified as high priority, and other items identified, but not rising to the level of high priority, were listed as either medium- or low-priority needs. These priorities inform park management efforts to secure funding and support for planning projects.

Planning Needs – Where A Decision-Making Process Is Needed

Related to an FRV or Key Issue?	Planning Need	Priority (H, M, L)	Notes
Free-Flowing Condition, Water Quality, Aquatic Resources, Riparian Resources	Water resources management plan (update)	H	Updated plan would summarize work done since 1997, describe information gaps that exist (e.g., effect of climate change), and develop statements for projects that would help fill those gaps.
Aquatic Resources	Aquatic resources management plan	H	Plan would summarize native mussel and fish work done to date, describe information gaps that exist (e.g., effect of climate change), and develop statements for projects that would help fill those gaps.
Recreation, Key Issue	Visitor use and commercial services management plan	H	Needed in order to align visitor opportunities with protecting fundamental resources and values. Issues to be considered and addressed include uncontrolled visitation, visitor use conflicts, visitation limits, facilities, permitting, and commercial services (e.g., determine how to involve outfitters for resource protection, education, interpretation, enforcement). There are presently a few problem areas of heavy use that need to be addressed. Management strategies to consider could include segmenting use based on equipment type, season, numbers, etc. Because of the patchwork of ownership and multitude of access points, it is unclear what options truly exist to manage these issues. Managing visitor use would be a huge enforcement issue and difficult to implement. Need to look at similar parks (Buffalo National River, Ozark National Scenic Riverways) to see how they have addressed these issues.

Planning Needs – Where A Decision-Making Process Is Needed			
Related to an FRV or Key Issue?	**Planning Need**	**Priority (H, M, L)**	**Notes**
Free-Flowing Condition, Cultural Resources	Cultural resources management plan	H	Issues to be addressed by this plan would include historic cabin management (deteriorating, need to identify a partner or park use), museum collection management, archeological resources management, cultural landscape identification and management, and the future disposition of historic logging and navigational features.
Key Issue	Business plan (update)	H	The current business plan is not that useful for the park; concern that any update would not be implementable.
Scenic–Aesthetic Values, Recreation	Soundscape management plan	M	This plan would determine which existing or proposed human-made sounds are consistent with park purposes, set acoustic management goals based on these purposes, and determine which noise sources are impacting the park and need to be addressed by management. Because the Riverway is a long, thin ribbon of protection, it is susceptible to noise intrusions from development (e.g., mines) just outside the boundary. Still, many portions of river are exceptionally quiet (e.g., part of the Marshland District) and the plan would identify strategies for protecting the river's natural soundscape.
Scenic–Aesthetic Values	Visual resource management plan	M	This plan would build on the viewshed mapping and scenic assessments by developing strategies to protect the park viewshed.
Key Issue	Volunteer enhancement strategy	M	The strategy would guide how to best identify, develop, use, and manage volunteers at the Riverway.
Recreation, Key Issue	Long-range interpretive plan (update)	M	Much of this has been completed; the rest is obsolete.
Key Issue	Universal accessibility plan	M	This plan would identify park facilities that could be made universally accessible including landings, visitor centers, and campsites.

Planning Needs – Where A Decision-Making Process Is Needed			
Related to an FRV or Key Issue?	**Planning Need**	**Priority (H, M, L)**	**Notes**
Free-Flowing Condition	Determine if National Park Service should pursue a federal water right for the river	M	Section 13(c) of the Wild and Scenic Rivers Act establishes a federal reserved water right. Some river parks may need to pursue water rights in order to protect the quantity of water necessary to support river values.
Cultural Resources	Tribal communications strategy	M	Plan or strategy to enhance communications, coordination, and outreach with tribal groups regarding cultural and ethnographic resources.
Recreation	Park marketing and outreach plan	M	Strategy to increase outreach to recreational visitors.
Rare Upland Habitats	Site-specific restoration plans	M	These would be done in-house before restoration actions would be taken.
Recreation, Riparian Resources	Trail management plan	L	Partners periodically propose trails that would require use of NPS lands. Trails through sensitive riparian areas are not always appropriate, but some of the upland areas may be. A trail plan may help determine appropriate and inappropriate areas for foot trails.
Scenic–Aesthetic Values	Land protection plan (update)	L	Land protection plans identify lands in the corridor to be protected through purchase in fee or scenic easements. This is nearly complete for the Riverway, but should be updated to consider the river values and identify key experiences in need of protection.
Key Issue	Prioritized plan of action for rehabilitating problem erosion areas	L	Is being done on a case-by-case basis at landings and campsites.
Water Quality	Spill response plan	In progress	This plan will provide Riverway managers and first responders with maps depicting sensitive resources, descriptions of local response capacity, list of key contacts, notification protocols, key physical features (highway crossings, outfalls, etc.), as well as geographic response plans, response strategies, and incident action plans.

Planning Needs – Where A Decision-Making Process Is Needed			
Related to an FRV or Key Issue?	**Planning Need**	**Priority (H, M, L)**	**Notes**
Recreation, Key Issue	Sign plan	In progress	The purpose of the sign plan is to provide a unified and consistent sign system throughout the entire park. It will improve orientation and information for visitors, wayfinding and NPS identity.
Rare Upland Habitats	Fire management plan / long-term burn plan (update)	In progress	Update will review and reprioritize burn units based on 10 years or experience, their biological integrity and feasibility of restoring important significant plant communities. It will also add and prioritize additional sites (such as pine plantations in need of restoration and accumulations of hazardous fuels).

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV or Key Issue?	**Data and GIS Needs**	**Priority (H, M, L)**	**Notes**
Free-Flowing Condition, Water Quality, Riparian Resources	Data consolidation, gap analysis, and development of monitoring protocols for water resources	H	These water resources would include the river, riparian resources, adjacent wetlands, and back channels. Gap analysis would help determine where to put our focus on new data collection efforts.
Recreation, Key Issue	Conduct gap analysis of data related to visitor use (numbers and activities); develop protocols for inventory and monitoring of visitor use	H	Professional research project to look at existing visitor use data, determine where gaps in information exist, and recommend or develop protocols to gather visitor use numbers. Visitor use monitoring is needed to inform management decisions and track their effectiveness.
Scenic–Aesthetic Values	Conduct viewshed mapping	H	Conduct viewshed mapping from the river using GIS technology. This information would be useful for section 7(a) reviews and focusing management attention on those areas visible from the river.
Scenic–Aesthetic Values	Professional boundary survey and marking	H	The park boundary and the boundary between fee-title and scenic easement lands has never been surveyed or marked. Doing so would bring clarity to the park lands/ scenic easement program.

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV or Key Issue?	**Data and GIS Needs**	**Priority (H, M, L)**	**Notes**
Aquatic Resources	Data consolidation, gap analysis, and development of monitoring protocols for aquatic resources	M	These aquatic resources would include fish and native mussels. Gap analysis would help determine where to put our focus on new data collection efforts.
Free-Flowing Condition, Cultural Resources, Riparian Resources	Conduct LiDAR data mapping (both bathymetric and surface)	M	LiDAR data would reveal former river channels and stream widths as well as underwater and surface cultural features. It would allow mapping of historical changes to the river as well as cultural resources, such as burial mounds and water control features currently hidden under the water or by vegetation.
Cultural Resources	Study of logging and water control features	M	Would assist in understanding the significance of logging and water control features and their effect on fundamental resource values, wild rice, archeological sites, and cultural associations on the flowages. This will help determine if there is any management conflict between the logging and water control features and protecting fundamental resource values.
Cultural Resources	Enhance monitoring of archeological resources	M	Annual archeological site assessment and monitoring is completed by law enforcement rangers, the majority of which are new to the Riverway. Data gathering could be improved with orientation and training. Lack of a cultural resource specialist makes this unlikely to occur.
Cultural Resources	Update the ethnographic overview	M	An ethnographic overview was completed in 2001. The report should be updated to reflect current use of natural and cultural resources by the Ojibwe and Dakota and related issues, any changes in contemporary tribal ties to the park, and the status of action on the report's recommendations.
Recreation, Scenic–Aesthetic Values	Conduct additional sound monitoring	M	Sound monitoring has been conducted at two locations in the park. Additional locations should be studied to determine natural and human-made sound levels.

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV or Key Issue?	**Data and GIS Needs**	**Priority (H, M, L)**	**Notes**
Recreation, Scenic–Aesthetic Values	Undertake formal scenic inventory	M	This would help better understand the visibility, viewshed intrusion, visibility ceiling, and sensitivity of the park's scenic environment.
Recreation, Scenic–Aesthetic Values	Complete sensory inventories and assessments	M	This would help better understand and articulate the sensory aspects of the aesthetic value.
Water Quality, Scenic–Aesthetic Values	Inventory of erosion problem areas for potential/prioritized rehabilitation efforts	M	Erosion problems are primarily associated with campsites and landings. Erosion at these areas is handled on a case-by-case basis through cyclic maintenance.
Free-Flowing Condition, Water Quality, Aquatic Resources, Riparian Resources, Rare Upland Habitats	Obtain and interpret physical parameters related to weather and the river	M	Include precipitation, temperature, and storm events as well as river levels and water temperatures. Assess climate models (projected climate futures) for the region to identify potential impacts of climate change on aquatic resources, support park planning, and influence decisions.
Riparian Resources	Riparian habitat inventory	M	Conduct baseline inventories of riparian habitats to inform monitoring strategy development. Some information may be available from the states.
Free-Flowing Condition	Develop an inventory and status of structures in the river that are impeding free flow, including dams, diversions, bridges	L	Would be useful for section 7 reviews. A list of bridges and dams already exists. A list of bank stabilization structures and boat docks could be developed from U.S. Army Corps of Engineers permits, but would be time consuming and apply mainly to the state-administered zone.
Cultural Resources	Develop cultural resource baseline inventories and monitoring strategies	L	Cultural resource funding for this is not likely. Compliance efforts more likely to get attention.
Geology of the Dalles and Glacial Potholes	Large-scale geologic mapping is needed, especially north of St. Croix Falls	In progress	Fiscal year 2016 efforts will map geologic features in USGS quads from the Polk-Burnett County line, Nebraska, to Danbury, Wisconsin, as well as two quads in the Trego, Wisconsin, area.
Aquatic Resources	Impact assessment and monitoring of toxic contaminants on aquatic organisms	In progress	Continue assessing impacts and monitoring mercury and other toxic contaminants on biota in the park.

Part 3: Contributors

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Others

Many NPS staff, state agency employees, and partner organizations participated in a workshop to define the park's outstandingly remarkable values, prior to the foundation document workshop. Their efforts were invaluable and integrated into this document.

Photo Credits

A special thank-you to the photographers who have generously provided permission for use of their work of St. Croix National Scenic Riverway.

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Appendixes

Appendix A: Enabling Legislation and Legislative Acts for St. Croix National Scenic Riverway

Legislative History

- Public Law 90-542 (10/2/1968) established the Wild and Scenic Rivers Act, and section 3(a) designated a portion of the St. Croix (from Gordon, Wisconsin to Taylors Falls, Minnesota) and its tributary, the Namekagon, as a component of this wild and scenic rivers system.
- Public Law 92-560, Section 2 (10/25/1972) amended the Wild and Scenic Rivers Act by adding the Lower St. Croix segment between the dam near Taylors Falls and its confluence with the Mississippi River (52 river miles). This lower 25 miles of the Lower St. Croix was designated in 1976 under section 2(a)ii of the Wild and Scenic Rivers Act. This section is managed jointly by the Minnesota Department of Natural Resources and Wisconsin Department of Natural Resources. The states manage the river cooperatively with the National Park Service per the 2002 cooperative management plan.
- Public Law 96-580 (12/23/1980) amended the act further by adding that "A one thousand three hundred and eighty acre portion of the area commonly known as the Velie Estate, may be acquired" without regard to the Wild and Scenic Rivers Act's acreage limitation.

Designation Language

Public Law 90-542 established the wild and scenic rivers system. These key excerpts heavily influence the purpose statement of the Riverway. The full text of the act follows.

- Section 1 (b) states that "it is hereby . . . the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in a free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations."
- ". . .preserve. . .rivers. . .in their free flowing condition and protect the water quality of such rivers . . .to fulfill other vital national conservation purposes."
- Each component of the system "shall be administered in such a manner as to protect and enhance the values which caused it to be included in said system without. . . limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration, primary emphasis shall be given to protecting its aesthetic, scenic, historic, archaeologic, and scientific features."

Wild & Scenic Rivers Act

An Act[1]

To provide for a National Wild and Scenic Rivers System, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that

SECTION 1.

(a) This Act may be cited as the "Wild and Scenic Rivers Act."

(b) It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations. The Congress declares that the established national policy of dam and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes.

(c) The purpose of this Act is to implement this policy by instituting a national wild and scenic rivers system, by designating the initial components of that system, and by prescribing the methods by which and standards according to which additional components may be added to the system from time to time.

SECTION 2.

(a) The national wild and scenic rivers system shall comprise rivers

(i) that are authorized for inclusion therein by Act of Congress, or

(ii) that are designated as wild, scenic or recreational rivers by or pursuant to an act of the legislature of the State or States through which they flow, that are to be permanently administered as wild, scenic or recreational rivers by an agency or political subdivision of the State or States concerned, that are found by the Secretary of the Interior, upon application of the Governor of the State or the Governors of the States concerned, or a person or persons thereunto duly appointed by him or them, to meet the criteria established in this Act and such criteria supplementary thereto as he may prescribe, and that are approved by him for inclusion in the system, including, upon application of the Governor of the State concerned, the Allagash Wilderness Waterway, Maine; that segment of the Wolf River, Wisconsin, which flows through Langlade County and that segment of the New River in North Carolina extending from its confluence with Dog Creek downstream approximately 26.5 miles to the Virginia State line.

Upon receipt of an application under clause (ii) of this subsection, the Secretary shall notify the Federal Energy Regulatory Commission and publish such application in the Federal Register. Each river designated under clause (ii) shall be administered by the State or political subdivision thereof without expense to the United States other than for administration and management of federally owned lands. For purposes of the preceding sentence, amounts made available to any State or political subdivision under the Land and Water Conservation [Fund] Act of 1965 or any other provision of law shall not be treated as an expense to the United States. Nothing in this subsection shall be construed to provide for the transfer to, or administration by, a State or local authority of any federally owned lands which are within the boundaries of any river included within the system under clause (ii).

1. The Wild and Scenic Rivers Act (16 U.S.C. 12711287) as set forth herein consists of Public Law 90542 (October 2, 1968) and amendments thereto.

(b) A wild, scenic or recreational river area eligible to be included in the system is a free-flowing stream and the related adjacent land area that possesses one or more of the values referred to in Section 1, subsection (b) of this Act. Every wild, scenic or recreational river in its free-flowing condition, or upon restoration to this condition, shall be considered eligible for inclusion in the national wild and scenic rivers system and, if included, shall be classified, designated, and administered as one of the following:

(1) Wild river areas – Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

(2) Scenic river areas – Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

(3) Recreational river areas – Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

SECTION 3.

(a) The following rivers and the land adjacent thereto are hereby designated as components of the national wild and scenic rivers system:

[List of additional designated rivers omitted.]

…(6) Saint Croix, Minnesota and Wisconsin. – The segment between the dam near Taylor Falls, Minnesota, and the dam near Gordon, Wisconsin, and its tributary, the Namekagon, from Lake Namekagon downstream to its confluence with the Saint Croix; to be administered by the Secretary of the Interior: Provided, That except as may be required in connection with items (a) and (b) of this paragraph, no funds available to carry out the provisions of this Act may be expended for the acquisition or development of lands in connection with, or for administration under this Act of, that portion of the Saint Croix River between the dam near Taylors Falls, Minnesota, and the upstream end of Big Island in Wisconsin, until sixty days after the date on which the Secretary has transmitted to the president of the Senate and Speaker of the House of Representatives a proposed cooperative agreement between the Northern States Power Company and the United States (a) whereby the company agrees to convey to the United States, without charge, appropriate interests in certain of its lands between the dam near Taylors Falls, Minnesota, and the upstream end of Big Island in Wisconsin, including company's right, title, and interest to approximately one hundred acres per mile, and (b) providing for the use and development of other lands and interests in land retained by the company between said pints adjacent to the river in a manner which shall complement and not be in consistent with the purposes for which the lands and interests in land donated by the company are administered under this Act. Said agreement may also include provision for State or local governmental participation as authorized under subsection (e) of section 10 of this Act…

(b) The agency charged with the administration of each component of the national wild and scenic rivers system designated by subsection (a) of this section shall, within one year from the date of designation of such component under subsection (a) (except where a different date is provided in subsection (a)), establish detailed boundaries therefore (which boundaries shall include an average of not more than 320 acres of land per mile measured from the ordinary high water mark on both sides of the river); and determine which of the classes outlined in section 2, subsection (b), of this Act best fit the river or its various segments. Notice of the availability of the boundaries and classification, and of subsequent boundary amendments shall be published in the Federal Register and shall not become effective until ninety days after they have been forwarded to the President of the Senate and the Speaker of the House of Representatives.

(c) Maps of all boundaries and descriptions of the classifications of designated river segments, and subsequent amendments to such boundaries, shall be available for public inspection in the offices of the administering agency in the District of Columbia and in locations convenient to the designated river.

(d)(1) For rivers designated on or after January 1, 1986, the Federal agency charged with the administration of each component of the National Wild and Scenic Rivers System shall prepare a comprehensive management plan for such river segment to provide for the protection of the river values. The plan shall address resource protection, development of lands and facilities, user capacities, and other management practices necessary or desirable to achieve the purposes of this Act. The plan shall be coordinated with and may be incorporated into resource management planning for affected adjacent Federal lands. The plan shall be prepared, after consultation with State and local governments and the interested public within 3 full fiscal years after the date of designation. Notice of the completion and availability of such plans shall be published in the Federal Register.

(2) For rivers designated before January 1, 1986, all boundaries, classifications, and plans shall be reviewed for conformity within the requirements of this subsection within 10 years through regular agency planning processes.

SECTION 4.

(a) The Secretary of the Interior or, where national forest lands are involved, the Secretary of Agriculture or, in appropriate cases, the two Secretaries jointly shall study and submit to the President reports on the suitability or nonsuitability for addition to the national wild and scenic rivers system of rivers which are designated herein or hereafter by the Congress as potential additions to such system. The President shall report to the Congress his recommendations and proposals with respect to the designation of each such river or section thereof under this Act. Such studies shall be completed and such reports shall be made to the Congress with respect to all rivers named in subparagraphs 5(a) (1) through (27) of this Act no later than October 2, 1978. In conducting these studies the Secretary of the Interior and the Secretary of Agriculture shall give priority to those rivers

(i) with respect to which there is the greatest likelihood of developments which, if undertaken, would render the rivers unsuitable for inclusion in the national wild and scenic rivers system, and

(ii) which possess the greatest proportion of private lands within their areas. Every such study and plan shall be coordinated with any water resources planning involving the same river which is being conducted pursuant to the Water Resources Planning Act (79 Stat. 244; 42 U.S.C. 1962 et seq.). Each report, including maps and illustrations, shall show among other things the area included within the report; the characteristics which do or do not make the area a worthy addition to the system; the current status of land ownership and use in the area; the reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed, or curtailed if the area were included in the national wild and scenic rivers system; the Federal agency (which in the case of a river which is wholly or substantially within a national forest, shall be the Department of Agriculture) by which it is proposed the area, should it be added to the system, be administered; the extent to which it is proposed that such administration, including the costs thereof, be shared by State and local agencies; and the estimated cost to the United States of acquiring necessary lands and interests in land and of administering the area, should it be added to the system. Each such report shall be printed as a Senate or House document.

(b) Before submitting any such report to the President and the Congress, copies of the proposed report shall, unless it was prepared jointly by the Secretary of the Interior and the Secretary of Agriculture, be submitted by the Secretary of the Interior to the Secretary of Agriculture or by the Secretary of Agriculture to the Secretary of the Interior, as the case may be, and to the Secretary of the Army, the Chairman of the Federal Power Commission, the head of any other affected Federal department or agency and, unless the lands proposed to be included in the area are already owned by the United States or have already been authorized for acquisition by Act of Congress, the Governor of the State or States in which they are located or an officer designated by the Governor to receive the same. Any recommendations or comments on the proposal which the said officials furnish the Secretary or Secretaries who prepared the report within ninety days of the date on which the report is submitted to them, together with the Secretary's or Secretaries' comments thereon, shall be included with the transmittal to the President and the Congress.

(c) Before approving or disapproving for inclusion in the national wild and scenic rivers system any river designated as a wild, scenic or recreational river by or pursuant to an act of the State legislature, the Secretary of the Interior shall submit the proposal to the Secretary of Agriculture, the Secretary of the Army, the Chairman of the Federal Power Commission, and the head of any other affected Federal department or agency and shall evaluate and give due weight to any recommendations or comments which the said officials furnish him within ninety days of the date on which it is submitted to them. If he approves the proposed inclusion, he shall publish notice thereof in the Federal Register.

(d) The boundaries of any river proposed in section 5(a) of this Act for potential addition to the National Wild and Scenic Rivers System shall generally comprise that area measured within one-quarter mile from the ordinary high water mark on each side of the river. In the case of any designated river, prior to publication of boundaries pursuant to section 3(b) of this Act, the boundaries also shall comprise the same area. This subsection shall not be construed to limit the possible scope of the study report to address areas which may lie more than one-quarter mile from the ordinary high water mark on each side of the river.

SECTION 5.

The following rivers are hereby designated for potential addition to the national wild and scenic rivers system:

[List of additional study rivers and study periods is omitted]

(21) Saint Croix, Minnesota and Wisconsin: The segment between the dam near Taylor Falls and its confluence with the Mississippi River.

(c) The study of any of said rivers shall be pursued in as close cooperation with appropriate agencies of the affected State and its political subdivisions as possible, shall be carried on jointly with such agencies if request for such joint study is made by the State, and shall include a determination of the degree to which the State or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the national wild and scenic rivers system.

(d)(1) In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas, and all river basin and project plan reports submitted to the Congress shall consider and discuss any such potentials. The Secretary of the Interior and the Secretary of Agriculture shall make specific studies and investigations to determine which additional wild, scenic and recreational river areas within the United States shall be evaluated in planning reports by all Federal agencies as potential alternative uses of the water and related land resources involved.

(2) The Congress finds that the Secretary of the Interior, in preparing the Nationwide Rivers Inventory as a specific study for possible additions to the National Wild and Scenic Rivers System, identified the Upper Klamath River from below the John Boyle Dam to the Oregon–California State line. The Secretary, acting through the Bureau of Land Management, is authorized under this subsection to complete a study of the eligibility and suitability of such segment for potential addition to the National Wild and Scenic Rivers System. Such study shall be completed, and a report containing the results of the study shall be submitted to Congress by April 1, 1990. Nothing in this paragraph shall affect the authority or responsibilities of any other Federal agency with respect to activities or action on this segment and its immediate environment.

SECTION 6.

(a)(1) The Secretary of the Interior and the Secretary of Agriculture are each authorized to acquire lands and interests in land within the authorized boundaries of any component of the national wild and scenic rivers system designated in section 3 of this Act, or hereafter designated for inclusion in the system by Act of Congress, which is administered by him, but he shall not acquire fee title to an average of more than 100 acres per mile on both sides of the river. Lands owned by a State may be acquired only by donation or by exchange in accordance with the subsection (d) of this section. Lands owned by an Indian tribe or a political subdivision of a State may not be acquired without the consent of the appropriate governing body thereof as long as the Indian tribe or political subdivision is following a plan for management and protection of the lands which the Secretary finds protects the land and assures its use for purposes consistent with this Act. Money appropriated for Federal purposes from the land and water conservation fund shall, without prejudice to the use of appropriations from other sources, be available to Federal departments and agencies for the acquisition of property for the purposes of this Act.

(2) When a tract of land lies partially within and partially outside the boundaries of a component of the National Wild and Scenic Rivers System, the appropriate Secretary may, with the consent of the landowners for the portion outside the boundaries, acquire the entire tract. The land or interest therein so acquired outside the boundaries shall not be counted against the average one-hundred-acre-per-mile fee title limitation of subsection (a)(1). The lands or interests therein outside such boundaries, shall be disposed of, consistent with existing authorities of law, by sale, lease, or exchange.

(b) If 50 per centum or more of the entire acreage outside the ordinary high water mark on both sides of the river within a federally administered wild, scenic or recreational river area is owned in fee title by the United States, by the State or States within which it lies, or by political subdivisions of those States, neither Secretary shall acquire fee title to any lands by condemnation under authority of this Act. Nothing contained in this section, however, shall preclude the use of condemnation when necessary to clear title or to acquire scenic easements or such other easements as are reasonably necessary to give the public access to the river and to permit its members to traverse the length of the area or of selected segments thereof.

(c) Neither the Secretary of the Interior nor the Secretary of Agriculture may acquire lands by condemnation, for the purpose of including such lands in any national wild, scenic or recreational river area, if such lands are located within any incorporated city, village or borough which has in force and applicable to such lands a duly adopted, valid zoning ordinance that conforms with the purposes of this Act. In order to carry out the provisions of this subsection the appropriate Secretary shall issue guidelines, specifying standards for local zoning ordinances, which are consistent with the purposes of this Act. The standards specified in such guidelines shall have the object of (A) prohibiting new commercial or industrial uses other than commercial or industrial uses which are consistent with the purposes of this Act, and (B) the protection of the bank lands by means of acreage, frontage, and setback requirements on development.

(d) The appropriate Secretary is authorized to accept title to non-Federal property within the authorized boundaries of any federally administered component of the national wild and scenic rivers system designated in section 3 of this Act or hereafter designated for inclusion in the system by Act of Congress and, in exchange therefore, convey to the grantor any federally owned property which is under his jurisdiction within the State in which the component lies and which he classifies as suitable for exchange or other disposal. The values of the properties so exchanged either shall be approximately equal or, if they are not approximately equal, shall be equalized by the payment of cash to the grantor or to the Secretary as the circumstances require.

(e) The head of any Federal department or agency having administrative jurisdiction over any lands or interests in land within the authorized boundaries of any federally administered component of the national wild and scenic rivers system designated in section 3 of this Act or hereafter designated for inclusion in the system by Act of Congress is authorized to transfer to the appropriate Secretary jurisdiction over such lands for administration in accordance with the provisions of this Act. Lands acquired by or transferred to the Secretary of Agriculture for the purposes of this Act within or adjacent to a national forest shall upon such acquisition or transfer become national forest lands.

(f) The appropriate Secretary is authorized to accept donations of lands and interests in land, funds, and other property for use in connection with his administration of the national wild and scenic rivers system.

(g)(1) Any owner or owners (hereinafter in this subsection referred to as "owner") of improved property on the date of its acquisition, may retain for themselves and their successors or assigns a right of use and occupancy of the improved property for noncommercial residential purposes for a definite term not to exceed twenty-five years, or in lieu thereof, for a term ending at the death of the owner, or the death of his spouse, or the death of either or both of them. The owner shall elect the term to be reserved. The appropriate Secretary shall pay to the owner the fair market value of the property on the date of such acquisition less the fair market value on such a date retained by the owner.

(2) A right of use and occupancy retained pursuant to this subsection shall be subject to termination whenever the appropriate Secretary is given reasonable cause to find that such use and occupancy is being exercised in a manner which conflicts with the purposes of this Act. In the event of such a finding, the Secretary shall tender to the holder of that right an amount equal to the fair market value of that portion of the right which remains unexpired on the date of termination. Such right of use or occupancy shall terminate by operation of law upon tender of the fair market price.

(3) The term "improved property," as used in this Act, means a detached, one-family dwelling (hereinafter referred to as "dwelling"), the construction of which was begun before January 1, 1967, (except where a different date is specifically provided by law with respect to any particular river), together with so much of the land on which the dwelling is situated, the said land being in the same ownership as the dwelling, as the appropriate Secretary shall designate to be reasonably necessary for the enjoyment of the dwelling for the sole purpose of noncommercial residential use, together with any structures accessory to the dwelling which are situated on the land so designated.

SECTION 7.

(a) The Federal Power Commission shall not license the construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act (41 Stat. 1063), as amended (16 U.S.C. 791a et seq.), on or directly affecting any river which is designated in section 3 of this Act as a component of the national wild and scenic rivers system or which is hereafter designated for inclusion in that system, and no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration. Nothing contained in the foregoing sentence, however, shall preclude licensing of, or assistance to, developments below or above a wild, scenic or recreational river area or on any stream tributary thereto which will not invade the area or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area on the date of designation of a river as a component of the National Wild and Scenic Rivers System. No department or agency of the United States shall recommend authorization of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration, or request appropriations to begin construction of any such project, whether heretofore or hereafter authorized, without advising the Secretary of the Interior or the Secretary of Agriculture, as the case may be, in writing of its intention so to do at least sixty days in advance, and without specifically reporting to the Congress in writing at the time it makes its recommendation or request in what respect construction of such project would be in conflict with the purposes of this Act and would affect the component and the values to be protected by it under this Act. Any license heretofore or hereafter issued by the Federal Power Commission affecting the New River of North Carolina shall continue to be effective only for that portion of the river which is not included in the National Wild and Scenic Rivers System pursuant to section 2 of this Act and no project or undertaking so licensed shall be permitted to invade, inundate or otherwise adversely affect such river segment.

(b) The Federal Power Commission shall not license the construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act, as amended, on or directly affecting any river which is listed in section 5, subsection (a), of this Act, and no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river might be designated, as determined by the Secretary responsible for its study or approval

(i) during the ten-year period following enactment of this Act or for a three complete fiscal year period following any Act of Congress designating any river for potential addition to the national wild and scenic rivers system, whichever is later, unless, prior to the expiration of the relevant period, the Secretary of the Interior and where national forest lands are involved, the Secretary of Agriculture, on the basis of study, determine that such river should not be included in the national wild and scenic rivers system and notify the Committees on Interior and Insular Affairs of the United States Congress, in writing, including a copy of the study upon which the determination was made, at least one hundred and eighty days while Congress is in session prior to publishing notice to that effect in the Federal Register: *Provided*, That if any Act designating any river or rivers for potential addition to the national wild and scenic rivers system provides a period for the study or studies which exceeds such three complete fiscal year period the period provided for in such Act shall be substituted for the three complete fiscal year period in the provisions of this clause (i); and

(ii) during such interim period from the date a report is due and the time a report is actually submitted to the Congress; and

(iii) during such additional period thereafter as, in the case of any river the report for which is submitted to the President and the Congress for inclusion in the national wild and scenic rivers system, is necessary for congressional consideration thereof or, in the case of any river recommended to the Secretary of the Interior under section 2(a)(ii) of this Act, is necessary for the secretary's consideration thereof, which additional period, however, shall not exceed three years in the first case and one year in the second.

Nothing contained in the foregoing sentence, however, shall preclude licensing of, or assistance to, developments below or above a potential wild, scenic or recreational river area or on any stream tributary thereto which will not invade the area or diminish the scenic, recreational, and fish and wildlife values present in the potential wild, scenic or recreational river area on the date of designation of a river for study as provided in section 5 of this Act. No department or agency of the United States shall, during the periods hereinbefore specified, recommend authorization of any water resources project on any such river or request appropriations to begin construction of any such project, whether heretofore or hereafter authorized, without advising the Secretary of the Interior and, where national forest lands are involved, the Secretary of Agriculture in writing of its intention so to do at least sixty days in advance of doing so and without specifically reporting to the Congress in writing at the time it makes its recommendation or request in what respect construction of such project would be in conflict with the purposes of this Act and would affect the component and the values to be protected by it under this Act.

(c) The Federal Power Commission and all other Federal agencies shall, promptly upon enactment of this Act, inform the Secretary of the Interior and, where national forest lands are involved, the Secretary of Agriculture, of any proceedings, studies, or other activities within their jurisdiction which are now in progress and which affect or may affect any of the rivers specified in section 5, subsection (a), of this Act. They shall likewise inform him of any such proceedings, studies, or other activities which are hereafter commenced or resumed before they are commenced or resumed.

(d) Nothing in this section with respect to the making of a loan or grant shall apply to grants made under the Land and Water Conservation Fund Act of 1965 (78 Stat. 897; 16 U.S.C. 46015 et seq.).

SECTION 8.

(a) All public lands within the authorized boundaries of any component of the national wild and scenic rivers system which is designated in section 3 of this Act or which is hereafter designated for inclusion in that system are hereby withdrawn from entry, sale, or other disposition under the public land laws of the United States. This subsection shall not be construed to limit the authorities granted in section 6(d) or section 14A of this Act.

(b) All public lands which constitute the bed or bank, or are within one-quarter mile of the bank, of any river which is listed in section 5, subsection (a), of this Act are hereby withdrawn from entry, sale, or other disposition under the public land laws of the United States for the periods specified in section 7, subsection (b), of this Act. Notwithstanding the foregoing provisions of this subsection or any other provision of this Act, subject only to valid existing rights, including valid Native selection rights under the Alaska Native Claims Settlement Act, all public lands which constitute the bed or bank, or are within an area extending two miles from the bank of the river channel on both sides of the river segments referred to in paragraphs (77) through (88) of section 5(a) are hereby withdrawn from entry, sale, State selection or other disposition under the public land laws of the Unites States for the periods specified in section 7(b) of this Act.

SECTION 9.

(a) Nothing in this Act shall affect the applicability of the United States mining and mineral leasing laws within components of the national wild and scenic rivers system except that

(i) all prospecting, mining operations, and other activities on mining claims which, in the case of a component of the system designated in section 3 of this Act, have not heretofore been perfected or which, in the case of a component hereafter designated pursuant to this Act or any other Act of Congress, are not perfected before its inclusion in the system and all mining operations and other activities under a mineral lease, license, or permit issued or renewed after inclusion of a component in the system shall be subject to such regulations as the Secretary of the Interior or, in the case of national forest lands, the Secretary of Agriculture may prescribe to effectuate the purposes of this Act;

(ii) subject to valid existing rights, the perfection of, or issuance of a patent to, any mining claim affecting lands within the system shall confer or convey a right or title only to the mineral deposits and such rights only to the use of the surface and the surface resources as are reasonably required to carrying on prospecting or mining operations and are consistent with such regulations as may be prescribed by the Secretary of the Interior, or in the case of national forest lands, by the Secretary of Agriculture; and

(iii) subject to valid existing rights, the minerals in Federal lands which are part of the system and constitute the bed or bank or are situated within one-quarter mile of the bank of any river designated a wild river under this Act or any subsequent Act are hereby withdrawn from all forms of appropriation under the mining laws and from operation of the mineral leasing laws including, in both cases, amendments thereto.

Regulations issued pursuant to paragraphs (i) and (ii) of this subsection shall, among other things, provide safeguards against pollution of the river involved and unnecessary impairment of the scenery within the components in question.

(b) The minerals in any Federal lands which constitute the bed or bank or are situated within one-quarter mile of the bank of any river which is listed in section 5, subsection (a) of this Act are hereby withdrawn from all forms of appropriation under the mining laws during the periods specified in section 7, subsection (b) of this Act. Nothing contained in this subsection shall be construed to forbid prospecting or the issuance of leases, licenses, and permits under the mineral leasing laws subject to such conditions as the Secretary of the Interior and, in the case of national forest lands, the Secretary of Agriculture find appropriate to safeguard the area in the event it is subsequently included in the system. Notwithstanding the foregoing provisions of this subsection or any other provision of this Act, all public lands which constitute the bed or bank, or are within an area extending two miles from the bank of the river channel on both sides of the river segments referred to in paragraphs (77) through (88) of section 5(a), are hereby withdrawn, subject to valid existing rights, from all forms of appropriation under the mining laws and from operation of the mineral leasing laws including, in both cases, amendments thereto, during the periods specified in section 7(b) of this Act.

SECTION 10.

(a) Each component of the national wild and scenic rivers system shall be administered in such manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration primary emphasis shall be given to protecting its esthetic, scenic, historic, archaeologic, and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development, based on the special attributes of the area.

(b) Any portion of a component of the national wild and scenic rivers system that is within the national wilderness preservation system, as established by or pursuant to the Act of September 3, 1964 (78 Stat. 890; 16 U.S.C., ch. 23), shall be subject to the provisions of both the Wilderness Act and this Act with respect to preservation of such river and its immediate environment, and in case of conflict between the provisions of these Acts the more restrictive provisions shall apply.

(c) Any component of the national wild and scenic rivers system that is administered by the Secretary of the Interior through the National Park Service shall become a part of the national park system, and any such component that is administered by the Secretary through the Fish and Wildlife Service shall become a part of the national wildlife refuge system. The lands involved shall be subject to the provisions of this Act and the Acts under which the national park system or national wildlife refuge system, as the case may be, is administered, and in case of conflict between the provisions of these Acts, the more restrictive provisions shall apply. The Secretary of the Interior, in his administration of any component of the national wild and scenic rivers system, may utilize such general statutory authorities relating to areas of the national park system and such general statutory authorities otherwise available to him for recreation and preservation purposes and for the conservation and management of natural resources as he deems appropriate to carry out the purposes of this Act.

(d) The Secretary of Agriculture, in his administration of any component of the national wild and scenic rivers system area, may utilize the general statutory authorities relating to the national forests in such manner as he deems appropriate to carry out the purposes of this Act.

(e) The Federal agency charged with the administration of any component of the national wild and scenic rivers system may enter into written cooperative agreements with the Governor of a State, the head of any State agency, or the appropriate official of a political subdivision of a State for State or local governmental participation in the administration of the component. The States and their political subdivisions shall be encouraged to cooperate in the planning and administration of components of the system which include or adjoin State- or county-owned lands.

SECTION 11.

(a) The Secretary of the Interior shall encourage and assist the states to consider, in formulating and carrying out their comprehensive statewide outdoor recreation plans and proposals for financing assistance for State and local projects submitted pursuant to the Land and Water Conservation Fund Act of 1965 (78 Stat. 897), needs and opportunities for establishing State and local wild, scenic and recreational river areas.

(b)(1) The Secretary of the Interior, the Secretary of Agriculture, or the head of any other Federal agency, shall assist, advise, and cooperate with States or their political subdivisions, landowners, private organizations, or individuals to plan, protect, and manage river resources. Such assistance, advice and cooperation may be through written agreements or otherwise. This authority applies within or outside a federally administered area and applies to rivers which are components of the National Wild and Scenic Rivers System and to other rivers. Any agreement under this subsection may include provisions for limited financial or other assistance to encourage participation in the acquisition, protection, and management of river resources.

(2) Wherever appropriate in furtherance of this Act, the Secretary of Agriculture and the Secretary of the Interior are authorized and encouraged to utilize the following:

(A) For activities on federally owned land, the Volunteers in the Parks Act of 1969 (16 U.S.C. 18gj) and the Volunteers in the Forest Act of 1972 (16 U.S.C. 558a–558d).

(B) For activities on all other lands, section 6 of the Land and Water Conservation Fund Act of 1965 (relating to the development of statewide comprehensive outdoor recreation plans).

(3) For purposes of this subsection, the appropriate Secretary or the head of any Federal agency may utilize and make available Federal facilities, equipment, tools and technical assistance to volunteers and volunteer organizations, subject to such limitations and restrictions as the appropriate Secretary or the head of any Federal agency deems necessary or desirable.

(4) No permit or other authorization provided for under provision of any other Federal law shall be conditioned on the existence of any agreement provided for in this section.

SECTION 12.

(a) The Secretary of the Interior, the Secretary of Agriculture, and the head of any other Federal department or agency having jurisdiction over any lands which include, border upon, or are adjacent to, any river included within the National Wild and Scenic Rivers System or under consideration for such inclusion, in accordance with section 2(a)(ii), 3(a), or 5(a), shall take such action respecting management policies, regulations, contracts, plans, affecting such lands, following the date of enactment of this sentence, as may be necessary to protect such rivers in accordance with the purposes of this Act. Such Secretary or other department or agency head shall, where appropriate, enter into written cooperative agreements with the appropriate State or local official for the planning, administration, and management of Federal lands which are within the boundaries of any rivers for which approval has been granted under section 2(a)(ii). Particular attention shall be given to scheduled timber harvesting, road construction, and similar activities which might be contrary to the purposes of this Act.

(b) Nothing in this section shall be construed to abrogate any existing rights, privileges, or contracts affecting Federal lands held by any private party without the consent of said party.

(c) The head of any agency administering a component of the national wild and scenic rivers system shall cooperate with the Administrator, Environmental Protection Agency and with the appropriate State water pollution control agencies for the purpose of eliminating or diminishing the pollution of waters of the river.

SECTION 13.

(a) Nothing in this Act shall affect the jurisdiction or responsibilities of the States with respect to fish and wildlife. Hunting and fishing shall be permitted on lands and waters administered as parts of the system under applicable State and Federal laws and regulations unless, in the case of hunting, those lands or waters are within a national park or monument. The administering Secretary may, however, designate zones where, and establish periods when, no hunting is permitted for reasons of public safety, administration, or public use and enjoyment and shall issue appropriate regulations after consultation with the wildlife agency of the State or States affected.

(b) The jurisdiction of the States and the United States over waters of any stream included in the national wild, scenic or recreational river area shall be determined by established principles of law. Under the provisions of this Act, any taking by the United States of a water right which is vested under either State or Federal law at the time such river is included in the national wild and scenic rivers system shall entitle the owner thereof to just compensation. Nothing in this Act shall constitute an express or implied claim or denial on the part of the Federal Government as to exemption from State water laws.

(c) Designation of any stream or portion thereof as a national wild, scenic or recreational river area shall not be construed as a reservation of the waters of such streams for purposes other than those specified in this Act, or in quantities greater than necessary to accomplish these purposes.

(d) The jurisdiction of the States over waters of any stream included in a national wild, scenic or recreational river area shall be unaffected by this Act to the extent that such jurisdiction may be exercised without impairing the purposes of this Act or its administration.

(e) Nothing contained in this Act shall be construed to alter, amend, repeal, interpret, modify, or be in conflict with any interstate compact made by any States which contain any portion of the national wild and scenic rivers system.

(f) Nothing in this Act shall affect existing rights of any State, including the right of access, with respect to the beds of navigable streams, tributaries, or rivers (or segments thereof) located in a national wild, scenic or recreational river area.

(g) The Secretary of the Interior or the Secretary of Agriculture, as the case may be, may grant easements and rights-of-way upon, over, under, across, or through any component of the national wild and scenic rivers system in accordance with the laws applicable to the national park system and the national forest system, respectively: Provided, That any conditions precedent to granting such easements and rights-of-way shall be related to the policy and purpose of this Act.

SECTION 14.

The claim and allowance of the value of an easement as a charitable contribution under section 170 of title 26, United States Code, or as a gift under section 2522 of said title shall constitute an agreement by the donor on behalf of himself, his heirs, and assigns that, if the terms of the instrument creating the easement are violated, the donee or the United States may acquire the servient estate at its fair market value as of the time the easement was donated minus the value of the easement claimed and allowed as a charitable contribution or gift.

SECTION 14A.

(a) Where appropriate in the discretion of the Secretary, he may lease federally owned land (or any interest therein) which is within the boundaries of any component of the National Wild and Scenic Rivers system and which has been acquired by the Secretary under this Act. Such lease shall be subject to such restrictive covenants as may be necessary to carry out the purposes of this Act.

(b) Any land to be leased by the Secretary under this section shall be offered first for such lease to the person who owned such land immediately before its acquisition by the United States.

SECTION 15.

[Deleted Pertains to Alaska]

SECTION 16.

As used in this Act, the term

(a) "River" means a flowing body of water or estuary or a section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills, and small lakes.

(b) "Free-flowing," as applied to any river or section of a river, means existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence, however, of low dams, diversion works, and other minor structures at the time any river is proposed for inclusion in the national wild and scenic rivers system shall not automatically bar its consideration for such inclusion: Provided, That this shall not be construed to authorize, intend, or encourage future construction of such structures within components of the national wild and scenic rivers system.

(c) "Scenic easement" means the right to control the use of land (including the air space above such land) within the authorized boundaries of a component of the wild and scenic rivers system, for the purpose of protecting the natural qualities of a designated wild, scenic or recreational river area, but such control shall not affect, without the owner's consent, any regular use exercised prior to the acquisition of the easement. For any designated wild and scenic river, the appropriate Secretary shall treat the acquisition of fee title with the reservation of regular existing uses to the owner as a scenic easement for purposes of this Act. Such an acquisition shall not constitute fee title ownership for purposes of section 6(b).

SECTION 17.

There are hereby authorized to be appropriated, including such sums as have heretofore been appropriated, the following amounts for land acquisition for each of the rivers described in section 3(a) of this Act:

- Clearwater, Middle Fork, Idaho, $2,909,800;
- Eleven Point, Missouri, $10,407,000;
- Feather, Middle Fork, California, $3,935,700;
- Rio Grande, New Mexico, $253,000;
- Rogue, Oregon, $15,147,000
- St. Croix, Minnesota and Wisconsin, $21,769,000;
- Salmon, Middle Fork Idaho, $1,837,000; and
- Wolf Wisconsin, $142,150.

Appendix B: Inventory of Administrative Commitments

Name	Agreement Type	Start Date	Expiration Date	Stakeholders	Purpose
Upper St. Croix Management Commission	Policy resolution	Oct 20, 1993	Indefinite	MN DNR, WI DNR, NPS, Xcel Energy	Established commission and defines its objectives including providing a forum for discussion of mutual problems, activities, and programs on the upper St. Croix and Namekagon. (Note: has not met for several years.)
Lower St. Croix Management Commission (LSCMC)	Cooperative agreement	Aug 6, 1973	Until termination by mutual consent	MN DNR, WI DNR, NPS	Established commission and defines its objectives including providing a forum for discussion of mutual problems, activities, and programs on the lower St. Croix.
Lower St. Croix Partnership Team	Established by cooperative management plan	Oct 11, 2001	Indefinite	Membership by LSCMC invitation; representatives of local units of government	Team serves an advisory role to the LSCMC, particularly regarding state land use rules, state water surface rules. Conducts post-decision review of local land use actions for consistency with the cooperative management plan.
St. Croix Interagency Basin Planning Team	Cooperative agreement	1994	Indefinite	Consists of federal, state, and local units of government and nonprofits	Founded the Team and defines its purpose: to work cooperatively to protect and enhance water quality in the St. Croix Basin.
Mussel Coordination Team: Upper Mississippi River and Tributaries (MCT)	Partnering agreement	Apr 26, 2002	Indefinite	NPS, USFWS, USGS, USACE, USCG, IL DNR, IA DNR, MN DNR WI DNR, SCWRS	Established the MCT and defines its purpose: to work jointly to conserve native mussels and control nonindigenous mussels.
Fisheries Management, St. Croix National Scenic Riverway	Memorandum of understanding	May 22, 1998	Until termination by any party providing 30-day notice	NPS, MN DNR, WI DNR	Established mutual understanding that the parties would cooperate and coordinate in the management, protection, and study of fisheries and aquatic resources of the Riverway.
St. Croix Falls Hydroelectric Project	Memorandum of understanding	Apr 13, 2006		WI DNR, Xcel Energy	Established a voluntary agreement that Xcel Energy would normally operate the project as run-of-the-river for the protection of aquatic resources of the St. Croix River.

Name	Agreement Type	Start Date	Expiration Date	Stakeholders	Purpose
St. Croix River Association (SCRA)	Friends group agreement	May 4, 2011	Dec 31, 2017	NPS and SCRA	To provide the legal and policy framework for the work done by the Riverway and its friends group, the St. Croix River Association, and to encourage innovation and creativity to meet mutual goals.
Namekagon River Partnership (NRP)	General agreement	June 16, 2013	June 16, 2018	NPS and NRP	To guide the relationship between the Riverway and the Namekagon River Partnership as it seeks to reach its mission of supporting, promoting, and providing activities that enhance stewardship, awareness, and enjoyment of the Namekagon River.
St. Croix Valley Foundation (Foundation)	Fundraising agreement	Jan 30, 2008	Dec 31, 2016	NPS and the Foundation	To establish a basis for donation assistance and philanthropic services benefitting the Riverway.
Northwest Passage	General agreement	Nov 15, 2012	Nov 15, 2017	NPS and Northwest Passage	To provide guidelines for the "In a New Light" partnership between the Riverway and Northwest Passage and to establish a framework for use of the historic Schaefer Cabin.
Cable Natural History Museum	Memorandum of understanding	Sept 7, 2011	Sept 7, 2016	NPS and Cable Natural History Museum	To define guiding principles and goals related to partnering to deliver interpretive and educational programs about the Namekagon River.
Shared terrestrial ecologist position	Memorandum of understanding	June 20, 2014	June 20, 2019	Voyageurs National Park fire program and St. Croix National Scenic Riverway	Established the terms and conditions under which the two parks would share a terrestrial ecologist position.
Multiple (varies by year and funded projects)	Cooperative agreements				For federal financial assistance to projects with a public benefit that extends beyond the National Park Service and in which the National Park Service will be substantially involved.

Appendix C: Wild and Scenic River Values

Wild and Scenic River Classifications

- The Upper St. Croix and Namekagon are classified as scenic. The upper 10 miles of the Lower St. Croix are classified as scenic; the lower 42 miles of the Lower St. Croix are classified as recreational.
- Under the 2(a)ii designation, Minnesota and Wisconsin have the responsibility to manage the lowest 25 miles from Taylors Falls to the confluence with the Mississippi. The National Park Service retains responsibility for section 7(a) determinations and comprehensive management planning. (State-managed portions of the river do not require foundational statements or comprehensive river management plans, but they do require development of river values statements for section 7a issues under the Wild and Scenic River Act.)
- The National Park Service manages the upper 27 miles of the Lower St. Croix and the entire 200 miles of the Upper St. Croix and the Namekagon, totaling 230 river miles.
- Several portions of the river are also classified as Outstanding Resource Waters and Exceptional Resource Waters by the states of Minnesota and Wisconsin. These classifications carry various protection standards for the river.

The Wild and Scenic Rivers Act and the St. Croix National Scenic Riverway

In 1968, Congress passed the Wild and Scenic Rivers Act (Act). The Act "declared to be the policy of the United States that certain selected rivers of the Nation, which with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations."

The National Park Service works to ensure this policy holds true by safeguarding values of the rivers in its care, their free-flowing condition, water quality, and outstandingly remarkable values (ORV), so that "each component of the national wild and scenic rivers system shall be administered in such manner as to protect and enhance the values which caused it to be included in [the] system..." in accordance with the act.

Long-recognized as an exceptional recreational river with abundant natural resources and rich culture and history, the St. Croix National Scenic Riverway was established by the act as one of the eight original components of the wild and scenic rivers system. Congress used the Wild and Scenic Rivers Act twice, in 1968 and 1972, to add portions of the St. Croix and Namekagon Rivers to the system in Minnesota and Wisconsin. Additionally, in 1972, the Secretary of the Interior designated the lower 25 miles of the St. Croix River as a state-administered component under section 2(a)ii of the act at the request of the governors of Minnesota and Wisconsin.

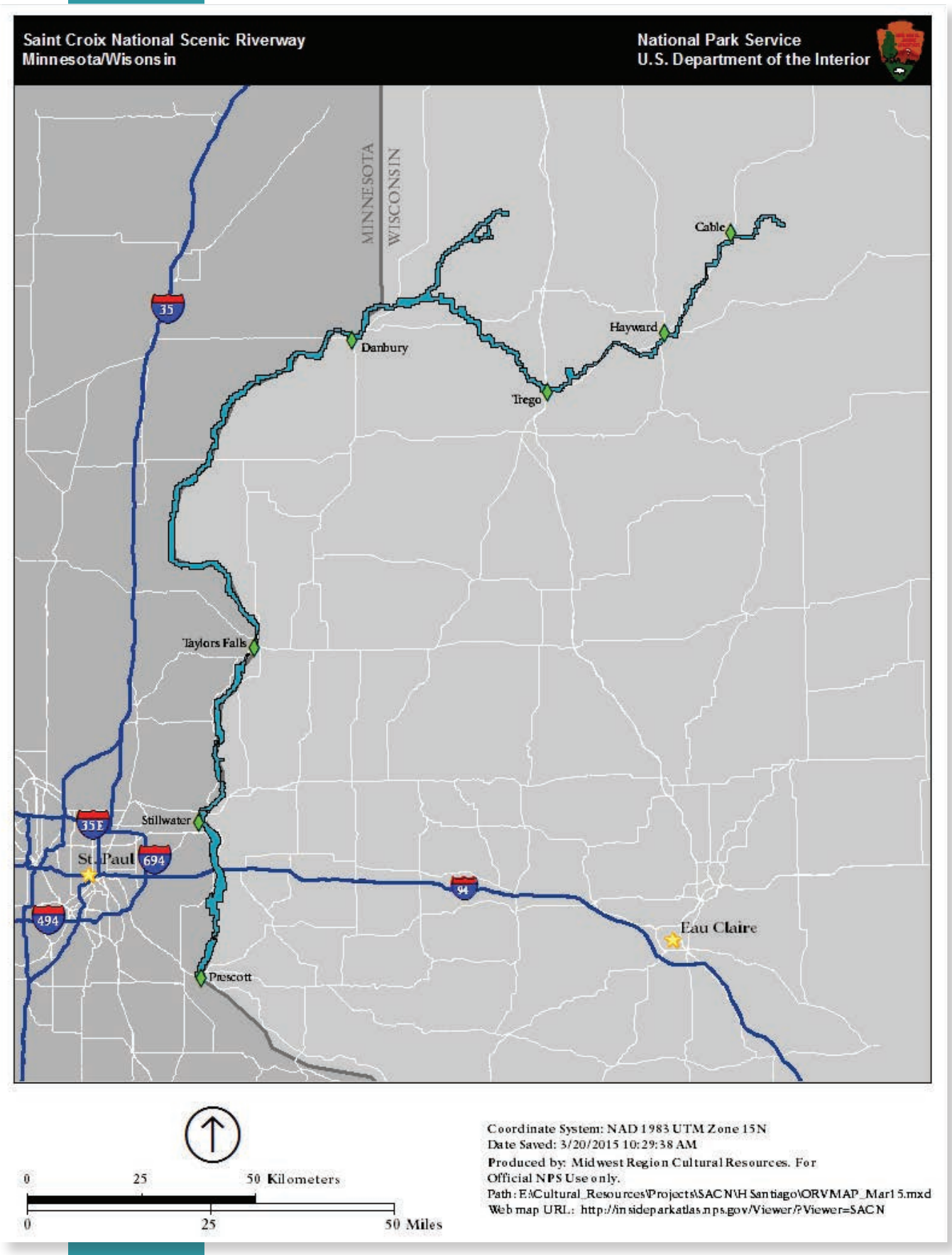
The designations were as follows.

- 1968 Original Designation of the Upper Riverway: Upper St. Croix River and Namekagon – "The segment between the dam near Taylors Falls, Minnesota, and the dam near Gordon, Wisconsin, and its tributary, the Namekagon, from Lake Namekagon downstream to its confluence with the Saint Croix"
- 1972 Congressional Designation of the Lower Riverway: Lower St. Croix River – "The segment between the dam near Taylors Falls and its confluence with the Mississippi River: Provided (i) That the upper twenty-seven miles of this river segment shall be administered by the Secretary of the Interior; and (ii) That the lower twenty-five miles shall be designated by the Secretary upon his approval of an application for such designation made by the Governors of the States of Minnesota and Wisconsin..."
- 1976 Secretarial Designation of the Lower Riverway as provided for in the previous designation.

Classified as wild, scenic, or recreational according to their level of development, rivers are managed to protect and enhance their condition at the time of designation, regardless of classification. The three classifications are defined as follows:

- "Wild" river areas – Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive, and waters unpolluted. These represent vestiges of primitive America.
- "Scenic" river areas – Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive, and shorelines largely undeveloped, but accessible in places by roads.
- "Recreational" river areas – Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some shoreline development, and that may have undergone some impoundment or diversion in the past.

The Riverway encompasses 255 river miles and includes 225.5 river miles classified as scenic and 29.5 river miles classified as recreational. The lower Riverway includes the last 25 miles of the St. Croix, which were added to the system as a state-administered component. A cooperative management plan between the National Park Service and the states of Minnesota and Wisconsin is in place to promote consistent management of the Riverway throughout its lower reaches.


Saint Croix National Scenic Riverway
Minnesota/Wisconsin
National Park Service
U.S. Department of the Interior
MINNESOTA
WISCONSIN
Cable
Hayward
Danbury
Trego
35
Taylors Falls
35E
Stillwater
St. Paul
694
494
94
Eau Claire
Prescott
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25
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Coordinate System: NAD 1983 UTM Zone 15N
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Web map URL: http://insideparkatlas.nps.gov/Viewer/?Viewer=SACN

Wild and Scenic River Values of the St. Croix National Scenic Riverway

Free-flowing character, water quality, and outstandingly remarkable values (ORV), are the characteristics or values for which the Riverway was designated and the foundation of wild and scenic river planning and management. To be eligible for addition into the wild and scenic rivers system, a river must be free-flowing and have at least one ORV. Additionally, good water quality is important, as a river with poor or declining water quality may not be suitable for designation. Together these values comprise the three critical elements that distinguish these rivers as remarkable and special. These scenic river values must be clearly described in order to facilitate their protection for future generations.

The Interagency Wild and Scenic Rivers Coordinating Council (IWSRCC) has issued guidelines for determining ORVs. To be outstandingly remarkable, values must be:

- River related or dependent. This means that values must:
    1. "Be located in the river or on its immediate shorelands (generally within one-quarter mile on either side of the river, but not restricted to that distance);
    2. Contribute substantially to the functioning of the river ecosystem; and/or
    3. Owe their location or existence to the presence of the river."
- Rare, unique, or exemplary at a comparative regional or national scale. This means that "such a value would be one that is a conspicuous example from among a number of similar values that are themselves uncommon or extraordinary." (Diedric and Thomas, "The Wild & Scenic River Study Process," 1999; http://www.rivers.gov/documents/study-process.pdf)

Based on these criteria and after a careful analysis of the designated reaches of the Riverway, the National Park Service has affirmed that several ORVs are present in the Riverway. The analysis concluded that the designated segments of the St. Croix and Namekagon Rivers contain aquatic, cultural, recreational, riparian, scenic–aesthetic, and geologic values. Each river value is articulated in this document to create narratives that capture the overall and combined values of the river system, as protected under the act.

The evaluation process was used to further determine in which river segments each ORV exists. The results of this evaluation were used to develop segment-specific ORV statements to provide more specific evidence and support for their extent throughout the Riverway. These segment-specific narratives provide a higher level of detail for the ORVs that are present in each designated segment.

Eleven river segments were adopted for ORV analysis along 255 river miles. The segments correspond with the existing administrative segments established by the park and include all designated reaches, including the state-administered reach. Segments 1 to 3 are within the Namekagon River, 4 to 7 encompass the Upper St. Croix, and segments 8 to 11 are within the Lower St. Croix designation.

The segments are defined as follows:

Segment 1: Namekagon River, Cable (Namekagon Dam) to Hayward (33 river miles)
Segment 2: Namekagon River, Hayward to Trego (29 river miles)
Segment 3: Namekagon River: Trego to confluence with St. Croix River (37 river miles)
Segment 4: St. Croix River, Gordon Dam to Thayers Landing (37 river miles)
Segment 5: St. Croix River, Thayers Landing to Norway Point Landing (14 river miles)
Segment 6: St. Croix River, Norway Point Landing to Highway 70 Bridge (14 river miles)
Segment 7: St. Croix River, Highway 70 Bridge to St. Croix Falls (36 river miles)
Segment 8: St. Croix River, St. Croix Falls to Osceola Landing (8 river miles)
Segment 9: St. Croix River, Osceola to Marine on St. Croix (10 river miles)
Segment 10: St. Croix River, Marine on St. Croix to north Stillwater (11 river miles)
Segment 11: St. Croix River, Stillwater to confluence with Mississippi (state-administered zone) (25 river miles)

River Segment	ORV Category					
	Aquatic	Cultural	Recreation	Riparian	Scenic–Aesthetic	Geology
Namekagon River **Cable to Hayward**	•	•	•		•	
Namekagon River **Hayward to Trego**	•	•	•		•	
Namekagon River **Trego to St. Croix River**	•	•	•		•	
Upper St. Croix River **Gordon to Thayers Landing**	•	•	•		•	
Upper St. Croix River **Thayers Landing to Norway Point Landing**	•	•	•	•	•	
Upper St. Croix River **Norway Point Landing to Highway 70 Bridge**	•	•	•	•	•	
Upper St. Croix River **Highway 70 Bridge to St. Croix Falls**	•	•	•	•	•	
Lower St. Croix River **St. Croix Falls to Osceola**	•	•	•	•	•	•
Lower St. Croix River **Osceola to Marine**	•	•	•	•	•	
Lower St. Croix River **Marine to North Stillwater**	•	•	•	•		
Lower St. Croix River (state-administered) **Stillwater to Mississippi River**	•	•	•		•	

Aquatic ORV

The St. Croix-Namekagon river system provides one of the most extensive and exemplary aquatic species assemblages within the Upper Mississippi River basin and contains healthy naturally reproducing populations of 41 native freshwater mussels and 100 native fish species.

The St. Croix-Namekagon river system contributes significantly to the freshwater biodiversity of the planet and contains 5 federally listed mussel species: higgins eye mussel (*Lampsilis higginsii*), winged mapleleaf (*Quadrula fragosa*), spectaclecase (*Cumberlandia monodonta*), sheepnose (*Plethobasus cyphyus*), snuffbox (*Epioblasma triquetra*) and 17 state-listed mussel species, including pistolgrip (*Tritogonia verrucosa*), ebonyshell (*Fusconaia ebena*), and rock pocketbook (*Arcidens confragosus*). In addition, 2 invasive species: zebra mussel (*Dreissena polymorpha*) and quagga mussel (*Dreissena rostriformis bugensis*) are either rare or limited to the lacustrine, lake-like, reaches. The mussels of the Riverway play an important role in filtering water and cycling nutrients and contribute to the relatively unimpacted water quality of the St. Croix and Namekagon rivers.

The waters of the Riverway are classified as Outstanding Resource Waters by Minnesota and Wisconsin and a portion of the upper St. Croix is near U.S. Environmental Protection Agency reference conditions. Exceptional water quality and largely free-flowing conditions provide unique habitat conditions, including stable substrates for mussels and excellent connectivity between upstream and downstream reaches and tributaries that benefits fish species.

The river system also transitions from a cold water river to a warm water river, ending in a glacially formed riverine lake before flowing into the Mississippi River. Fish and mussel communities along this gradient provide a textbook example of how assemblages change from headwater streams to large rivers. Ample spawning and rearing areas connect abundant adult habitat for 19 state-listed fish species, including lake sturgeon, crystal darters, and golden redhorse.

The St. Croix-Namekagon river system contains outstanding invertebrate communities and is home to populations of undescribed species of the gilt darter. The rivers provide world class fishing for smallmouth bass, and trophy-sized sport fish including walleye, sauger, muskellunge, and channel catfish. Species of redhorse are found in larger numbers and sizes than in other river systems in Minnesota and Wisconsin.

All of these factors contribute to the national and regional significance of the St. Croix-Namekagon river system and the Riverway remains one of the most biologically diverse aquatic systems in the Upper Mississippi River basin.

Cultural ORV

The continuum of human occupation along the St. Croix and Namekagon Rivers encompasses diverse cultures and uses. People have lived along the rivers for at least 12,000 years, since the final retreat of the glaciers at the end of the most recent ice age, and have continually taken advantage of the abundant natural resources. Cultural themes within the Riverway include American Indian heritage, fur trade, logging, and recreation, and conservation.

As a connection between the Mississippi River and Lake Superior, these rivers served as an American Indian trade route and a corridor with a wealth of natural resources. Mound sites, campsites, tool-making sites, quarries, wild rice processing areas, rock art, and village sites offer evidence of the seasonal and complex nature of life along the rivers prior to European contact. Some areas remain important cultural sites to tribes for religious and traditional activities. Wild rice and sturgeon are resources of particular importance.

Beginning in the late 1600s, Europeans came to the area to exploit the fur resources. European fur traders traveled the rivers to trade, primarily with the Dakota and Ojibwe. Evidence of these interactions includes fur posts, portages, and campsites.

With the 1837 treaty that opened the area to settlement by European Americans and the decline of the fur trade, logging became the primary economic driver. Because of the extensive pine forests in this large watershed, logging occurred for a period of 75 years, longer than any other area in the region. The St. Croix Triangle, a pinelands area between the Mississippi and St. Croix Rivers that was opened to commercial lumbering after the treaty, was important to the development of Minnesota and supplied lumber to build the Midwest. The remains of logging camps, dams, other water control structures, saw mills, boom sites, and river towns help tell the story of this era.

People have recreated on the St. Croix and Namekagon Rivers since the late 1800s. Transportation improvements, including enhancements to river navigation, railroads, and roads, were essential to the continued growth and expansion of the settlement of the river valley. Numerous visitors arrived by railroad and steamboat. With the invention of automobiles and accompanying roads, recreational use exploded. Recreational sites include cabins, houses, state parks, scenic overlooks, landings, ferries, and bridges.

The history of conservation and resource protection along the St. Croix and Namekagon Rivers dates back to the creation of state parks in the 1890s to preserve recreational access and scenic beauty. A lawsuit in 1954 to prevent a hydropower dam from being added to the Namekagon is another example of continued river advocacy that ultimately lead to the designation of the Riverway as a national wild and scenic river in 1968, 1972, and 1976. Designation finalized the shift from the harvest, exploitation, and manipulation of river resources to the appreciation of the scenic beauty, wildlife habitat, and a wide range of recreational opportunities. With designation, additional court decisions have set important precedents about implementation of the Wild and Scenic Rivers Act. The Riverway continues to make history today.

Recreation ORV

From its headwaters to its confluence with the Mississippi, the St. Croix National Scenic Riverway offers a diverse continuum of high quality, multiseason recreational experiences within a short drive of a large metropolitan area. Riverway users can easily find opportunities that range from paddling in peace and solitude to outdoor recreational activities with increased social interaction.

High water quality enhances these experiences and regionally rare trout and smallmouth bass fisheries draw anglers from far beyond the St. Croix River Valley. The Riverway's recreational values were cherished long before passage of the Wild and Scenic Rivers Act, resulting in efforts to balance commercial uses of the river for logging and hydropower with the need to protect public access and riverfront lands through the creation of state parks and forests that allow for the enjoyment of river-related recreation.

The Riverway provides an escape from modern civilization, increasingly as one travels to the upstream reaches. From day trips to multiday adventures, users can engage in recreational experiences such as paddling, boating, bird-watching, and primitive camping in a big river system within a relatively unimpaired ecological setting. Downriver, these and other recreational activities can be enjoyed. These activities include visits to view, hike, and climb within the Dalles in the first interstate park in the nation; paddleboat outings; picnicking in view of beautiful sandstone bluffs at the Osceola day use area; camping on islands; and boating and waterskiing on the lower river.

Throughout the Riverway, vestiges of the area's past remind modern-day visitors of the sustained use of the rivers by its original inhabitants, fur traders, early European American settlers, the logging industry, and vacationers. Recreation is an ORV on the Riverway because of its diverse, high quality recreational opportunities, history, and pristine setting in proximity to millions of residents and visitors.

Riparian ORV

Unlike many rivers that have been manipulated to serve the needs of industry and commerce, the St. Croix and Namekagon remain connected to their floodplain. As a result, both rivers have high quality riparian zones, with those along the St. Croix River being generally larger in size due to its larger floodplain. Riparian zones are the interface between the land and the river and are important ecologically for their unique habitats and high biodiversity. Many of the seeps and springs that feed the St. Croix and Namekagon rivers have their own riparian zones and have a multiplying effect on biodiversity.

The riparian zone along the Riverway includes wetlands, floodplain or bottomland forests, and seepage environments formed by surface expressions of groundwater. These distinct areas all contribute substantially to the river ecosystem by lending stability to the hydrological environment and providing habitat for native species, some of which are rare.

While the entire riparian zone along the Riverway plays an important ecological function, certain natural communities at specific locations are considered rare, unique, or exemplary in a regional or national context based upon the State of Wisconsin's rankings of 1) critically imperiled, 2) imperiled, or 3) rare. Minnesota has similar rankings. In most cases, the significance of these natural communities has been recognized with designation as state natural areas. In Wisconsin and in Minnesota, state natural areas protect outstanding examples of the native landscape of natural communities, preserve biological diversity, and provide some of the last refuges for rare plants and animals. This is evidenced by NPS inventory and monitoring efforts that show records of rare plants and birds in or near these rare riparian communities.

Rare plants that occur in riparian communities at the Riverway include bog bluegrass (*Poa paludigena*), drooping sedge (*Carex prasina*), and false mermaid weed (*Floerkea proserpinacoides*). Bog bluegrass is listed by the State of Wisconsin as special concern and by the State of Minnesota as threatened. It is found in wet, mossy woods, tamarack bogs, sedge meadows, and alder thickets associated with cold water seepages. Drooping sedge is listed by Wisconsin as threatened and not listed in Minnesota. It occurs in areas with a prominent ground water discharge and extensive tree canopy, most commonly in seepages and beds and banks of small creeks in mesic to dry-mesic forests. False mermaid weed is not listed by the State of Wisconsin but is listed by Minnesota as threatened. It inhabits open or forested floodplains, riverside seeps, and limestone cliffs.

Rare birds that occur in riparian communities at the Riverway include golden-winged warbler (*Vermivora chrysoptera*), red shouldered hawks (*Buteo lineatus*), cerulean warbler (*Dendroica cerulea*), prothonotary warbler (*Protonotaria citrea*), Louisiana waterthrush (*Seiurus motacilla*), and trumpeter swans (*Cygnus buccinators*). Habitat for birds at the Riverway is important enough that the National Audubon Society has identified four "state level" Important Bird Areas. To qualify as an Important Bird Area, a site must support a) a species of conservation concern (e.g., endangered or threatened species), b) species that are vulnerable because they are not widely distributed, c) species that are vulnerable because their populations are concentrated in one general habitat type, and d) species that are vulnerable because they congregate together for breeding, feeding, or migration.

- Golden-winged warbler is currently proposed for federal listing as a threatened species. They have an interesting life-history in that they require early successional habitats for nesting, but as soon as the chicks have fledged, they move to mature forest habitats to continue raising their young. The early successional habitat needed for nesting can be either upland or wetland habitat of shrubby, tangled thickets (Golden-winged Warbler Conservation Initiative 2014).
- Red shouldered hawks are currently listed as threatened by the State of Wisconsin and of special concern by the State of Minnesota. They depend on wetlands and other shallow water habitats for prey and on large trees for nesting. Their preferred breeding habitat is characterized by large tracts of contiguous, mature forests with interspersed open wetlands (Red-shoulder Hawk Species Guidance 2013).
- Cerulean warbler is listed as threatened by the State of Wisconsin and of special concern by the State of Minnesota. It prefers lowland deciduous forests dominated by mature stands of American elm, cottonwood, and green ash and large upland blocks of mature dry-mesic to mesic forests.
- Prothonotary warbler is listed as rare by the State of Wisconsin. They are not listed by the State of Minnesota. They nest in moist bottomland forests that are seasonally or permanently flooded, typically in truncated snags (Prothonotary Warbler Species Guidance 2013). At the Riverway, they nest in floodplain forest.
- Louisiana waterthrush is listed as rare by the State of Wisconsin and of special concern by the State of Minnesota. It requires mature forest in riparian areas and is most frequently found along rocky, swiftly flowing streams in forested, steep-sided valleys (MnDNR 2014).
- Trumpeter swans are listed as rare by the State of Wisconsin and of special concern by the State of Minnesota. The ideal habitat for trumpeters include shallow wetlands, one to three feet deep, in isolated areas away from human disturbance with a diverse mix of emergent vegetation and open water that support a rich variety of submergent plants. At the Riverway, they nest in backwaters of the St. Croix. They winter in ice-free portions of the St. Croix.

Scenic–Aesthetic ORV

The aesthetic features of the St. Croix and Namekagon Rivers offer a unique sense of time and place with authentic opportunities to engage all five senses, including the touch of cool water, the smell of campfires and of pine trees in the sun, the sound of birdsong and rapids, and the sight of wildlife. A dynamic range of colors, textures, landforms, and historic and cultural sights provides visitors with a sense of anticipation as they round the bend in a canoe or kayak or as they drive through the valley. The aesthetic experience along the entire Riverway is influenced by all of the senses: sight, sound, smell, taste, and touch. The continuity of the visual and auditory experience could be expressed as the difference between a single snapshot and a movie of the journey along the river. These aesthetic values are among the most vulnerable of all Riverway resources to intrusions from outside the Riverway boundaries.

Nationally known for their scenic and aesthetic beauty, the St. Croix and Namekagon Rivers offer a wide variety of visual experiences. Scenic views from the river include adjacent landscape features such as pine barren forests, wild rice waving in the breeze, the spectacular basalt outcroppings of the Dalles, and the ochre of sandstone bluffs. The view of the river, from landings, bluffs, and the numerous state parks and forests and the scenic byway within the river corridor, are also regionally outstanding.

The range of colors and textures that can be experienced along the Riverway includes brown-tinted tannic waters along both rivers, contrasting coniferous and hardwood forests, the bright fall colors of deciduous trees, the black, white, and grays of the landscape covered in snow and ice during the winter, and the open expanses of Lake St. Croix, framed by historic river towns and soaring bluffs. This aesthetic experience is enhanced by the sensation of immersion in the riverscape, especially during multiday paddling trips, with uninterrupted vistas of green vegetation lining the banks and night skies unimpaired by artificial light at the most remote locations. Fresh air filled with the scent of nature and the largely natural soundscape provide an escape from civilization and complement the visual character of the area.

These scenic and aesthetic attributes are closely tied to the experiences for both local citizens and visitors along rivers. These features are especially unique and impressive as they are viewed from the rivers. The Riverway has outstandingly remarkable scenic-aesthetic values.

Geology ORV

The geologic story of St. Croix National Scenic Riverway is rich. It includes the Midcontinent Rift with exposed igneous rock, sedimentary bedrock, glacial features, and fluvial landforms.

The Midcontinent Rift occurred about one billion years ago when the North American continent began to split apart. The rift failed but not before lava flowed from it and cooled, forming basalt. Sedimentary rock, including Cambrian sandstones and Ordovician carbonate, were laid down when the area was covered by a vast inland sea 500 million years ago. During the glacial retreat about 10,000 years ago, a series of proglacial lakes formed at the retreating front of the glaciers; one of them was Glacial Lake Duluth. The torrential outfall of Glacial Lake Duluth exposed the basalt formed by the Midcontinent Rift, forming the Dalles of the St. Croix, a striking 100-foot gorge on the St. Croix River. It is a globally rare geologic feature and is the southernmost example of basalt exposed by a river on the continent. Glacial activity also formed potholes within the basalt of the Dalles. In fact, the Dalles contains the greatest concentration of glacial potholes of any place in the world, including the world's deepest example of this glacial phenomenon. At the Dalles, all of the following can be seen together: the ancient history of basalt lava flows from the inner earth, sedimentary Tunnel City sandstone, and glacial potholes, the result of more recent ice age processes. The basalt cliffs of the Dalles and the associated glacial potholes are exemplary in a regional and even worldwide context. Therefore, geology is an outstandingly remarkable value in that area.

Other glacial features along the Riverway include deposits such as moraines, glacial outwash, till, and lake clays.

These glacial deposits and the sandstone bluffs contribute to the conspicuous geology of the Riverway and its scenic value. However, these features can be found elsewhere in Wisconsin and Minnesota, including along the Mississippi River, in the Baraboo Hills, and along the Ice Age National Scenic Trail. Therefore, segments of river where these geologic features alone are present are not considered to have outstandingly remarkable geologic values because they are not rare, unique, or exemplary in a regional context.

Free-Flowing Condition

Section 16(b) of the Wild and Scenic Rivers Act (the Act) defines the free-flowing condition of a river as follows:

> *"... Free-flowing, as applied to any river or section of a river means existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modifications of the waterway."*

The longest scenic riverway east of the Mississippi River, the St. Croix and Namekagon Rivers flow through Bayfield, Sawyer, Washburn, Douglas, Burnett, Polk, St. Croix, and Pierce counties in Wisconsin and Pine, Chisago, and Washington counties in Minnesota. Although influenced by hydroelectric dams and many existing instream structures, remnant logging embankments, and legacy wing walls that once supported more extensive navigation in the river, the St. Croix remains one of the last undeveloped, large floodplain rivers in the upper Mississippi River system. From the outlet of Lake Namekagon to its confluence with the Mississippi, the Riverway flows freely throughout most of its reaches.

Stream flow in the St. Croix River has been recorded since 1902. According to records from the U.S. Geological Survey gaging stations, the annual discharge from the St. Croix is relatively stable. Seasonally, the highest annual flow occurs in the spring from melting snow, rain on melting snow, or heavy rains on saturated soils. However, low flow and high flow events can occur in any month of the year based on antecedent precipitation, soil moisture, frost depth, and other factors. Stream flow on the Namekgon River has been recorded only since 1996.

The effect of climate change on the Riverway is not fully understood, but may include higher intensity storms with subsequent high water events, longer periods between precipitation with subsequent low water events, and wide fluctuations in temperature with subsequent impacts on aquatic life.

The operation of dams primarily under run-of-the river strategies currently protects the instream flow needs of the rivers. There are no known large-scale water withdrawals from the river, except for the Allen S. King Power Plant in the state-administered zone near Stillwater, which uses water from Lake St. Croix for its cooling towers. It is possible that flow conditions may change as entities look to the abundant water resources of the St. Croix to resolve their water shortage issues, but currently levels are supportive of river values.

Water Quality

The protection of the water quality in designated rivers is explicitly directed as part of the congressional declaration of policy under section 1(b) of the Act, which states:

> *"The Congress declares that the established national policy of dam and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes."*

Additional management policies under section 12(c) of the Act reinforce the role of the Environmental Protection Agency (EPA) and appropriate state water pollution control agencies in enforcing the Clean Water Act and related water quality standards. Federal agencies that administer the wild and scenic rivers system work in cooperation with the Environmental Protection Agency and state agencies to address water quality issues that affect rivers as directed by the act.

Water quality on the Riverway is an important river value that has been recognized by both the State of Wisconsin and the State of Minnesota. In Wisconsin, the river has been designated an Outstanding Resource Water from the outlet of the Upper St. Croix Lake to the inlet of the St. Croix flowage. In Minnesota, the entire river is considered an Outstanding Resource Water. The results of long-term monitoring on the St. Croix also affirm its remarkably high water quality as sites in the upper St. Croix remain relatively unimpacted and near EPA reference conditions.

Both the St. Croix and the Namekagon Rivers have long been noted for their exceptional water quality, especially considering their proximity to a major metropolitan area. High water quality and opportunities for fishing, swimming, boating, and other recreational pursuits were an important factor in the Riverway being designated under the Act. The exceptional water quality also supports a diversity of aquatic biota, including the native mussel populations, which are of particular importance.

While these endorsements explain why the St. Croix and Namekagon Rivers are considered two of the cleanest rivers in the Midwest, challenges do exist. Chemicals and sediment inputs are of emerging concern. Many road and pipeline crossings pose a threat from spills. Entire portions of the St. Croix River have been placed on impaired waters lists in both Minnesota and Wisconsin for various reasons. The State of Minnesota declared the entire St. Croix impaired for mercury and the State of Wisconsin declared the St. Croix below St. Croix Falls to be impaired for polychlorinated biphenyls. Both states declared Lake St. Croix impaired for excess nutrients (phosphorus) in 2008 and placed it on their respective 303(d) lists. This portion of the river has been the subject of an interstate total maximum daily load study for excess phosphorus and is currently the subject of an implementation plan to achieve that total maximum daily load.

The upper river, from Namekagon Dam and Gordon Dam to St. Croix Falls, provides the opportunity to engage in multiday paddling trips with abundant, relatively secluded campsites (segments 1–7). The combination of Class I paddling with approximately 150 primitive shoreline campsites offers the most iconic of the Riverway's experiences. These opportunities range from peace and solitude to dynamic outdoor sport and social interaction.

Namekagon River						
River Segment	ORV Category					
	Aquatic	Cultural	Recreation	Riparian	Scenic–Aesthetic	Geology
Namekagon River **Cable to Hayward**	•	•	•		•	
Namekagon River **Hayward to Trego**	•	•	•		•	
Namekagon River **Trego to Confluence with St. Croix Riverr**	•	•	•		•	

Aquatic

Segment 1: Namekagon River, Cable (Namekagon Dam) to Hayward (33 river miles) – This segment contains a variety of thermal habitats, free-flowing conditions, high connectivity, excellent water quality, and a natural sediment regime. These habitat conditions are conducive for the occasional brook trout and three state-listed mussel species. There is very little in the way of fish records, but habitat is suitable for 10 common fish species. Natural fish reproduction occurs in Cap Creek and Big Brook. There are only a few small mussel beds (light density) but fish abundance and richness is good. Based on the quality of the habitat, fish and mussel abundance, natural reproduction, and presence of species of concern, this segment of river does have outstandingly remarkable aquatic values.

Segment 2: Namekagon River, Hayward to Trego (29 river miles) – This segment contains a variety of thermal habitats, free-flowing conditions, high connectivity, excellent water quality and a natural sediment regime. These habitat conditions probably support some state-listed mussel species along with a unique undescribed species of gilt darter and the state-listed least darter and lake sturgeon. Natural reproduction is occurring for gilt darter, lake sturgeon, and redhorse. Fish abundance is high and there are scattered but naturally reproducing mussel populations. Based on the quality of the habitat, fish and mussel abundance, natural reproduction, and presence of species of concern, this segment of river does have outstandingly remarkable aquatic values.

Segment 3: Namekagon River, Trego to confluence with St. Croix River (37 river miles) – This segment contains a variety of warmwater habitats, free-flowing conditions, high connectivity, excellent water quality, and a natural sediment regime. These habitat conditions are conducive to the natural reproduction of at least five scattered mussel populations, natural reproduction for a unique undescribed species of gilt darter, lake sturgeon, and most game fishes, including trophy-sized muskellunge. The Totagatic River, a Wisconsin Wild River, is a tributary to this segment. Based on the quality of the habitat, fish and mussel abundance, natural reproduction, and presence of species of concern, this segment of river has outstandingly remarkable aquatic values.

Cultural

Segment 1: Namekagon River, Cable (Namekagon Dam) to Hayward (33 river miles) – Beginning at Namekagon Dam, where a logging camp and dam once stood, this stretch, as well as the other river segments, combine to tell the story of logging in the 19th and early 20th centuries. Rivers were "tamed" to carry the logs from the woods to sawmills. Here can be found evidence of water control features, dam sites, the large Hayward mill and smaller Radford mill, and camps. While some of the 21 archeological sites are hidden, many of the sites become visible with interpretation. When combined with the other river segments, the diversity of river-related logging sites becomes apparent and a unique opportunity to interpret logging history is revealed.

In addition to logging, American Indian heritage is also significant in this stretch. Archeological sites are present, with the most visible being mounds. The natural flowages of Pacwawong and Phipps were traditional rice beds that would have had associated villages. Here Schoolcraft recorded visiting Odabassa's village in 1831. These areas are still riced today by members of the Lac Courte Oreilles Band of Ojibwe, helping to maintain language, stories, traditions, and food.

Based on the presence of resources highlighting logging history and American Indian heritage, this segment has outstandingly remarkable cultural values.

Segment 2: Namekagon River, Hayward to Trego (29 River Miles) – Logging history continues to be revealed on this stretch of river. Stinnett and Veazie, names connected with dams, camps, and a former town, are found on this stretch. Where Stinnett dam once stood, you can still see the turbulent water from the former gate and modifications to the adjacent land. From the Trego Nature Trail, you can see where the Veazie Dam was anchored to the shore.

This segment has important American Indian heritage features. A trail marks the passage between the Namekagon and Lake Courte Oreilles that connects to the Chippewa River. This portage allowed Ojibwe people and explorers such as Jonathan Carver and Henry Schoolcraft to move between these two watersheds and provided different routes to Lake Superior. A fur trade fort was situated nearby on the Namekagon for easy access by Ojibwe traders. Sturgeon are also found in these waters. This fish has special significance to the Ojibwe people associated with the St. Croix and Namekagon Rivers and has been determined to be culturally significant. Indeed, the word Namekagon means "place of the sturgeon" in Ojibwe.

Based on the presence of resources highlighting logging history and American Indian heritage, this segment has outstandingly remarkable cultural values.

Segment 3: Namekagon River, Trego to confluence with St. Croix River (37 river miles) – The river deepens as it moves toward the St. Croix, meaning fewer modifications were needed for log drives. Still, rock dams are visible at the mouth of some tributaries and this segment continues to be a part of the exemplary network of logging history revealed along the Riverway.

The Schaefer and Lessner cabins survive as rustic log structures built after the arrival of the automobile, which provided independence to drive to individual cabins instead of having to rely on a train destined for a lodge. These buildings and their associated cultural landscapes, which are eligible for listing in the National Register of Historic Places, are an exemplary part of the Riverway's recreational heritage.

Ojibwe elders say that you used to be able to hear the arrival of spawning sturgeon in Dogtown Creek, at an area near the site of an Ojibwe village. While no longer as numerous, sturgeon continue to live here and are recognized as important to maintaining traditional Ojibwe culture. Wild rice can be found downstream of County K Landing, at a density worthwhile for human harvest. The amount of wild rice decreases as the Namekagon approaches the confluence with the St. Croix.

Based on the presence of resources highlighting logging history, recreation/conservation, and American Indian heritage, this segment has outstandingly remarkable cultural values.

Recreation

Segment 1: Namekagon River, Cable (Namekagon Dam) to Hayward (33 river miles) – Recreation in this segment affords an opportunity to experience outstanding trout fishing in a remote North Woods setting, especially during periods of higher flow. There are ample opportunities for peace and solitude from Namekagon Dam downstream to Cable wayside. Hayward Lake provides for a more social boating and fishing experience. Based on the diversity of paddling opportunities and exemplary trout fishing, this segment of river does have outstandingly remarkable recreation values.

Segment 2: Namekagon River, Hayward to Trego (29 River Miles) – This section's many landings and campsites support both day and multiday trips. Paddling is relatively easy, with a few chutes and rapids, accommodating users with a range of abilities. There is a high diversity of on-water recreation with opportunities for solitude and also opportunities for a more social experience. Based on this diversity, the quality of the recreational experience, and the regional rarity of multiday paddling trips in a North Woods setting, this segment of river does have outstandingly remarkable recreation values.

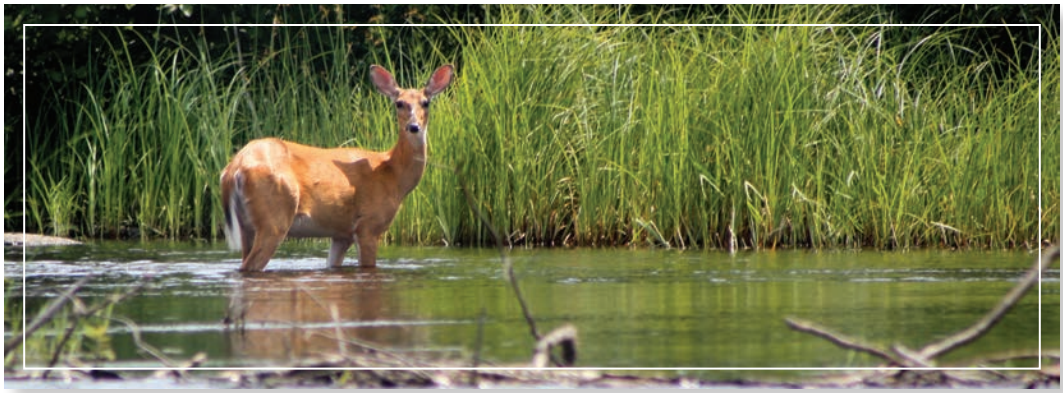
Segment 3: Namekagon River, Trego to confluence with St. Croix River (37 river miles) – Segment 3 below the Trego Dam possesses the most abundant campsites within the Riverway. The segment's lower density of landings and its meandering course make it more popular for multiday use than for day trips. Opportunities to escape civilization—to view the night sky and to enjoy the natural soundscape far from roads and the noise of developed areas, for days at a time—are outstanding. Paddling is easy with a few short riffles, suitable for all abilities, and fishing is popular. Within the segment, the opportunity for small motorboat use on Lake Trego provides additional recreational diversity. Based on the high quality of the recreational experience on day and multiday trips, this segment does have outstandingly remarkable recreation values.

Riparian

Segment 1: Namekagon River, Cable (Namekagon Dam) to Hayward (33 river miles) – The riparian zone along this stretch of river varies from wide, marshy areas to narrow, rocky, high bank areas. No rare or imperiled natural communities have been identified here to date. Nesting golden-winged warblers have been documented by NPS breeding bird monitoring efforts. While this stretch does include important riparian zone habitat, outstandingly remarkable riparian values have not been identified.

Segment 2: Namekagon River, Hayward to Trego (29 River Miles) – The riparian zone along this stretch of river varies from wide, marshy areas to narrow, high bank areas. No rare or imperiled natural communities have been identified here to date. It has not been subject to NPS breeding bird surveys. While this stretch does include important riparian zone habitat, outstandingly remarkable riparian values have not been identified.

Segment 3: Namekagon River, Trego to confluence with St. Croix River (37 river miles) – The riparian zone along this stretch of river varies from wide, marshy areas to narrow, high bank areas. No rare or imperiled natural communities have been identified here to date. Nesting golden-winged warblers have been documented by NPS breeding bird surveys. The Namekagon-Solon Springs Barrens Important Bird Area intersects with the lower Namekagon River on this segment. It provides upland nesting habitat for barrens species including sharp-tailed grouse, upland sandpiper, northern harrier, brown thrasher, and Connecticut warbler. While this stretch does include important riparian zone habitat and important upland nesting habitat, outstandingly remarkable riparian values have not been identified.



Scenic–Aesthetic

Segment 1: Namekagon River, Cable (Namekagon Dam) to Hayward (33 river miles) – The scenery along the Namekagon River in this segment is diverse in character. In some places it is sedate as it flows along marshes and scrub; in others it is a high gradient rocky stream that provides intimate views framed by hairpin turns and towering pines. Within Pacwawong and Phipps flowages, a naturally broad portion of the river was dammed during the logging era and provides a more lake-like experience. Except in the few places where roads come close to the river, signs of civilization are largely absent, replaced by the sounds of riffles flowing, turtles dropping into the water, and birdsong. These attributes combine to create an exemplary resource value, meeting ORV criteria. Based on the high quality of these attributes, this segment of river has outstandingly remarkable scenic–aesthetic values.

It is not until just upstream of the Hayward Flowage, where cabins begin to line the banks and other sites and sounds of civilization predominate, that the feeling of remoteness is lost and the scenic–aesthetic criteria are not met. Even so, maintaining the area's current condition without additional visual encumbrances is important.

Segment 2: Namekagon River, Hayward to Trego (29 River Miles) – The big bend of the Namekagon takes paddlers far from the sounds of civilization. Within this segment, the Namekagon makes wide, sweeping, visually pleasing turns. As red-breasted mergansers, kingfishers, and eagles lead the paddler downriver, canoes and kayaks are carried from side to side through numerous meanders. The continuous uninterrupted ribbon of aesthetic experience provided by this segment is regionally exemplary. Based on the combination and high quality of these attributes, this segment of river has outstandingly remarkable scenic–aesthetic values.

Segment 3: Namekagon River, Trego to confluence with St. Croix River (37 river miles) – As the Namekagon descends through the pine barrens to its confluence with the Upper St. Croix River, the corridor widens and becomes more sedate. Deciduous trees begin to dominate. Animals tend to be observed at a greater distance from the viewer. The wilderness-like quality of this segment, far from roads, creates an uninterrupted viewscape and soundscape. Meanders keep other parties out of sight, creating the impression of solitude. In this setting, time slips away. Near McDowell, the big sand hills of the pine barrens create the impression of turtle backs, contrasting with the upper section of the Namekagon. There are more sight lines through openings in scrubby vegetation. The segment is very picturesque with high sensory experiences such as night sky viewing, natural sounds, and the scent of pine needles in the sun. The multiday experience of floating through this pine barren habitat, contrasting with views of deciduous forest, is regionally unique. Based on the combination and high quality of these attributes, this segment of river has outstandingly remarkable scenic-aesthetic values.

It is only within the Trego Flowage itself, where cabins and the dam briefly change the river's scenic character, that the ORV criteria for scenery and aesthetics are not met.

Upper St. Croix River						
River Segment	ORV Category					
	Aquatic	Cultural	Recreation	Riparian	Scenic–Aesthetic	Geology
Upper St. Croix River **Gordon to Thayers Landing**	•	•	•		•	
Upper St. Croix River **Thayers Landing to Norway Point Landing**	•	•	•	•	•	
Upper St. Croix River **Norway Point Landing to Highway 70 Bridge**	•	•	•	•	•	
Upper St. Croix River **Highway 70 Bridge to St. Croix Falls**	•	•	•	•	•	

Aquatic

Segment 4: Gordon Dam to Thayers Landing (37 river miles) – This segment contains a variety of warmwater habitats, free-flowing conditions, high connectivity, excellent water quality, and a natural sediment regime. There are a number of tributaries, including the Namekagon River. These habitat conditions are conducive to support at least six state-listed mussel species and three state-listed fish species. Natural fish and mussel reproduction is occurring, including reproduction for resident lake sturgeon, river redhorse, greater redhorse, walleye, smallmouth bass, and the unique undescribed species of the gilt darter. Fish abundance is good and there are scattered small populations of mussels with light to medium densities. Based on the quality of the habitat, fish and mussel abundance, natural reproduction, and presence of species of concern, this segment of river does have outstandingly remarkable aquatic values.

Segment 5: St. Croix River, Thayers Landing to Norway Point Landing (14 river miles) – This segment contains a variety of warmwater habitats, free-flowing conditions, high connectivity, excellent water quality, and clean substrates including bedrock, and natural sediment regime. Tributaries include the Yellow River, which is a hot spot for lake sturgeon spawning. Habitats are diverse with repeating pools, riffles, and runs and some pools 10 to 20 feet deep. The segment supports at least nine state-listed mussels and four state-listed fish species. Natural reproduction is good for game and riffle fishes, with notable increases in smallmouth bass and channel catfish abundance. Mussel communities are common and diverse, with light to medium densities and good natural reproduction. The unique undescribed species of the gilt darter and resident lake sturgeon are joined by blue suckers as important fishes within this segment. The segment also functions as an exemplary area for the reproduction of four species of redhorse. Based on the quality of the habitat, fish and mussel abundance, natural reproduction, and presence of species of concern, this segment of river does have outstandingly remarkable aquatic values.

Segment 6: St. Croix River, Norway Point Landing to Highway 70 Bridge (14 river miles) – This segment contains a variety of warmwater habitats, free-flowing conditions, high connectivity, excellent water quality, and a natural sediment regime. The segment has some bedrock habitats and a number of islands. Tributaries include the Kettle and Snake rivers that support lake sturgeon. Species of concern include the rare St. Croix snaketail dragonfly, at least five state-listed fish species, and 10 mussels including the federally listed spectaclecase mussel. The habitat is also conducive to eight state-listed fish species, including the unique undescribed species of the gilt darter, resident lake sturgeon, river redhorse, and greater redhorse. Natural reproduction is good for game and riffle fish, and mussel communities are common with light to heavy densities. Together with Segment 7, this segment contains the second highest number of mayfly taxa and the highest number of unique taxa of mayflies in Wisconsin rivers. Based on the quality of the habitat, fish and mussel abundance, natural reproduction, and presence of species of concern, this segment of river does have outstandingly remarkable aquatic values.

Segment 7: St. Croix River, Highway 70 Bridge to St. Croix Falls (36 river miles) – This segment contains a variety of warmwater habitats, free-flowing and backwater conditions, high connectivity, excellent water quality, a natural sediment regime, and a number of islands. Tributaries include the Wood, Sunrise, and Trade Rivers, and Rush, Goose, and Big Rock Creeks. Species of concern include the rare St. Croix snaketail dragonfly, at least nine state-listed fish species, and 10 mussel species including the federally listed spectaclecase mussel. This segment contains one of only two records of the state-listed pallid shiner in the St. Croix River, above the St. Croix Falls dam. The nine state-listed fish include the unique undescribed species of the gilt darter, unique resident lake sturgeon, river redhorse, and greater redhorse. Natural reproduction is good for game and riffle fish, and mussel communities are common with light to heavy densities. There are possible winged mapleleaf relocation sites, which are extremely rare. Together with Segment 6, this segment contains the second highest number of mayfly taxa and the highest number of unique taxa of mayflies in Wisconsin rivers. Based on the habitat provided, fish and mussel abundance, natural reproduction, and presence of species of concern, this segment of river has outstandingly remarkable aquatic values.

Cultural

Segment 4: St. Croix River, Gordon Dam to Thayers Landing (37 river miles) – Logging history is again on display in this segment. The remains of Coppermine Dam hint at the multi-gate, rock and log structure that once held back the waters of the St. Croix. Below, at Big Fish Trap Rapids, impressive rock walls were constructed to assist the flow of logs. Above Coppermine, a railroad track once delivered logs to the river to take advantage of the free transportation provided by the current. The path of the railroad is still visible on Google Earth, but the park has not assessed the area for interpretive value.

The Gibson Cabin standing near the shore has come to represent the many cabins and people who once cherished their place along the river – a time when families spent summers away from the city, ensconced in rustic architecture. It is a unique surviving example of a more common way of life prior to designation.

American Indian heritage is also evident. Wild rice is visible along the river wherever the water slows along the shore, fed by the large rice beds upstream of Gordon Dam to the headwaters. Big Fish Trap Rapids is also recognized as a traditional fishing spot for the Ojibwe. Accounts tell of Ojibwe travelling from Lake Superior and the Yellow River to trap fish in weirs and dry them for future use.

Based on the presence of resources highlighting logging history, recreation/conservation, and American Indian heritage, this segment has outstandingly remarkable cultural values.

Segment 5: St. Croix River, Thayers Landing to Norway Point Landing (14 river miles) – Logging history is especially rich along the shores of St. Croix State Park. Here the Fleming Railroad extended to the river. When the trees were gone from this area, the track was pulled up and moved upstream to Segment 4 to continue the expansion of tree cutting. Today, the railroad bed is used as a road. A logging camp also stood here and a few water control features exist. The horrific Hinckley Fire of 1894, which burned more than 200,000 acres and claimed more than 400 lives, needed a river the size of the St. Croix to halt its spread to the east.

American Indian heritage is also evident. The mouths of the Clam and Yellow Rivers were used by the Ojibwe and earlier people as campsites. Near the mouth of the Yellow River, tribal lands of the St. Croix Chippewa Indians of Wisconsin are within the Riverway boundary. This includes a cemetery. Across the St. Croix River is an area traditionally used by the Lake Lena Band, a part of the Mille Lacs Band of Ojibwe. Here it is said that a rare appearance of the Megis shell in a small creek informed the Ojibwe that this was an area that they should settle. A cemetery remains, which has been designated a family cemetery for some members of the Lake Lena Band. The yellow bank area is reported to have been an exemplary source for clay to make pottery. Wild rice and sturgeon are both found in this area.

This area became significant for recreation and conservation when it was selected to be an NPS Recreational Demonstration Area under the Civilian Conservation Corps and the Works Progress Administration. Planning for the park area to be built on "sub marginal agricultural land" began in 1934 and the work was completed in 1942. Today it is recognized as a national historic landmark for the exemplary integrity of the approximately 160 structures and the landscape that encompassed the demonstration area, which evolved to become St. Croix State Park and has been in continuous use. It is located in both river segments 5 and 6.

Based on the presence of resources highlighting logging history, recreation/conservation, and American Indian heritage, this segment has outstandingly remarkable cultural values.

Segment 6: St. Croix River, Norway Point Landing to Highway 70 Bridge (14 river miles) – Logging camps and minor water control features are found within this segment. Combined with the other sections they would comprise an exemplary archeological district of water control features.

Sand Rock Cliffs is the most visible of the American Indian heritage sites in this segment. Here on a bluff on a side stream of the St. Croix, pre-contact and post-contact American Indians camped, made tools, and carved into the sandstone walls. Unfortunately the later carvings of others and erosion has obliterated those original carvings. Nonetheless it is an exemplary example of a preferred American Indian campsite. The site provides a lookout over a distance but is sheltered from the main branch of the St. Croix. It is also high and dry but has fresh water nearby. Wild rice and sturgeon are also found in this stretch of river.

The recreation/conservation theme is represented by the national historic landmark, the St. Croix National Recreational Demonstration Area, extending into this segment. Also contributing are the ferry sites at Norway Point and Soderbeck, evidence of the need for access by settlers and recreationists. Norway Point has been documented as the location where members of the former community of Ekdall went to swim and enjoy the river on Sunday afternoons.

Based on the presence of resources highlighting logging history, recreation/conservation, and American Indian heritage, this segment has outstandingly remarkable cultural values.

Segment 7: St. Croix River, Highway 70 Bridge to St. Croix Falls (36 river miles) – A log slide near the Wood River and Nevers Dam and its ice islands are the most significant logging features on this stretch. At the time of its construction, Nevers Dam was purported to be the largest pile-driven dam in the world. While the dam was removed in 1955, the earthen causeways define where the dam stood and how much water must have been backed up.

A pit where sand and gravel were removed for a portion of the causeways can also be seen. Upriver man-made islands served to direct logs and break ice flows to reduce damage to the dam. Where the main gate once stood, hazardous currents require that the area be signed as dangerous. Foundations and concrete and wooden beams still hint at the complex that was once here. Other smaller water control features can be found at the mouth of tributaries.

The Van Cabin represents the many cabins that once blanketed the shores, providing a rustic retreat from urban life for families. Four generations of a family used the property before it was acquired by the National Park Service.

Based on the presence of resources highlighting logging history and recreation/conservation, this segment has outstandingly remarkable cultural values.

Recreation

Segment 4: St. Croix River, Gordon Dam to Thayers Landing (37 river miles) – This stretch of the St. Croix River begins the most unobstructed, remote, and scenic reach of the St. Croix. There is little human development that can be seen from the river and only four automobile bridges and one railroad bridge cross it. The number of landings makes multiday trips possible. Paddling this stretch is a wilderness-like experience. This entire stretch has banks that are covered with woods with scattered marshes, especially through Danbury. The rapids (e.g., Big Fish Trap) provide amazing habitat for fishing and paddling.

This segment has the Riverway's most challenging rapids and the water level can change dramatically. There are a variety of in-river geological features that are unique to the St. Croix and exciting to paddle along. The day trips are more popular on this upper section as water levels influence multiday use. Exciting rapids include: Class 1 and 2 above Scott Bridge, the Coppermine Dam chute, Big Fish Trap Rapids, and the ledge just upstream of the Highway 77/48 bridge (Thayers Landing) that provides a Class 1 rapid. Fishing opportunities include smallmouth bass and musky. A portion of the North Country National Scenic Trail passes near the river along the upper reaches of this segment. Camping in this stretch offers beautiful night skies, howling wolves and coyotes, and solitude. From Riverside to Danbury, the river changes from rocky rapids to deeper waters, while maintaining a pristine environment. Anglers use this reach more commonly, and they start using boats, because Riverside is the first place you can launch a boat easily. The availability of camping is limited in this reach by marshy shorelines. Based on the quality of the paddling experience and the opportunity to experience the peace and solitude of a remote reach of the St. Croix River, this segment does have outstandingly remarkable recreation values.

Segment 5: St. Croix River, Thayers Landing to Norway Point Landing (14 river miles) – In this stretch you start encountering protected areas that influence the nature of the river (e.g., St. Croix State Park in Minnesota and Governor Knowles State Forest in Wisconsin). Downstream of the Highway 77 bridge at Thayers Landing the water becomes calmer, deeper, and widens in some stretches. People fish for musky, walleye, and small-mouth bass on this segment. Minnesota's largest state park, St. Croix State Park, is located here, and the majority of its visitors come to use the river as well as the state park. The park borders much of the Minnesota side of the river stretch, and Governor Knowles State Forest borders the Wisconsin side. These public lands provide an additional buffer to the Riverway, making this one of its most remote and quiet stretches. Several eagle nests can be seen along this stretch. Visitors camping overnight have the opportunity to view beautiful night skies and hear the howling of wolves and coyotes.

Based on the quality of the experience and the opportunity to experience the peace and solitude of a remote reach of the St. Croix River, this segment does have outstandingly remarkable recreation values.

Segment 6: St. Croix River, Norway Point Landing to Highway 70 Bridge (14 river miles) – Adjacent protected lands (St. Croix State Park, Chengwatana State Forest, Governor Knowles State Forest, and Crex Meadows State Wildlife Area) contribute greatly to the remoteness of this stretch of river. This stretch also contains the steepest stream gradient in the river beginning right below Nelsons Landing where it splits into a main channel and a smaller Minnesota channel. The latter is commonly called the Kettle River Slough because this is where the Kettle River first enters the St. Croix River valley. The change in gradient results in a series of rapids in both the main channel and the slough, ending with a dramatic descent where the Kettle finally merges with the main channel of the St. Croix. Paddling is excellent here, relatively easy, and fun! During high water the rapids can be in the Class 2 range and Class 3 where the Kettle River Slough merges back to the main channel. A side-channel into Sandrock Cliffs at the lower end of this segment provides an intimate paddling experience.

Camping sites are abundant and remote. Many of the campsites are very picturesque and several of the slough campsites are very secluded.

The segment also boasts world-class smallmouth bass fishing with some anglers pursuing muskies. There are a variety of fish habitats, including deep waters near the mouth of the Snake River where people fish for channel catfish and walleye.

Based on the quality of the paddling experience, the opportunity to experience the natural quiet, peace, and solitude of a remote reach of the St. Croix River, the availability of primitive shoreline campsites, and the world-class fishing, this segment does have outstandingly remarkable recreation values.

Segment 7: St. Croix River, Highway 70 Bridge to St. Croix Falls (36 river miles) – This segment is the last within the most unobstructed, remote, and scenic reach of the St. Croix River. Wild River State Park in Minnesota and Governor Knowles State Forest in Wisconsin provide additional buffer to the Riverway.

The rapids are farther apart here and the river grows wider. It gradually turns to the south so paddling is a little slower due to less current. South winds can also slow movement. There are a few secluded primitive campsites on the upper portion of this segment, with more clustered campsites provided near landings. A flowage resulting from the dam at St. Croix Falls forms the last 10 miles of this stretch. Here there are more campsites and the general feeling is one of a more social experience with more houses, houseboats, pontoon boats, and even a few businesses in the last mile.

Fishing is nearly as good as Segment 6, especially from Highway 70 to County Road O Landing. In the flowage, more lake fish species (e.g., crappie) occur.

Birdwatching is excellent on this stretch, one of the most biologically diverse on the Riverway. Based on the diversity and quality of the recreational experience, excellent fishing and availability of primitive shoreline campsites, this segment of river does have outstandingly remarkable recreation values.

Riparian

Segment 4: St. Croix River, Gordon Dam to Thayers Landing (37 river miles) – Once below the confluence of the Namekagon River on this stretch, the riparian zone broadens. This segment includes Big Island State Natural Area (Wisconsin). Much of the island, which rises 100 feet above the river, is important because of the presence of upland natural communities. The northwest and eastern tips of the island are lower and wetter and support a river-related northern wet forest. White spruce, marsh bluegrass, northern blue flag iris, and wool-grass all occur here. Northern wet forest is not a rare or imperiled plant community in Wisconsin or Minnesota. Nesting golden-winged warblers have been recorded along this stretch by NPS breeding bird surveys. This stretch includes important riparian zone habitat, but does not include a rare or imperiled river-related natural community. Therefore, outstandingly remarkable riparian values have not been identified here.

Segment 5: St. Croix River, Thayers Landing) to Norway Point Landing (14 river miles) – This stretch of river includes some of the most extensive riparian wetlands on the Riverway. It also includes the Norway Point Bottomlands State Natural Area in Wisconsin, which encompasses five major lowland natural communities including a southern wet-mesic forest at its northern range limit in Wisconsin. Also present are a northern wet-mesic forest (rare in Wisconsin and imperiled in Minnesota), shrub carr, northern sedge meadow (rare in Wisconsin and uncommon in Minnesota), and a short reach of Iron Creek. Closest to the river is a bottomland hardwood forest (rare in Wisconsin and vulnerable to extirpation in Minnesota) with silver maple, American elm, white ash, and black ash. Between the floodplain and uplands are swamp hardwoods dominated by black ash with yellow birch and elm. Along the base of the river terrace escarpment are similar hardwoods and white cedar with numerous springs and seeps that feed into Iron Creek. Nesting golden-winged warblers, red-shouldered hawks, and Louisiana waterthrush have all been documented along the St. Croix River between Thayers Landing and Norway Point Landing.

Based on the presence of rare river-related natural communities and rare birds, this segment of river has outstandingly remarkable riparian values.

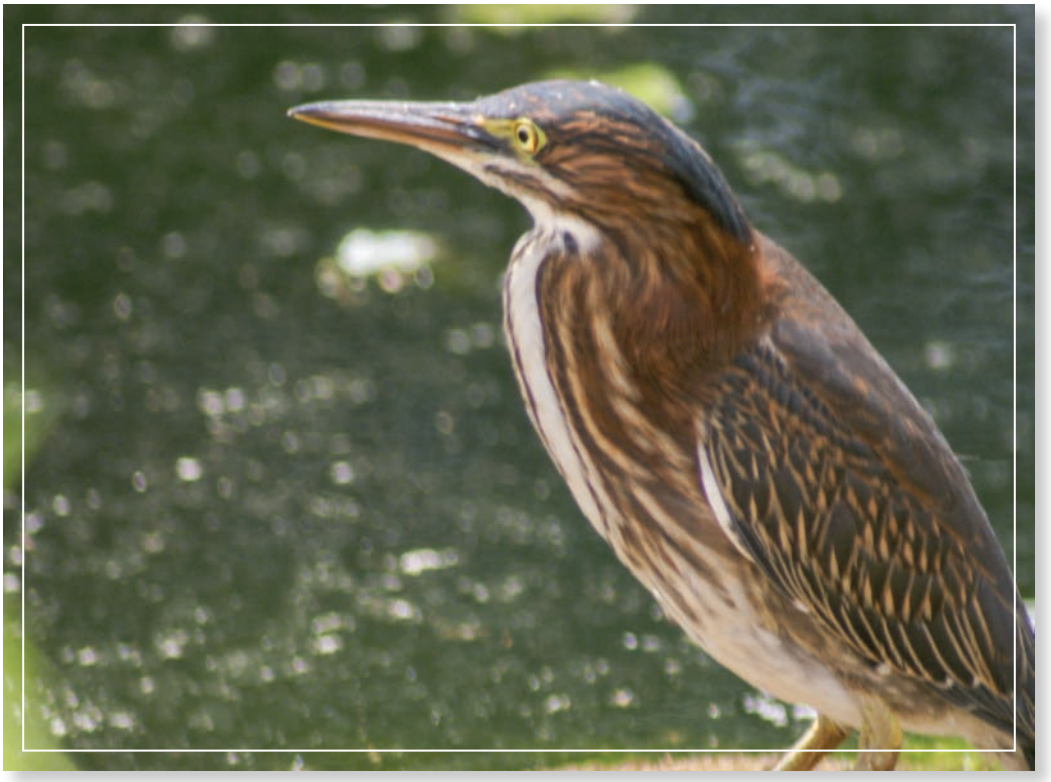
Segment 6: St. Croix River, Norway Point Landing to Highway 70 Bridge (14 river miles) – This stretch includes Ekdall Wetlands State Natural Area in Wisconsin. It lies in a low narrow terrace, where the St. Croix River has meandered away from the steep escarpment. The site contains northern wet forest and alder thicket plus a southern wet-mesic forest near its northern range limit in Wisconsin. Flat uplands above the escarpment are about 80 feet above the swamp and consist of barrens openings and dense stands of young oaks and jack pine. The escarpment slope also exhibits a continuum from xeric oaks at the summit to more mesic species mid-slope to swamp species at the wet base. Numerous seeps near the base contribute water to a swamp of northern wet-mesic forest (rare in Wisconsin and imperiled in Minnesota) and tamarack swamp (rare in Wisconsin and uncommon in Minnesota) with white cedar, tamarack, black spruce, black ash, and alder with scattered balsam fir and yellow birch. Typical understory species are sphagnum moss, Labrador-tea, pitcher plant, cat-tail, and sedges. Closer to the river are shrub-dominated thickets and small marshy pockets. Nesting golden-winged warblers, red-shouldered hawks, and Louisiana waterthrush have all been recorded along this stretch by NPS breeding bird surveys. Based on the presence of rare river-related natural communities and rare birds, this segment of river has outstandingly remarkable riparian values.

Segment 7: St. Croix River, Highway 70 Bridge to St. Croix Falls (36 river miles) – This segment includes the St. Croix Seeps State Natural Area in Wisconsin. It spans a four-mile stretch of river and is one of the most diverse places along the Riverway for rare species. Here the terrace is very near the river and numerous seeps and springs emanate from the lower slopes of the steep, west facing bluff. The area supports a high quality black ash seepage swamp (imperiled in Wisconsin and vulnerable to extirpation in Minnesota) with yellow birch and red maple. Dominant ground layer species include skunk cabbage, broom-like sedge, jewelweed, ostrich fern, eastern willow-herb, fowl manna grass, marsh bluegrass, and swamp aster. The southwest flank of the river bluff is forested with red pine and old-growth red oak and white pine. Below is a large flowing seepage run with a shady overstory of old-growth sugar maple and eastern hop-hornbeam. Understory species include American golden saxifrage, lady fern, and Pennsylvania sedge. These small, specialized habitats support large populations of rare plant species including bog bluegrass and drooping sedge. The seeps here are ranked as a state-imperiled natural community in Wisconsin.

In addition, it includes the St. Croix Ash Swamp State Natural Area in Wisconsin. The St. Croix Ash Swamp features a range of forest types from mesic uplands adjacent to the St. Croix River through extensive low swamp to droughty uplands on the sandy plain above the river valley. The hardwood swamp (rare in Wisconsin and vulnerable to extirpation in Minnesota) is composed of basswood, black ash, American elm, yellow birch, white oak, and red maple with scattered white cedar, balsam fir, and white pine. On the forest floor are small pockets of standing water between the mossy hummocks. The flat, sandy uplands are wooded with young oaks. The river valley contains very steep sides that rise nearly 100 feet above the swamp. Small spring-fed streams and seepages have eroded small pockets and tributary valleys providing diverse microhabitats.

Nesting red-shouldered hawks and Louisiana waterthrush have been recorded along this stretch by NPS breeding bird surveys. Trumpeter swans winter here. The Wild River State Park Important Bird Area is found along this stretch.

Based on the presence of rare and imperiled river-related natural communities, rare plants, and rare birds, this segment of river does have outstandingly remarkable riparian values.



Scenic–Aesthetic

Segment 4: St. Croix River, Gordon Dam to Thayers Landing (37 river miles) – The North Woods boreal setting, characterized by a greater abundance of spruce and other conifers is predominant on the upper reaches of this segment. The riverbed is filled with boulders and shelves of bedrock, contrasting with the character of the lower Namekagon, which meets the St. Croix in this segment. Downstream of the confluence of the Namekagon, the St. Croix widens. Deciduous forest becomes predominant downstream of Riverside. The community of Danbury is the only developed area along the length of this segment. All-terrain vehicle use on the Gandy Dancer State Trail generates some noise, especially at the bridge crossing. Overall, the diversity of natural sounds in this segment adds to the aesthetic experience, attributable to the remoteness of the river. Based on the high quality of these attributes, this segment of river has outstandingly remarkable scenic–aesthetic values.

Segment 5: St. Croix River, Thayers Landing to Norway Point Landing (14 river miles) – In this segment the valley widens and heavily wooded areas are interspersed with vast marshes. Large areas of public land bordering the river including St. Croix State Park, Chengwatana State Forest, Governor Knowles State Forest, and Crex Meadows State Wildlife Area. All this public land creates a wilderness-like experience in this stretch, with views of expansive marshes, especially on the Wisconsin side, and high bluffs on the Minnesota side. The soundscape is very quiet, predominated by a diversity of natural sounds. Between Sand Creek and Norway Point Landing the river offers dramatic changes of view as it turns sharply to the east and again to the west. Based on the high quality of these attributes, this segment of river has outstandingly remarkable scenic–aesthetic values.

Segment 6: St. Croix River, Norway Point Landing to Highway 70 Bridge (14 river miles) – The gradient in this segment influences many of the scenic–aesthetic values including visual landscapes with rocky shelves, many islands and sloughs, and a soundscape with rushing water. At Nelsons Landing the islands first begin to split the river and extend downstream. The islands create the isolated Kettle River Slough, the Seven Islands, and Sand Rock Cliffs channel. The exposed rock faces of the Sand Rock Cliffs and the enclosed canopy offer an intimate visual experience. It also offers a sandy river bottom for swimming and wading. Protected public lands continue to serve as a buffer and preserve the natural soundscape with voices of swans and other waterfowl. Mechanical sounds are introduced near the end of this segment by the frac sand mine bordering the Sand Rock Cliffs area and traffic crossing the Highway 70 bridge. Based on the high quality of these attributes, this segment of river has outstandingly remarkable scenic–aesthetic values.

Segment 7: St. Croix River, Highway 70 Bridge to St. Croix Falls (36 river miles) – This segment is similar in character to the upstream segment. Lengthening downriver vistas create the impression of a bigger river with fewer islands. Chengwatana State Forest, Wild River State Park, and Governor Knowles State Forest continue to buffer the river, keeping the wild character intact for much of the stretch. Sandstone outcroppings create visual interest. Small groupings of cabins and houses seem to fit into the river shoreline in most cases. The river gradient is less steep here and eventually the river current is slowed by the hydroelectric dam in St. Croix Falls creating the lake-like Indian Head Flowage. The calm waters of the flowage can be whipped by the wind channeled by the north-south orientation of the river between opposite hillsides. Based on the high quality of these attributes, this segment of river has outstandingly remarkable scenic-aesthetic values.

Lower St. Croix River						
River Segment	ORV Category					
	Aquatic	Cultural	Recreation	Riparian	Scenic–Aesthetic	Geology
Lower St. Croix River **St. Croix Falls to Osceola**	•	•	•	•	•	•
Lower St. Croix River **Osceola to Marine**	•	•	•	•	•	
Lower St. Croix River **Marine to North Stillwater**	•	•	•	•		

Aquatic

Segment 8: St. Croix River, St. Croix Falls to Osceola Landing (8 river miles) – This segment contains a variety of warmwater habitats, free-flowing and backwater conditions, high connectivity, excellent water quality, a natural sediment regime, bedrock, islands, riffles, and backwaters. Coldwater tributaries include Lawrence Creek, which supports native brook trout, and unnamed streams. Species of concern include 15 state-listed fish species and more than 20 mussel species including 4 federally listed mussels. The habitat is also conducive to 11 state-listed fish, including a unique undescribed species of the gilt darter, unique resident lake sturgeon, river redhorse, and greater redhorse. Natural reproduction is good for fish, and mussel communities are common with heavy densities. The densities of mussel species are unmatched for the St. Croix River, and this segment includes the best producing areas for spectaclecase and winged mapleleaf mussels. This segment contains the largest reproducing population of spectaclecase in the world. Based on the quality of the habitat, fish and mussel abundance, natural reproduction, and presence of species of concern, this segment of river does have outstandingly remarkable aquatic values.

Segment 9: St. Croix River, Osceola to Marine (10 river miles) – This segment contains a variety of warmwater habitats, free-flowing and backwater conditions, high connectivity, excellent water quality, a natural sediment regime, and clean substrates. Although the segment includes some riffles, pools, backwaters, and islands, much of the riverbed is sand, which reduces the frequency and overall area of suitable habitat for mussels. While the overall diversity of mussels declines slightly here, the segment supports more than 22 state-listed species, as well as 15 state-listed species of fish. Natural reproduction of mussels is generally good with the possible exception of the federally listed species. All of the state-listed fishes reproduce well. Based on the quality of the habitat, fish and mussel abundance, natural reproduction, and presence of species of concern, this segment of river does have outstandingly remarkable aquatic values.

Segment 10: St. Croix River: Marine on St. Croix to north Stillwater (11 river miles) – This segment is the final reach of faster moving water before the river enters the series of geologically formed impoundments of deep pools. It retains the free-flowing character of other segments, a natural sediment regime, and high quality warm water. Substrate composition is dominated by shifting sands with backwaters present throughout the reach. The Apple River is an important coldwater tributary that creates a dominating delta. There is diverse habitat, including many islands, backwaters, and riffles. Twenty state-listed and 4 federally listed species of mussels occur in this segment. At least 14 state-listed fish species occur in this segment, and native brook trout are found in coldwater tributaries. Naturally occurring reproduction is assumed for mussel species and known to occur for all state-listed fish species, except blue sucker and goldeye. Diversity of fish species is similar to segment 9, though mussel habitat is dramatically less than segments 8 and 9. Based on the quality of the habitat, fish and mussel abundance, natural reproduction, and presence of species of concern, this segment of river does have outstandingly remarkable aquatic values.

Cultural

Segment 8: St. Croix River, St. Croix Falls to Osceola Landing (8 river miles) – The logging history in this segment is linked to a natural feature. Angle rock, a sharp bend in the river within the Dalles, created the perfect location for massive log jams. The jams that occurred here in the 1880s received international attention, became major tourist attractions, and resulted in the construction of Nevers Dam in an effort to avoid future gridlock. The communities of Taylors Falls, St. Croix Falls, and Franconia all owe their origins to the logging industry and once had productive sawmills. The sawmills' New England character speaks to the origins of the loggers. Taylors Falls and Franconia both contain historic districts in the National Register of Historic Places.

The American Indian heritage of this segment is particularly rich. The rocky area below the St. Croix Falls Dam is documented as the location of a bloody battle in the 1770s between the Ojibwe and a group of Fox and Dakota. Downriver, a small number of mounds survive from what once comprised the largest complex of mounds in Wisconsin. Nearby pits are thought to have been food storage areas, perhaps for wild rice, which is still present, although the beds are not as extensive as they once were. Across the river, an unusual basalt quarry was the source for large basalt adzes during late prehistoric times. On the basalt rock walls are pictographs painted with red ochre and above the bluff is a petroglyph carved in the stone. Sturgeon swim in these waters.

Tourists who traveled to the Dalles to see the log jams also noted the beauty of the area, which led to the creation of the first interstate park. Minnesota designated its side first in 1895 with Wisconsin following in 1900. Both parks were improved by Civilian Conservation Corps and Works Progress Administration crews with distinctive rustic buildings and landscaping. They also contain the original steamboat landings that marked the end of navigation on the St. Croix. Steel rings that boats once tied up to remain anchored in the basalt. Visitors traveled by boat and train to visit the Dalles.

To aid navigation for steamboats, the U.S. Army Corps of Engineers began to "improve" the river in the 1870s and continued work through the early 1900s. In low water, their improvements (wing dams, revetments) are still visible.

Based on the presence of resources highlighting logging history, recreation/conservation, and American Indian heritage, this segment has outstandingly remarkable cultural values.

Segment 9: St. Croix River, Osceola to Marine on St. Croix (10 river miles) – Marine on St. Croix was the location of the first commercial sawmill on the St. Croix River and in the state of Minnesota. The Marine Mill State Historic Site interprets the ruins of the mill and a large portion of the surrounding community is a historic district. Log House Landing was a stopping place on the river, and the adjacent structure that gives the landing its name is unique in that it is made from branded logs pulled from the river.

The bend in the river known as Standing Cedars was where the dividing line for the 1837 treaty crossed the St. Croix. It had served as a unique dividing line between the Ojibwe and Dakota since the 1820s in an attempt to delineate ownership and keep the peace between these two peoples. Burial mounds can be seen on the Minnesota side of the river. Sturgeon are found in this stretch.

The U.S. Army Corps of Engineers' navigational structures continue in this segment of the river.

Based on the presence of resources highlighting logging history and American Indian heritage, this segment has outstandingly remarkable cultural values.

Segment 10: St. Croix River, Marine on St. Croix to north Stillwater (11 river miles) – The St. Croix Boom Site, a national historic landmark associated with the logging era, is located in this segment. Stretching for 8 miles above Stillwater, the boom site was the location where logs were corralled and sorted before being sent to mills or assembled into rafts and shipped downriver. Between 1856 and 1914, the boom handled more than 15.5 billion board feet.

It was known for its profitability and longevity. While the sorting areas have been removed from the river, a cave for keeping food, the company's house and barn, and an area where the offices stood, remain. Upstream, the Arcola Mill and Mower House recall more of the logging era. The Mower House is the second oldest frame house in Minnesota and the two Mower brothers played a significant role in Minnesota history. The chimney from the steam-powered sawmill, as well as the millstream from the original sawmill, are both present.

The American Indian heritage in this stretch is associated with the Oneota, a group that lived throughout what is now Wisconsin, Iowa, and southern Minnesota. The Oneota relied on agriculture, plant gathering, and hunting for their subsistence. An archeological site in Marine on St. Croix provides evidence of an Oneota village (1200 to 1450 AD) and is believed to be at the northern edge of their settlement. Mound sites, pits, stone tools, projectile points, grinding stones, scraping tools, bone tools, and pottery are associated with them. Nearby a petroglyph is carved into sandstone, the maker unknown. Just north of Stillwater, in a natural ravine, is the site of a late 1830s battle between the Dakota and Ojibwe. Sturgeon are found in this stretch of river.

The U.S. Army Corps of Engineers navigational structures continue into this stretch. The Corps was particularly frustrated by the logging/boom work on this stretch but continued its efforts to allow boats, and thus people, access to the river.

The Soo Line High Bridge was constructed in 1911 in the style of the Eiffel Tower in Paris and is significant for its innovative engineering—one of the first uses of the flat slab support system. Spanning nearly a mile, with five steel arches that reach a height 185 feet, this bridge creates a scenic point on the river and is included within the discussion of the scenic–aesthetic ORV.

Based on the presence of resources highlighting logging history, recreation/conservation, and American Indian heritage, this segment has outstandingly remarkable cultural values.

Recreation

Segment 8: St. Croix River, St. Croix Falls to Osceola Landing (8 river miles) – This iconic segment of the Riverway offers a diverse and high quality mix of recreational uses and opportunities. Visitor experiences range from rock climbing on the sheer rock faces of the Dalles, camping, and shore and small motorboat fishing, to wildlife and pothole viewing in the adjacent state parks. The western terminus of the Ice Age National Scenic Trail is here. This segment sees a high volume of visitors on scenic paddleboat tours and day trip paddling. Camping at primitive shoreline campsites and birdwatching is popular. Based on the quality and rarity of such a variety of recreational experiences in one location, this segment of river does have outstandingly remarkable recreation values.

Segment 9: St. Croix River, Osceola to Marine on St. Croix (10 river miles) – This segment includes the Osceola Landing Day Use Area, which provides opportunities for picnicking and is an important access for boaters and day trip paddlers. Channel braiding through islands provides great opportunities for birdwatching and wildlife viewing and to experience solace. Camping at primitive shoreline campsites is popular. William O'Brien State Park in Minnesota is located on this stretch. Based on the exemplary recreation opportunities in such close proximity to a metropolitan area, this segment of river does have outstandingly remarkable recreation values.

Segment 10: St. Croix River, Marine on St. Croix to north Stillwater (11 river miles) – This segment provides a quieter more solitary recreational experience above the Soo Line High Bridge, as watercraft are prohibited from traveling upstream of the bridge to prevent the spread of invasive zebra mussels. Below the bridge, larger motorboats, houseboats, and pontoons become more common. There is the rare opportunity for island camping, which takes on a much more dynamic and social character on summer weekends and holidays. Based on the exemplary recreation opportunities in such close proximity to a metropolitan area, this segment of river does have outstandingly remarkable recreation values.

Riparian

Segment 8: St. Croix River, St. Croix Falls to Osceola Landing (8 river miles) – Interstate Parks Lowland Forest State Natural Area is within Wisconsin Interstate State Park along this stretch of river. It features a mature southern wet forest community (rare in Wisconsin and vulnerable to extirpation in Minnesota) on what is periodically an island in the St. Croix River. During periods of high water, an old channel on the area's north side fills with water and isolates the site. The canopy is composed of tall, rather evenly spaced, straight-trunked trees. Silver maple is dominant with scattered black and green ash, hackberry, and ironwood, with many of the trees well over two feet in diameter. In addition, the Osceola Landing Mixed Hardwood Seepage Swamp is on the Minnesota side along this segment (Wovcha et al. 1995). Mixed hardwood seepage swamps (imperiled in Wisconsin and Minnesota) occur where ground water seepages merge with gentle slopes to produce standing water and ecosystems with very high species diversity.

Nesting red-shouldered hawks, prothonotary warbler, cerulean warbler, and Louisiana waterthrush have all been recorded along this stretch by NPS breeding bird surveys. The St. Croix Bluffs Important Bird Area is located along both sides of the river.

Based on the presence of rare and imperiled natural communities and rare breeding birds, this segment does have outstandingly remarkable riparian values.

Segment 9: St. Croix River, Osceola to Marine on St. Croix (10 river miles) – This stretch of river includes the Osceola Landing Mixed Hardwood Seepage Swamp, described above, and Farmington Bottoms State Natural Area in Wisconsin

Farmington Bottoms State Natural Area contains excellent examples of floodplain forest (rare in Wisconsin and vulnerable to extirpation in Minnesota), emergent aquatics, and forested seeps (imperiled in Wisconsin and Minnesota). It features an extensive tract of old-growth lowland forest with running sloughs and backwaters. Silver maple is the dominant canopy species with green ash, hackberry, and American elm. Basswood, red oak, cottonwood, black willow, and bitternut hickory are also present in smaller numbers. Shallow water areas contain abundant bulrush, rice cut grass, and prairie cord grass. Herbaceous plants include cardinal flower, ostrich fern, ironweed, fringed loosestrife, and false dragonhead. Rough, deeply dissected terrain borders the area with local relief exceeding 350 feet. Banks at the base of the river terrace often contain seepages that harbor large populations of the state-threatened bog bluegrass.

Nesting red-shouldered hawks, prothonotary warbler, and Louisiana waterthrush have all been documented on this stretch by NPS breeding bird surveys. The St. Croix Bluffs Important Bird Area, described above, also includes this segment. Bank, cliff, and northern rough-winged swallows all nest along the bluffs, and American bitterns and marsh wrens breed in the marshes in this segment. There are also several large great blue heron rookeries here.

Based on the presence of rare and imperiled river-related natural communities, rare plants, and rare birds, this segment does have outstandingly remarkable riparian values.

Segment 10: St. Croix River, Marine on St. Croix to north Stillwater (11 river miles) – The St. Croix Islands State Natural Area in Wisconsin is along this stretch of river. It features a diverse and extensive mosaic of running sloughs, backwater lakes, braided stream channels, stands of emergent aquatic vegetation, old-growth lowland forest, and the delta of the Apple River. The stands of emergents are extensive, and, depending on water depth, dominated by arrowhead, river bulrush, softstem bulrush, reed grass, and huge patches of cordgrass. The lowland forest (rare in Wisconsin and subject to extirpation in Minnesota) is dominated by silver maple with a few individuals reaching 35 inches in diameter. Other trees include green ash, hackberry, black willow, and elm. Sedges, catchfly grass, smartweed, and sensitive fern are common in the understory. In addition, there is also a small seepage forest at Arcola Bluffs, a tract of NPS-owned land on the Minnesota side of the river. Seepage forests are ranked as imperiled natural communities in Wisconsin and Minnesota.

Nesting red-shouldered hawks, prothonotary warbler, cerulean warbler, and Louisiana waterthrush have all been documented in this segment by NPS breeding bird surveys. It is also within the St. Croix Bluffs Important Bird Area, described above.

Based on the presence of river-related rare and imperiled natural communities and rare breeding birds, this segment does have outstandingly remarkable riparian values.

Scenic–Aesthetic

Segment 8: St. Croix River, St. Croix Falls to Osceola Landing (8 river miles) – This segment contains one of the most iconic areas of the Riverway, known as the Dalles. It is one of the few exposures of this basaltic bedrock in the St. Croix region. The basalt can appear dark gray to slate blue depending on the light. The water becomes darker, deeper, and more tumultuous here as it passes through the deep and narrow gorge. The erratic and angular rock cliffs cast shadows on themselves, as cracks and fissures further subdivide the planes. From the shore, large cylindrical voids are apparent in the bedrock from glacial meltwater having scoured into it like a drill using rocks and sand. Paddleboats, iron rings, and petroglyphs add visual allure and provide references of long human use here. The scenery is dramatic and sublime, and the bend in the gorge at Angle Rock is particularly iconic. Below the Dalles, the valley opens up into a wider, grander expanse. Rice Lake sloughs and the state parks provide a buffer to development and afford a more intimate setting. Based on the high quality and unique views created by the basalt gorge, the potholes, the sandstone bluffs, floodplain forests and marshes, this segment of river has outstandingly remarkable scenic–aesthetic values.

Segment 9: St. Croix River, Osceola to Marine on St. Croix (10 river miles) – This segment affords spectacular views of sandstone bluffs, particularly on the Wisconsin side of the river. Side channels and backwaters provide a more intimate viewing experience of both the landscape and wildlife. Seepages and springs provide visual and auditory splendor. There is more development, especially in the lower end of this segment, but the cultural modifications tend to be pleasing. Based on the high quality of these attributes, this segment of river has outstandingly remarkable scenic–aesthetic values.

Segment 10: St. Croix River, Marine on St. Croix to north Stillwater (11 river miles) – Views of broad valleys and wooded bluffs continue in this section. The Arcola High Bridge is awe-inspiring both in terms of scale and visual interest. As the channel braids through the Stillwater Islands, stunning sandstone bluffs flank each side, before the river begins to open up into Lake St. Croix. Based on the high quality of these attributes, this segment of river has outstandingly remarkable scenic–aesthetic values.

Geology

Segment 8: St. Croix River, St. Croix Falls to Osceola Landing (8 river miles) – The basalt cliffs of the Dalles and associated glacial potholes are found near the upstream end of this segment. The ancient basalt rock of the Dalles, formed by lava flowing from the Midcontinent Rift and exposed during the much more recent retreat of the glaciers, and the associated glacial potholes are exemplary in a regional and even worldwide sense. The Dalles is a place where the ancient history of basalt lava flows from the inner earth, sedimentary Tunnel City sandstone, and glacial potholes can all be seen together. Based on the variety and rarity of geologic features displayed, this segment of river does have outstandingly remarkable geologic values.

The sandstone bluffs and glacial deposits found elsewhere along the Riverway contribute to the conspicuous geology and scenic values of the Riverway. However, these features can be found elsewhere in Wisconsin and Minnesota, including along the Mississippi River, in the Baraboo Hills, and along the Ice Age National Scenic Trail as it crosses Wisconsin. Therefore, segments of river where these geologic features alone are present are not considered to have outstandingly remarkable geologic values.

Lower St. Croix River: State-Administered						
River Segment	ORV Category					
	Aquatic	Cultural	Recreation	Riparian	Scenic–Aesthetic	Geology
Lower St. Croix (state-administered) **Stillwater to Confluence with Mississippi River**	•	•	•		•	

Aquatic

Segment 11: Stillwater to confluence with Mississippi (state-administered zone) (25 river miles) – This segment includes the river through Stillwater downstream to Prescott and the Mississippi River confluence. Unlike the segments just upstream, the reach is composed of a series of geologically formed impoundments of deep pools and has warm water with several coldwater tributaries. Major tributaries on this segment include the Kinnickinnic River, Valley Branch, Trout Brook, Willow River, Silver Creek, and Brown's Creek. Though lake-like as the river is wide and slowing as it meets the Mississippi, the sediment regime remains natural with clean substrates. This segment has been listed as impaired for phosphorus and has periods of low to no oxygen within the lower levels of the deep pools. Species of concern include 20 state- and 4 federally listed mussel species, and the segment includes essential habitat areas for the Higgins eye mussel. There are 13 state-listed fish species, including a number more likely to occur in this segment, such as skipjack herring, pallid shiner, and paddlefish. The diversity of fish declines as the river shifts to a more lake-like environment. Mussels within the Hudson Narrows are diverse and found in dense beds, though elsewhere, the communities are uncommon with light to medium densities. The ebonyshell and elephant ear mussel species have been found near the confluence with the Mississippi, perhaps the only extant populations in the Upper Mississippi River basin. Mussel propagation efforts occur within this segment. Invasive species, including the zebra mussel and the Asian carp, as well as human activities are notable in this section. Based on the quality of the habitat, fish and mussel abundance, natural reproduction, and presence of species of concern, this segment of river does have outstandingly remarkable aquatic values.

Cultural

Segment 11: Stillwater to confluence with Mississippi (state-administered zone) (25 river miles) – This segment is linked to logging and the wealth it brought to build homes and towns. Most of the major sawmills once stood in this stretch. Only a portion of the Staples' Mill in Stillwater remains. The town of Stillwater grew in wealth and prestige from the presence of the sawmills and the boom. The historic commercial district and some of the homes of wealthy individuals hint at the money that came to this area. Stillwater, often referred to as the birthplace of Minnesota, is where the Minnesota territorial convention was held, which lead to statehood. Lake St. Croix was where rafts were put together for floating to sawmills down the Mississippi as far as St. Louis. The historic portions of the towns between Stillwater and the mouth of the St. Croix had links to that early logging era. Based on the presence of resources highlighting logging history, this segment has outstandingly remarkable cultural values.

Recreation

Segment 11: Stillwater to confluence with Mississippi (state-administered zone) (25 river miles) – This segment provides a diverse mix of recreational opportunities in close proximity to an urban center. Motor-boating is common with opportunities to travel long linear distances through a cross section of developed and undeveloped shoreline. Minimal industrial activity provides a more comfortable, lake-like environment for boaters. Sailing is also popular. Public parks and beaches offer access for those who may not own a boat. Relatively clean water supports water contact activities. A healthy fishery draws anglers during all seasons to this segment. Based on the exemplary recreation opportunities in close proximity to a metropolitan area, and the only river in the region supporting this mix of uses, this segment of river does have outstandingly remarkable recreation values.

Riparian

Segment 11: Stillwater to confluence with Mississippi (state-administered zone) (25 river miles) – The riparian zone along this stretch of river includes floodplain areas and, notably, the Kinnickinnic. The St. Croix Lake Important Bird Area is found on this stretch and wintering bald eagles, trumpeter swans, and other waterfowl can be seen. While this segment provides important habitat for rare birds, there are no rare natural communities here that are associated with the St. Croix River. Therefore, this segment does not possess outstandingly remarkable riparian values.

Scenic–Aesthetic

Segment 11: Stillwater to confluence with Mississippi (state-administered zone) (25 river miles) – While this segment is the most developed section of the Riverway, its scenic and aesthetic qualities are still enjoyed and appreciated by the public. There is a variety of developed and undeveloped shoreline and sandy beaches (e.g., Kinnickinnic Delta) as one travels downstream. As a result of the high bluffs and vegetation, structures are screened from view along many portions of this segment. The channel also varies from a broad lake-like setting to a narrower corridor as the river nears its confluence with the Mississippi. The water still retains some of the amber tint for which the St. Croix is known. Historic structures, such as the Stillwater Lift Bridge, and riverfront communities at Stillwater and Hudson are picturesque. For major rivers in the Upper Midwest, the quality of the scenery is exemplary. Based on the high quality of these attributes, this segment of river has outstandingly remarkable scenic–aesthetic values.

Appendix D: Past and Ongoing Park Planning and Data Collection Efforts

Park Planning Portfolio (Existing Plans That Provide Guidance)

Planning Document or Data Collection Effort	Year
River Values Report (in progress)	2015
Scope of Collection Statement	2010
Camping Management Plan	2007
Long-range Interpretive Plan	2005
Fire Management Plan and Long-term Burn Plan appendix	2005
Business Plan	2003
Time and the River: A History of the Saint Croix. A Historic Resource Study of the Saint Croix National Scenic Riverway	2002
Cooperative Management Plan (applies to Lower St. Croix only, not the Upper or the Namekagon, covers both NPS-managed and state-managed stretches from Taylors Falls to the confluence with the Mississippi)	2002
Ethnographic Overview	2001
Visitor Study	1999
General Management Plan (applies to NPS-managed Upper Saint Croix and Namekagon only)	1998
Water Resources Management Plan (applies to all segments)	1997
Strategic Plan	1997
Resources Management Plan	1995
Collection Management Plan	1994
Land Protection Plan	1993
Management Policy Resolution of the Upper St. Croix Management Commission (10/20/93)	1993
Administrative History	1992
Statement for Management	1991
Development Concept Plan	1981
National Register of Historic Places nominations (Boom Company House & Barn, Croixsyde, Franconia Historic District, John Copas House, Mower House and Arcola Mill, Pest House (all 1980)	1980
Master Plan	1976

Midwest Region Foundation Document Recommendation
St. Croix National Scenic Riverway

September 2017

This Foundation Document has been prepared as a collaborative effort between park and regional staff and is recommended for approval by the Midwest Regional Director.

Juliet L. Galonska 9/8/17

RECOMMENDED
Juliet L. Galonska, Superintendent, St. Croix National Scenic Riverway **Date**

9/8/2017

APPROVED
Cameron H. Sholly, Regional Director, Midwest Region **Date**

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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