

INTERPRETIVE PROSPECTUS

Saint Croix National Scenic Riverway Minnesota/Wisconsin

1995

630/115466

**A Plan for
the Interpretation of**

**Saint Croix
National Scenic Riverway**

Wisconsin/Minnesota

1995

prepared by

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Saint Croix National Scenic Riverway
Saint Croix Falls, Wisconsin

TECHNICAL INFORMATION CENTER
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Introduction

By its very nature, the Saint Croix provides challenges for management and interpretation. This Interpretive Prospectus has been created to meet these challenges and chart a future direction for the interpretive program of the Saint Croix National Scenic Riverway.

"'Saving the Saint Croix' today means accepting limits on the use of the river. It means monitoring managers like the National Park Service and at times challenging their procedures - although doing so in a cooperating and constructive fashion. Stewardship for citizen and civil servant alike means accepting an individual responsibility for the river's well being as readily as they accept the gift of its wild beauty. Through stewardship 'Save the Saint Croix' becomes more than a slogan from the past but a living link in the chain of history, from us to our children, to their children, a river flowing strong, clean, clear."

--Karamanski,
*Saving the Saint Croix:
An Administrative History of the
Saint Croix National Scenic Riverway,*
1993

Planning Considerations

Park Significance

The Saint Croix and Namekagon rivers remain among the cleanest and most pristine river systems in the Midwest. Congress created the Saint Croix National Scenic Riverway in 1968 and added the Lower Saint Croix National Scenic Riverway in 1972. Both are managed as a single unit of the National Park System called the riverway. A linear park unit, the riverway encompasses the Saint Croix from the Gordon Flowage near its headwaters to its confluence with the Mississippi, and the Namekagon from the flowage with the same name to its mouth. A portion of the Saint Croix serves as the border between Minnesota and Wisconsin.

The rivers manifest different traits; both the upper Saint Croix and the Namekagon vary from intimate cold water streams to wider waterways flowing through marshes and swamplands. The Saint Croix River to Taylors Falls widens gradually into a straight warm water river. The dam at Taylors Falls forms a reservoir for several miles upstream. After spilling through the Dalles, scenic basalt cliffs at Taylors Falls, the river becomes more shallow and intimate, winding past dozens of sandbars, islands, and sloughs. South of the Apple River is Lake Saint Croix, deeper, wider, slow-moving. Diverse characteristics offer a broad range of recreational opportunities for boating, canoeing, and fishing.

The riverway embraces significant resources centered around these free-flowing, high quality waters and their riparian environments. Diverse habitats explain the variety of flora and fauna. The riverway boasts 94 species of fish, 41 species of freshwater mussels, and over 246 species of birds. Six endangered animals inhabit the area: the bald eagle, peregrine falcon, arctic peregrine falcon, gray wolf, Higgins eye pearly mussel, and winged mapleleaf mussel. Much of the riverway is forested with hardwoods dominating the central and southern portions, while mixed forest of aspen and conifer reign over the northern section. Diversity characterizes the flora of the riverway.

The Saint Croix has witnessed a great pageant of human occupation of the valley, beginning with prehistoric peoples thousands of years ago, followed by the Dakota and Ojibway. Fur traders and missionaries led the migration of Europeans to this region, followed by explorers, loggers, and farmers. The timber industry changed the area dramatically, logging over eleven billion board feet of white and red pine between 1840 and 1914. Today development in the form of suburbanization, industry, and industrial farming threaten the resources of the Saint Croix watershed; confrontation between development and preservation advocates dominate issues in the valley today.

Park Legislative Authorities

The Saint Croix National Scenic Riverway derives its mission from the Organic Act of 1916. The Act created a National Park Service to:

"... conserve the scenery and the natural and historical objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations . . ."

The Saint Croix National Scenic Riverway was formally established as one of the eight original rivers under the Wild and Scenic Rivers Act of 1968:

"... 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."

--(P.L. 90-542).

Under this Act, the Saint Croix National Scenic Riverway was defined as that section of the Saint Croix River from Gordon Dam, Wisconsin to Taylors Falls, Minnesota/Saint Croix Falls, Wisconsin, along with nearly one hundred miles on the Namekagon River, Wisconsin.

In 1972, the Wild and Scenic Rivers Act was amended through P.L. 90-560 designating the Lower Saint Croix National Scenic Riverway. The Saint Croix and the Lower Saint Croix have

separate enabling legislations. Both are units of the National Park System. The Saint Croix is managed by the National Park Service. A portion of the Lower Saint Croix is managed by the National Park Service. The remainder is managed by the States of Minnesota and Wisconsin and the Boundary Area Commission.

Park Environment

The Saint Croix National Scenic Riverway begins at the Gordon Dam southwest of Gordon, Wisconsin. From there, it flows south for nearly 20 miles before merging with the Namekagon River, which originates at Lake Namekagon, one hundred miles upstream. Once the two rivers join, they flow together for 135 miles before joining the Mississippi River at Prescott, Wisconsin. Several dams on the Saint Croix and numerous small streams and tributaries flow into it.

VE { For over 100 miles the Saint Croix River is a border separating the States of Wisconsin and Minnesota. Its banks are lined with brush, second growth forest, and remnants of prairie. Wildlife is common. Numerous state parks and forests along the riverway contribute to a sustainable ecosystem along the riverway corridor.

{ The Saint Croix is a transition zone, from wild to urban. Its northern reaches provide a slice of wilderness in an area that is becoming increasingly urban. The southern portion provides a corridor through a spreading urban landscape. As development continues to spread from major urban centers such as Minneapolis/St. Paul (only one hour to the West), the Saint Croix will become even more important for meeting the recreational needs of a large population. The primary way for people to experience the resource is to be on or in it. Over 130 access points along the riverway enable boaters and canoeists to get onto the river.

Adjacent Land Uses

The riverway protects a long, narrow corridor that includes the river and a one-quarter mile area on each side of the river. Land ownership along the banks is federal, state, local, and private. State parks and forests are operated by the Minnesota and Wisconsin Departments of Natural Resources. Remaining land is held by private interests: individual and commercial. In addition to residential and commercial developments, there are

numerous agricultural developments. All of these uses impact the riverway. Proximity to large urban areas threatens the Saint Croix. Encroaching development leads to a proliferation of houses, bridges, and other structures along the riverway. Adjacent land uses that present direct threats to the integrity of the Saint Croix include channels, dams, power plants, and pollution.

The Federal land acquisition program for the Saint Croix National Scenic Riverway has been completed. As outlined in its enabling legislation, the park was prohibited from acquiring more than 100 acres per mile. The park boundary could not encompass any more than 320 acres per mile. Since these ceilings have for the most part been met, the riverway will continue to be challenged by issues outside its boundaries.

Public Use

More than 2 million people live within a two hour driving distance of the riverway. Nearly 1 million people visit it each year. This statistic is considerably higher than current park visitation figures due to the fact that visitors to state and local parks and forests are not counted in National Park Service statistics. Yet they visit the riverway. Only a small percentage of people who use the riverway currently visit any of the National Park Service visitor centers.

The riverway uses a visitor counting system developed by the Denver Service Center. From 1980 to 1991 an average of 476,000 people visited Saint Croix National Scenic Riverway annually. Visitation increased steadily from 379,000 in 1980 to 625,000 in 1987, before leveling off in the 500,000 range. In 1992 over 500,000 visitors passed through the riverway. In 1993 the riverway instituted a new statistical system and the visitor count was 341,400. Approximately 8 to 15 percent of riverway visitors use the visitor centers or participate in ranger led activities. *surrounding communities and scenic offer*

The riverway offers a variety of experiences

Most visitors are boaters and canoeists. The majority are repeat visitors from the region. Visitors also have the option to experience the river on a commercial paddleboat operated out of Taylors Falls, Minnesota. This experience is especially popular with those who would not otherwise get out on the river.

Fishing enthusiasts, hunters, and auto tourists use the riverway in significant numbers. The area is especially popular for viewing fall colors. School groups in spring and fall are another important group of visitors.

The riverway has a long tradition of use by local residents, many of whom do not realize that the Saint Croix and Namekagon are a unit of the National Park System.

Several visitor studies provide information about public use of the riverway. These include Visitor Center Observation Studies for the four visitor centers, a Lower Saint Croix River Aerial Survey (1980), and a Study of Area Visitors to Northern Wisconsin sponsored by the Northwest Regional Planning Commission (1986). While these studies provide some basic information about park visitors, more specific study will have to be completed if a detailed constituency profile is desired by the park.

Planning History

Separate Master Plans for the Saint Croix and the Lower Saint Croix National Scenic Riverways were completed in 1976. These plans state that interpretive services should focus on non-personal services and small visitor centers and compliment the work being done by state parks. This has, for the most part, been the approach of the park's interpretive program for the past decade and a half.

The Interpretive Prospectus completed in 1978 provided a good starting point for park interpretation, but it is outdated.

Separate General Management Plans for the Saint Croix and Lower Saint Croix National Scenic Riverways were started in Fiscal Year 1994. They are currently in progress and are scheduled to be completed in Fiscal Year 1997 or Fiscal Year 1998.

Existing Conditions--1993

Management Entities

Because of its physical and political layout, the Saint Croix National Scenic Riverway is managed by several different public and private entities. The National Park Service has forged partnerships with many, including the States of Minnesota and Wisconsin, counties, towns, and private and commercial interests.

Differences in philosophy and regulations exist among these management entities. The park staff is aware of public confusion over the different agencies and feels that most visitors do not identify the area with the National Park Service. This may be due to the fact that state and local management predated federal management. One aim articulated by the park staff is the need to emphasize the riverway's identity as a unit of the National Park System.

According to the current Master Plan (1976), park interpretation is intended to compliment the interpretation of other entities such as the state parks. This challenges the National Park Service to interpret the Service's mission and the Saint Croix National Scenic Riverway as a nationally significant resource.

One successful partnership is the Saint Croix Valley Interpreter's Association (SCVIA), composed of interpreters in the area. The Association has done a great deal to further riverway interpretation through partnerships.

Audiovisual Programs

The park has a 12-minute film entitled "Saint Croix Reflections." Through its stories and images, the film invites people to enjoy the resource. It sets a mood and feeling for a visit to the riverway. The film is also on videotape, making it available for outreach programs.

The current sound/slide program is dated and generic. It does little that is not done better and in more depth in "Saint Croix Reflections."

Personal Services

The interpretive staff consists of a Chief of Interpretation, three permanent district interpreters, a Stillwater interpreter, and several seasonal interpreters (the number varies from year to year).

Staffing levels at the park have never been adequate, and were severely impacted by budget cuts during the past decade. Because of this, the park is not able to meet its minimum requirements for personal services.

National Park Service interpreters provide programs in areas along the riverway such as state park campgrounds; the majority of visitors to state parks visit the riverway. Park interpreters also ride a commercial paddleboat downstream from Taylors Falls, Minnesota, to provide interpretive services.

Visitor centers, scheduled programs, outreach programs, preventive maintenance and housekeeping of interpretive equipment, supplies, and facilities, and roving interpretation at access points and on the river are vitally important parts of the program. Roving interpretation is of particular importance because service interpretive programs are not reaching most boaters, a large component of park visitation. Outreach is essential to build a constituency for the river, essential to preserve water quality and the scenic viewshed. A goal is to provide a National Park Service presence on the Lower Saint Croix National Scenic Riverway--the NPS manages only a portion of this unit.

In addition to developing and presenting interpretive programs, interpreters manage the park's cultural resources program, collections, fee program, VIP program, Eastern National Park and Monument Association (ENPMA) and public information. Routine tasks are complicated by the physical layout of the riverway. As a case in point, Trego District interpreters drive over 350 miles (round trip) to update their bulletin boards.

Four visitor centers, distances, and collateral duties contribute to making personnel and staffing requirements for the park's interpretive efforts increasingly complex. The interpretive program is negatively impacted by insufficient staff. Starting at the top, the Chief of Interpretation requires a staff so that he or she has time to provide essential direction and leadership.

The park has experimented with other interpretive contact sites to reach its visitors. At one time, a houseboat was donated to the park and used as a visitor contact facility. The cost was prohibitive, and the boat is no longer being used in this capacity. The boat was recently taken out of retirement in an effort to deal with a critical resource management issue: zebra mussels.

Publications

Park Folder--The park has a standard unigrid park map/brochure. It provides minimal interpretation of park themes. The map covers the entire 252-mile riverway from the Namekagon Dam to the Mississippi River. In trying to cover such a large area, detail is sacrificed. The park does, however, provide inexpensive handouts that focus on specific sections of the river. These are available in boxes attached to bulletin boards, at visitor centers, and through commercial outfitters. The park has other brochures that have been produced in-house (not in official site bulletin format). The park staff produces a newspaper annually, The Two Rivers Journal.

"Rivers Are Alive" Educational Outreach Program--The park has developed a successful educational outreach program that focuses on aquatic life in the riverway. (See Appendix III.)

Cooperating Association--Eastern National Park and Monument Association (ENPMA) is the park's cooperating association. However, the park's sales operation is not large enough to justify hiring Eastern National sales personnel. Instead, National Park Service interpreters oversee the sales operation. Books and other interpretive materials are sold at each of the park visitor centers. The Lower District Interpreter serves as the ENPMA coordinator.

Signage and Bulletin Boards

Signs and bulletin boards are located at river access sites to provide orientation and safety information. Because the Saint Croix National Scenic Riverway is a linear resource with over 130 access points, onsite information/orientation is essential.

At many of the landings, a profusion of signs mars the scene and confuses rather than orients visitors. This is a result of having multiple agency management of the riverway. Each agency is inclined to post its own signs and regulations. The information is

sometimes contradictory, and style and presentation are inconsistent.

Amphitheaters/Campfire Circles

The riverway has no amphitheaters or campfire circles, primarily because there are no suitable locations such as developed campgrounds. Through partnerships with state and local parks and private campgrounds, park interpreters present programs at their facilities. Some are not suited for slide illustrated talks and are marginal for campfire talks. Interpreters employ considerable creativity to develop programs at these facilities.

Visitor Centers

The riverway has no one specific point of access or "funnel" that all visitors pass through. Instead, people enter the park from every direction. In an attempt to contact visitors, the park has four visitor centers.

On signs and in literature, the park's visitor centers are currently labeled by a variety of names including "District Office," "Information Station," "Park Headquarters," and "Visitor Center."

These centers have similar functions and provide similar information. Numerous state and local visitor centers are scattered along the riverway.

With the exception of Marshland, the present buildings have been converted to visitor centers. They were originally a motel (park headquarters), a downtown store (Stillwater), and a tavern (Trego). The spaces are not ideal for interpretation and visitor services. The Highway "70" (Marshland) visitor center was built for that purpose and is well located next to the river.

All four visitor centers are mobility accessible and provide adequate interior space for movement. These visitor centers reach limited numbers of park visitors.

- ▶ **Marshland Visitor Center;** Pine City, Minnesota; open seasonally; Mile 87, Saint Croix River

Park staff and publications refer to this facility as Highway "70" and Marshland, to the confusion of visitors.

3 in upper
Riverway?

Located along Highway 70, the new facility currently serves more as a traveller's rest stop than an interpretive center. This may be due to the fact that some visitors do not realize that it is a visitor center, in part because of inadequate signs. Most visitors use the restrooms (which are located off a breezeway outside the center) and do not come into the center. For those who do come inside, interpretive exhibits are limited. There is a small sales area and an audiovisual room.

- **Park Headquarters Visitor Center;** Saint Croix Falls, Wisconsin; open year-round; Mile 54, Saint Croix River

Tucked in the lower level of the park headquarters building in Saint Croix Falls, Wisconsin, the Park Headquarters Visitor Center serves visitors to both the upper and lower Saint Croix River. Exhibits focus on European settlement, including logging, the river, and early settlers to the area. There is a secondary interpretive focus on natural history through mounted birds, rocks, and a touch table. This visitor center has an audiovisual room where the park movie "Saint Croix Reflections" and a five-minute slide show are shown. There is a small cooperating association sales area.

There are two highway signs on U.S. 8. One refers to "Visitor Center," the other to "Park Headquarters." Signage at the visitor center is inadequate. The sign on Main Street, Saint Croix Falls, is almost blocked by vegetation. There are no directions for parking--there are three possibilities: straight ahead to the river dead end, into the maintenance yard parking, or into the visitor parking. Directions from the parking area to the visitor center (on the opposite side of the building under park headquarters) are confusing. Visitors sometimes use the administrative entry rather than the public entry.

Of all park visitor centers, this one does the best job of interpreting park themes and mission. The logging exhibit is very well done and capitalizes on the large logging sled--an impressive attention getter. The interpretive shortcoming is the overemphasis on the logging story to the exclusion of more important themes.

- **Lower River Visitor Center;** Stillwater, Minnesota; open year-round, intermittently; Mile 22, Saint Croix River

This is the newest addition to the park's interpretive facilities. The park chose to open a visitor center in Stillwater in order to promote the National Park Service identity among area residents and recreational users of the Lower Saint Croix. Located in the commercial district of downtown Stillwater, Minnesota, this visitor center primarily serves weekend visitors who have come to the area for shopping. Although most of these individuals have not come specifically to visit the riverway, the center has the potential to serve as a point of introduction for future visits.

Currently, the space is large and the exhibits few. They focus on the river and resource stewardship and were produced by the park staff to prepare for the opening of the center.

- ▶ **Namekagon Visitor Center;** Trego, Wisconsin; open seasonally; mile 38, Namekagon River (171 miles above the source of the Saint Croix River)

VE { This is the northernmost of the park's four visitor centers. It serves the upper Saint Croix and Namekagon River area which is especially popular with canoeists. Appropriately, the center has a birchbark canoe on display. Other exhibits interpret natural history with limited interpretation of history. It has a small auditorium and a sales area.

Wayside Exhibits

{ Approximately 130 access points, public and private, exist along the river. Interpretation is provided by 12 wayside exhibits placed at landings along the riverway. Topics include fur trading, logging, dams, paddle boats, and natural history. Most are generic and are not tied to any viewable resources at the site. The orientation maps are very effective. The wayside exhibits are fiberglass embedment and smaller than the standard 36" X 48" size. Some are in poor condition and/or incorrectly placed according to the park's Wayside Exhibit Plan.

Interpretive Themes and Objectives

Interpretive Themes

The diversity of park resources provides a broad spectrum of interpretive themes:

- ▶ Geologic forces created the landscape of the Saint Croix River.
- ▶ Riverway resources depend on the water quality of the Saint Croix River system.
- ▶ The Saint Croix National Scenic River contains a great variety of plants and animals.
- ▶ Native plants and animals interact with each other and the environment as interdependent parts of an ecosystem.
- ▶ The history of the riverway is the story of human interaction with the environment and its resources.
- ▶ The riverway offers a variety of recreational opportunities for visitors.
- ▶ The riverway is a unit of the National Park System and is managed under the 1916 Organic Act.

Management Goals and Objectives

Interpretive goals are listed in the Annual Statement for Interpretation (Appendix I). The overall goal of park management and interpretation is to build an ethic of stewardship for the riverway and a recognition among visitors of the significance of its natural and cultural resources.

New General Management Plans for the Saint Croix National Scenic Riverway and the Lower Saint Croix National Scenic Riverway were initiated in Fiscal Year 1994. These plans will articulate specific goals and objectives for the management of the riverway.

Interpretive Recommendations

Viable and effective interpretation is essential at Saint Croix National Scenic Riverway. Interpretation must assume a role in generating a regional commitment for riverway protection. "Death from a thousand cuts" is a major concern for a linear park. This must be countered by protection from a million people.

General Recommendations

Accessibility

As museum exhibits are replaced or rehabilitated, type size of the smallest labels will be increased and contrast will be heightened. All new audiovisual programs will be open-captioned. As an interim strategy, the park will make audiovisual program scripts available for hearing impaired visitors.

Amphitheaters/Campfire Circles

The park staff will evaluate programs given at amphitheaters and campfire circles and work in partnership with owners to improve these facilities. Working with state and local parks, the park will investigate grants to order to upgrade existing facilities or construct new amphitheaters and campfire circles.

Audiovisual Equipment

As it becomes necessary to replace existing audiovisual equipment, the park will upgrade to meet technological advances. Laser disc players and video monitors will replace film trees and slide projectors. To better serve all park visitors, all audiovisual programs will be open-captioned. "Saint Croix Reflections" will be placed on videodisc, and videodisc players will be provided for all four visitor centers.

Park Folder

The park staff will continue to advise Harpers Ferry Center, Division of Publications, of needed changes in the park folder.

Signage and Bulletin Boards

The riverway is impacted by a multitude of signs erected by several agencies. The riverway staff should work with other agencies to develop and implement guidelines for signage.

Staffing

The park will work to increase the size of the interpretive staff, especially seasonally, to accomplish interpretive goals (see Existing Conditions, page 9).

Visitor Centers

The Saint Croix National Scenic Riverway has no ideal locations for visitor centers. The park will market its interpretation to visitors and ensure that meaningful interpretive experiences await those who use park visitor centers.

The park will operate visitor centers at Marshland, Saint Croix Falls, Stillwater, and Trego. However, the interpretive emphasis of each will change to meet the needs of park visitors. Because the majority of visitors will not visit more than one of the centers, it is appropriate for the centers to provide similar information and services.

A goal is to reduce reliance on traveling exhibits. They do not draw visitors to visitor centers, nor do they address interpretive themes effectively.

Eventually, all four visitor centers will have professionally planned and produced museum exhibits. Interim exhibits produced by park staff and permanent professional exhibits will emphasize the river resource through messages included in all interpretive media, and make maximum appropriate use of interactive interpretive techniques. All visitor centers will retain the popular touch tables, will have small reading alcoves for children, and will have a variety of videotapes available.

The recommendations that follow have been identified as immediate, short term, and long term goals.

PRIORITY I-- Immediate Implementation

Audiovisual Arts

The film "Saint Croix Reflections" will be made available for showing in all four park visitor centers.

Park staff will prepare large point scripts of "Saint Croix Reflections" for use by hearing impaired visitors.

Use of the sound/slide program will be discontinued. A variety of audiovisual programs will be made available for visitors at each of the visitor centers. In addition to natural and cultural history, these programs will include topics such as boater safety and minimum impact camping.

Signage and Bulletin Boards

Signage is the single most important method of contacting visitors and publicizing the National Park Service presence. A five-year sign program will be formulated to improve riverway signs.

Key signage issues include:

--Visitor centers should be prominently labeled as "Visitor Center," on highway signs and on entrance signs. Signage outside the Park Headquarters Visitor Center needs upgrading so that visitors can find the visitor center.

--Access roads to all public river access points (excepting those in state parks) should be identified with a standard brown-and-white National Park Service sign, including a National Park Service Arrowhead Emblem decal, regardless of who operates the landing.

--All river access points except those in state parks should have identical identification signs. River miles will be indicated at river access points.

An additional challenge is presented by the number of entities along the riverway, each having its own approach to signage. Although the National Park Service cannot completely resolve this issue, a great deal will be accomplished through establishing and

adhering to a parkwide National Park Service sign program. This will be the responsibility of the park Sign Committee.

Because the Saint Croix National Scenic Riverway is a linear resource with over 130 access points, bulletin boards are essential for visitor information/orientation. The majority of access points have bulletin boards. In order to improve bulletin board image and efficiency, the park will establish a unified approach to its bulletin board program. The Superintendent will appoint a park employee who will coordinate with district rangers and interpreters to determine bulletin board content and layout to ensure consistency.

The park will use partnerships with other riverway entities to set standards and ensure consistency for bulletin boards along the riverway.

Trails

Existing and new trails will be evaluated for interpretive potential. Interpretive services will be based on demonstrated need. The Interpretation and Visitor Services staff will apply the following criteria:

- ▶ Trail interpretation will fill a void not provided by other interpretive services.
- ▶ Numbers of visitors will justify the expense of providing interpretive services.
- ▶ Interpretive trails will complement rather than compete with nearby trails, such as those in state parks.

If a decision is made to interpret a trail, the method will be evaluated and documented. Personal services, self-guiding brochures, and wayside exhibits are possibilities. The costs of personal services, stocking brochures, and maintaining exhibits will be considered. Trailhead and trail wayside exhibits will be incorporated into the Wayside Exhibit Plan.

Visitor Centers

Highway and entrance signs and publications will be standardized so that all four facilities are called "visitor center."

The four facilities will be called Namekagon Visitor Center, Marshland Visitor Center, Park Headquarters Visitor Center, and Lower River Visitor Center.

- ▶ **Marshland Visitor Center**--Visitors to Marshland need to find out that there is a national scenic riverway, then learn something about it. Interpretive goals are to get visitors into the building and to communicate the concepts of stewardship and "The Rivers Are Alive" program.

The themes to be interpreted at Marshland are:

- ▶ Geologic forces created the landscape of the Saint Croix River.
- ▶ Riverway resources depend on the water quality of the Saint Croix River system.
- ▶ The riverway contains a great variety of plants and animals.
- ▶ Native plants and animals interact with each other and the environment as interdependent parts of the ecosystem.
- ▶ The riverway is a unit of the National Park System and is managed under the 1916 Organic Act.

Developing temporary exhibits for this visitor center is an immediate priority for the park. The park can meet this goal through low-tech interactive exhibits (including the ever-popular touch table). The park staff has the knowledge and talent to successfully produce these exhibits.

Minnesota and Wisconsin have mandated environmental education curriculums for their schools. Many schools have their own nature centers or are aligned with existing environmental education centers. Because of this, Marshland is an excellent place for the park to highlight its "Rivers Are Alive" educational outreach program. It is a successful program and can be marketed to the public. Exhibits placed in this facility must be suited for school groups and the general public.

Like the Headquarters Visitor Center, Marshland will include a reading corner for visitors to enjoy while at the center. "Saint Croix Reflections" and a variety of other videos will be available for viewing.

Because the Marshland Visitor Center will have an educational outreach focus, the park may consider applying for an educational grant program such as the National Park Foundation or "Parks As Classrooms" to partially fund the new exhibits.

- ▶ **Park Headquarters Visitor Center**--The south door to the visitor center will be unlocked and signed so that visitors can use this more natural entrance.

Because of the quality of the existing exhibits, replacement is not a top priority.

As in the other visitor centers, this center will retain its sales area and touch table. A reading corner will be created where visitors (especially children) can enjoy a book or story during their visit to the center.

The Park Headquarters Visitor Center will continue to show the film "Saint Croix Reflections." A variety of other video titles on river-related topics will be made available to visitors. The current slide show will be discontinued. A new one may be developed in the future, as funding and staffing permit.

- ▶ **Lower River Visitor Center**--This facility is an experiment. Its function is to provide a contact point close to the larger population centers in order to make people aware of the resource, encourage them to experience it, help them to experience it, and to provide regional National Park Service information. The short-term recommendation is to improve the existing facility. Better identification is needed on the outside. Public restrooms are needed on the inside.

The visitor center can serve as a base for roving and guided interpretation along the Stillwater waterfront.

The park staff will continue to evaluate the effectiveness of this facility.

Wayside Exhibits

Ultimately, the park needs to establish a new wayside program to replace existing generic wayside exhibits with site-specific thematic interpretation, and follow National Park Service standards for size (36" X 48" for vertical exhibits; 24" X 36" for low profile) and placement. The PRIORITY I recommendation is for the park staff to inventory potential sites for thematic wayside exhibits, leading to a parkwide Wayside Exhibit Plan. The plan will also consider opportunities for wayside exhibit interpretation outside visitor centers, especially at Park Headquarters, Marshland, and along the waterfront at Stillwater.

The park will replace current fiberglass panels that are showing signs of wear. In the future, they will be replaced at least every four years. New fiberglass embedments will be installed at the sites where they were originally intended to be placed, except for Philippi Landing.

PRIORITY II-- Near Future

Audiovisual Arts

To replace the existing sound/slide program, the park staff will develop several short (approximately five-minute) slide shows that focus on particular areas and resources of the riverway. Each program will highlight the resources and recreational opportunities of a particular district. Harpers Ferry Center will produce the slide shows from slides and scripts provided by the park.

Publications

The following publications are recommended for the Saint Croix National Scenic Riverway:

Interpretive River Guides--Inexpensive, waterproof guides will provide orientation and interpretation for canoeists. Each guide will cover a particular section of the rivers, providing a map and interpretation of the natural and cultural history. These guides will provide visitors with onsite interpretation of the resource as they enjoy it.

Outreach Packets--Park staff will create packets for school groups, both those that will visit the park and those that cannot travel. These would include student and teacher materials and a videotape.

"Rivers Are Alive" Teacher's Guide--The park has developed a successful educational outreach program that focuses on aquatic life in the riverway. As this program continues to grow, it will become necessary for classroom teachers to take an increasingly active role. A professionally-developed teacher's guide will expand the program without having to create additional demands on already limited staffing. This guide will allow teachers to use and adapt the program for their own use, whether or not they are able to get to the riverway. Eventually, the park may consider presenting teacher training workshops for the "Rivers Are Alive" program. The field exercise will be modified for safety and resource protection considerations. Post-activity exercises will be developed to more completely follow through with the program.

Popular Park Book--Park staff should find a publisher to plan and produce a popular, full color overview publication in the \$5-\$8 price range. The book will provide an easy to read, illustrated summary of the riverway's themes.

Visitor Centers

- ▶ **Headquarters Visitor Center**--Replace the "Where Is Saint Croix Falls?" exhibit, the first exhibit one sees after entering the north door, with one that is more inclusive of the entire riverway.
- ▶ **Marshland Visitor Center**--New, professionally planned and produced museum exhibits will interpret stewardship and the environment--"The Rivers Are Alive." The goal is to provide opportunities for visitors to explore issues and resources and to get involved. The major focus will be environmental involvement and education.

Themes to be interpreted at Marshland are:

- ▶ Geologic forces created the landscape of the Saint Croix River.
- ▶ The water quality of the Saint Croix River impacts all riverway resources.
- ▶ The Saint Croix National Scenic Riverway contains a great variety of plants and animals.
- ▶ The native plants and animals interact with each other and the environment as interdependent parts of the ecosystem.
- ▶ The riverway is a unit of the National Park System and is managed under the 1916 Organic Act.
- ▶ **Lower River Visitor Center**--New exhibits will be provided focusing on recreation, the National Park System, and river resources.

The interpretive themes to be interpreted here are:

- ▶ The water quality of the Saint Croix River system impacts all riverway resources.
- ▶ The Saint Croix National Scenic Riverway contains a great variety of plants and animals.
- ▶ The riverway offers a variety of recreational opportunities for visitors.
- ▶ The riverway is a unit of the National Park System.

Due to its location and visitor group, the Lower River Visitor Center will function best as an interpretive bookstore combining exhibits with a sales area. Books and other interpretive materials (posters, tapes, educational materials) will focus on recreation and the natural and cultural history of the riverway as well as other areas of the region. It will provide an excellent opportunity to also highlight other Wild and Scenic Rivers. This facility will serve as an orientation point for the entire Saint Croix National Scenic Riverway and, as such, will provide an opportunity to get visitors excited about the riverway.

New interpretive exhibits will be integrated into the sales area--providing interpretation keyed to areas of the bookstore, i.e., the National Park Service, wildlife, river recreation, etc. Recreation exhibits will include boating, canoeing, fishing, cross-country skiing, and auto tours. Large photomurals on the long wall can contribute to this interpretation. In addition, there may be adequate space for traveling exhibits (or for permanent exhibits if the park chooses to install them). The center will retain its current audiovisual room, and an array of videos will be made available for visitors to view while at the center. The center will also retain its touch table which is popular with visitors, especially children.

Visitor orientation to the entire riverway--including the management partners (state, county, and local forests and parks)--will be an important function of the Lower River Visitor Center. As a visitor center, the site must also provide for visitor comfort and enjoyment. Restroom facilities should be made available for visitors at this site.

The park will investigate potential sources of funding for the Lower River Visitor Center. Some financial support for the combined exhibit/sales area may be available through the park's cooperating sales association, Eastern National Park and Monument Association.

When the park's lease on the site expires in 1997, it will be necessary to reevaluate the feasibility of the Lower River Visitor Center.

- ▶ **Namekagon Visitor Center**--Themes to be interpreted at Trego are:
 - ▶ The Saint Croix National Scenic Riverway contains a great variety of plants and animals.
 - ▶ The history of the riverway is the story of human interaction with the environment and its resources.
 - ▶ The riverway offers a variety of recreational opportunities for visitors.
 - ▶ The riverway is a unit of the National Park System.

The front section of the visitor center will focus on canoeing and will provide specific and up-to-date information (safety, regulations, minimum impact camping, and what-to-see-and-do). It will feature a large graphic of a canoeist on the river.

The center currently has a birchbark canoe on display. This canoe will be placed in an interpretive context by placing objects (mannequin?, fur trade goods) in the canoe, providing text, and putting a large photo mural behind it. Animating this canoe can capture the interest and imagination of visitors.

The Namekagon Visitor Center presently has some exhibits on natural history. These will remain and be expanded. A number of natural history themes are appropriate subjects for museum exhibits: the effects of logging, the return of the pine martens, endangered species, and the interface between mixed hardwood and boreal forests.

As in the Headquarters and Marshland Visitor Centers, this visitor center will have a touch table and a children's reading area. One question to be resolved is whether or not a new visitor center should be constructed. From the point of view of interpretation within the building, there is little difference. The layout of the existing structure lends itself to effective information/orientation, exhibit, and audiovisual programs to accommodate current visitation. Advantages of a new structure would be additional interpretive office space (although this might be provided by adding a wing to the existing structure), a larger exhibit space, closer proximity to the Trego river access, and elimination of the safety hazard posed by having the river access on the opposite side of the road. A new facility would accomodate school groups. It is difficult to justify the expense a new visitor center when only 5,000 visitors used the existing one in 1992.

One alternative is to add a new wing to the existing structure which would consist solely of information/orientation and exhibit space, an audiovisual room, restrooms, and a small office. The current building would then be used for district offices.

Another alternative provides for a new office/storage wing for non-interpretive functions, allowing expansion of interpretive offices in the existing building.

Wayside Exhibits

The park's Wayside Exhibit Plan (PRIORITY I) will be implemented. All existing wayside exhibits will be removed when the new generation is installed. Because of vandalism problems, especially in the upper half of the riverway, fiberglass embedment exhibits are recommended rather than porcelain enamel.

PRIORITY III-- The Not So Near Future

Visitor Centers

- ▶ **Headquarters Visitor Center**--New exhibits will interpret the river using the theme "The Resource Is the River."

Themes to be interpreted at the Headquarters Visitor Center are:

- ▶ Geologic forces created the landscape of the Saint Croix River.
- ▶ The water quality of the Saint Croix River system impacts all riverway resources.
- ▶ The riverway contains a great variety of plants and animals.
- ▶ The native plants and animals interact with each other and the environment as interdependent parts of an ecosystem.
- ▶ The history of the riverway is the story of human interaction with the environment and its resources.
- ▶ The riverway is a unit of the National Park System.

Mussels and dragonflies might be subjects of exhibit interpretation--the variety of both species in the riverway indicates exceptional environmental quality. Exhibits will emphasize that aquatic life is dependent on water quality and ecosystem integrity. Aquatic ecology is a topic that is equally relevant to general park visitors and specialized educational groups.

The best place to interpret the falls and the dam is outside on the patio, overlooking the scene.

Publication

Park Handbook--It is recommended that a park handbook be developed. This can be done through a partnership arrangement with a local publisher. This handbook could also be sold by other management entities along the riverway such as the state parks and forests. The handbook is a lower priority because handbooks, although an excellent interpretive medium, are expensive to produce.

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APPENDIX I

Management Objectives from Annual Statement for Interpretation

- ▶ To make visitors aware of geologic forces, particularly glaciers, that created and continue to shape the landscape.
- ▶ To make visitors aware that geologic processes influenced the character of the riverway's natural systems and outstanding scenery.
- ▶ To promote a basic understanding of the interaction of natural systems within the riverway.
- ▶ To promote an awareness in visitors of natural forces that pose hazards to their safety.
- ▶ To instill an awareness of pollution that can affect water quality.
- ▶ To modify visitor behavior that might impact water resources.
- ▶ To promote an understanding that all life depends on water and how pollution threatens water quality and life.
- ▶ To promote an understanding of the ecosystem concept and the importance of biological diversity to an ecosystem.
- ▶ To promote visitor appreciation of the unique characteristics essential for the survival of flora and fauna in the ecosystem.
- ▶ To make visitors aware of the interdependency of the elements of an ecosystem and the consequences of altering or removing elements.
- ▶ To make visitors aware of the threats exotic species can pose to an ecosystem.

- ▶ To promote an understanding and support for the NPS mandate to preserve resources, natural processes, and ecosystems in perpetuity.
- ▶ To promote an appreciation of archeological resources, their unique and finite character.
- ▶ To reduce illegal collecting of artifacts and prevent vandalism to archeological and historic resources.
- ▶ To instill an understanding of how the environment and resources shaped human use of the Saint Croix Valley.
- ▶ To instill an understanding of how different cultures perceived, used, and impacted resources historically, and how people impact resources today.
- ▶ To promote an understanding of the history of the establishment of the riverway and awareness of present challenges to protecting the riverway.
- ▶ To modify visitor behavior that adversely impacts resources, using history as an example.
- ▶ To encourage visitors to try different experiences that put them into direct contact with the river and its resources.
- ▶ To foster an ethic that promotes recreation as a means to experience and appreciate the riverway, rather than an end in itself.
- ▶ To promote responsible recreational behavior that has minimal impact on resources.

APPENDIX II

Minimum Interpretive Program

The Master Plan for Saint Croix National Scenic Riverway states the following: The story of the river and its sub-themes will be presented in ways that minimize the need for personal services. Adequate visitor information is required to fulfill other purposes detailed in the Master Plan such as recreational opportunities available, visitor services, facilities available, resource protection, and environmental education. The master plan for the lower river states that the National Park Service will provide reasonable amounts of information concerning recreational opportunities available on the Saint Croix and Namekagon Rivers.

NPS Management Policies, Chapter 7, and *Interpretation and Visitor Services Guideline*, NPS-6 state that a park's minimum interpretive operation should provide services that accomplish the following:

- 1) Foster appreciation and understanding of parks and their resources, and in turn, develop support for preserving them;
- 2) Encourage safe, appropriate, minimum impact experiences in the parks;
- 3) Promote public understanding and support of the Service's policies and programs.

The minimum interpretive program for the riverway shall meet the following standards:

A. Visitor Centers

1. The Lower River Visitor Center must be open seven days per week from June through Labor Day. The center will be open five days per week the rest of the year to include weekends.

2. The Headquarters Visitor Center must be open year-round; seven days a week from May to mid-October and Monday through Friday the rest of the year.
3. The Marshland Visitor Center will be open seasonally from May to mid-October. It will be open seven days a week from June to Labor Day.
4. The Namekagon Visitor Center will be open seasonally from May to mid-October. It will be open seven days a week from June to Labor Day.

The prime function of each visitor center is to provide visitors access to orientation information and interpretation of riverway resources through personal services, or interpretive media such as audiovisual programs, publications, and exhibits.

Interpretive programs, usually campfire or slide-illustrated talks, will be given on weekends at adjacent state and local parks. Programs will be related to major interpretive themes. Safety, resource, and orientation information will be provided.

B. Environmental Education

During May and September, Environmental Education programs will be presented on the river and at schools adjacent to the riverway.

C. Other

Special programs will be given to civic, church, or other groups consistent with policies and subject to staff availability.

Attention will be given to wayside exhibits, bulletin boards, and publications which involves a commitment of staff.

D. Staffing

To implement this program, each visitor center requires one permanent employee, usually a District Interpreter, and two seasonals, or a total of four permanents and eight seasonals.

APPENDIX III

Educational Outreach Programs

Program Title: "THE RIVERS ARE ALIVE"

Theme: The St. Croix River is a complex system of interconnected habitats that support many forms of plant and animal life.

Participants: Fourth Grade classes

Program Goals:

1. Students will gain a greater respect for the river.
2. Students will develop stewardship that includes actively protecting the Riverway
3. Students will gain an understanding of the river system, life forms and the interrelationships contained there.
4. Students will develop a sense of ownership.
5. Students will be able to identify the National Park Service with the St. Croix

Background: ST. CROIX NATIONAL SCENIC RIVERWAY

In 1968 Congress passed the Wild and Scenic Rivers Act to protect streams and rivers that were still relatively free flowing and possessing unique scenic beauty or ecological significance. Eight rivers were included in the original act. One was the St. Croix River with its main tributary, the Namekagon River. They were set aside for protection because of the clean, clear water in the rivers and because most of the land along the river was still undeveloped. Visitors to the river are able to find a wealth of wildlife. Within the water are many insects, fish and many species of mussels including two that are very rare. On the riverbanks and in the trees animals such as beaver, muskrat, deer, otter, and Bald Eagles can be found. Recreational opportunities include canoeing, camping, fishing, swimming and picnicking.

Pre-visit Preparation Activity Behavioral Goals:

1. Students will become excited and curious about the Riverway visit.
2. Students will conduct themselves with respect for the resource.
3. Students will understand how to participate safely.

HABITAT NEWS (mini-magazine) can be duplicated and distributed to the students before the pre-visit activity. The stories and activities focus on the Riverway habitats, wildlife and the National Park Service.

OBSERVATIONS (wildlife reference sheet) You may duplicate this and review the types of life forms that live in and near the river before the pre-visit activity "The Web of Life".

Pre-visit activity: "THE WEB OF LIFE"

The focus of the "Web of Life" is the interdependent nature of all living things, plant or animal, and their place in the natural pyramid of life in various communities (forest, river, meadow, etc.). It will also highlight changes that occur, natural and human caused, and the affects they have on the environment.

It can be done by the teacher or by a visiting Park Ranger prior to the trip to the river.

Objective: Students will learn how all life and everything around it is connected, either directly or indirectly.

Materials:

--A ball of yarn

--Cards with pictures of the plants, elements and animals found in the freshwater marsh (on string to be worn around the neck). Actual items can be made available for hands on reinforcement such as a dragonfly, mussel, turtle egg shells, etc.

Introduction: Discuss **Habitat News** Mini-Magazine and ask the class to define Habitat and give examples of Habitat. What makes for a good habitat? What is so important about living in a good habitat? What is your habitat? Is your town a Habitat? The Northwoods? The Earth? What happens when part of the habitat is altered or destroyed? How does it affect us?

We are all connected to each other in some way. We are dependent on things in our environment, in our habitat. Without the trees the squirrels would not have

adequate places to live or food to eat. And without the squirrels, what would happen to the numbers of new trees? What are things in our environment that we are dependent on? Keep these things in mind when we play the "Web of Life" game.

Methods: Have everyone in your group stand in a circle. Each player wears a Web of Life card around their neck. The player becomes the animal, element or plant that s/he is wearing. The webbing begins by having one person state who they are and one way in which s/he is connected to one of the other players in the circle. Example: I am a HAWK and I breathe AIR. The HAWK would then toss the ball of yarn to the AIR. The AIR would then state who s/he is and restate that HAWK needs AIR to live; then toss it to RABBIT who also needs AIR. Each player holding the yarn after the toss will state the relationship between the person s/he got the yarn from and how s/he is connected to the person and then how s/he is related to the person s/he throws it to next.

Relationships may be direct or indirect. For example, a HAWK is a carnivore that might normally eat a RABBIT, but the HAWK also depends on CATTAILS (a plant) because it needs to breathe the oxygen made by the plant. When the web is completed and each player is connected to someone else, find out what would happen if one of the players in the circle is lost through pollution, habitat loss, over population, etc. That player holds up his/her string. Find out how many other players are affected by holding up just one string. (As soon as the students feel their string move they should hold it up). This illustrates that everyone in the web is affected, directly or indirectly, by the loss of one member. After all members have been affected, reverse the process. Ask students how the damage can be healed. Show restoration of the area.

Discussion: Are any of the parts of the web more important to the survival of the whole than the others? Are you surprised that some animals or elements you had considered unimportant are actually essential to the survival of the whole web? When you are finished discussing these questions, untangle the web by carefully setting the yarn on the ground and then ask a teacher or student to roll it up. This activity works well with young children when they are seated and yarn is rolled between the players.

Total time: 25 minutes.

"When we try to pick out anything by itself we find it hitched to everything else in the universe." --John Muir

On-site activity: "Let's Go Mucking"

Objectives: After exploring the river and its five habitats (stream bottom, open water, water surface, stream edges and the forest canopy), the students will be able to:

1. List three of the habitats that make up the river.
2. List one plant or animal from each of three habitats.
3. List two plants or animals that have a predator/prey relationship.
4. Describe one way that they can help protect the river.

Materials:

- Golden Guide "Pond Life" and other field guides
- laminated wildlife "OBSERVATIONS" reference sheet
- small dipper nets and small seining nets
- bug boxes
- buckets
- A flip chart or whiteboard

Location: A pre-designated landing on the St. Croix River or Namekagon River

The students, teachers and chaperons will arrive by bus at the river landing where they will be met by a ranger. The ranger will gather the group in the picnic area and begin the program by asking the group if anyone can explain what a habitat is. The definition will be written on a flip chart or whiteboard when the group has arrived at a satisfactory description. The ranger will ask the students to look around the area and describe as many habitats as they can see. The ranger will list the habitats they have found on the whiteboard and will ask the students to give an example of a plant or animal they would expect to find in that habitat.

Time: 15 minutes

At this point the ranger will divide the group into pairs and give each pair a bug box and either a dipper net or a small seining net. Each pair of students will also be given a laminated "OBSERVATIONS" sheet which will have identified some of the more common animals and insects found in the water. Moving to the waters edge the students will be instructed to use their nets to find or catch plants and animals that they can find in the water or along the riverbank, examining them with their bug box lenses as they find them and attempting to identify them from their "OBSERVATIONS" sheets. All finds will be brought to a central

location and placed in several large buckets. After about twenty to thirty minutes the ranger will call the students from the river to the bucket location.

As the students change to dry shoes, the ranger and teachers will gather the buckets and place one individual of each species into a bug box or other container. With the students seated in a circle, the ranger will discuss the species found and pass the boxes around. The students will try to place the animal in the food chain - plant eater, lower predator or higher predator. Each student will have a chance to closely examine each species.

Time: 40 minutes

On-site wrap-up: With the students gathered together, the ranger will take a couple of minutes to review the wealth of life found in just one small section of the river and discuss how this diversity reflects the water quality of the river. Then the ranger will ask the students if they can list some of the ways that they can help to protect all the plants and animals living in the river. After discussing these ideas the ranger and children will release the animals back into the river. The ranger will then thank the children for visiting the Riverway and refer the class to the teacher for departure.

Time: 15 minutes

Total time: 1 to 1 1/2 hours

Post-visit activities:

"Create-a-River" ---In the classroom the students and teacher can create their own river using a dishpan as the stream bed, sand and rocks for the stream bottom, water and small models of some of the plant and animal life that they found in and along the St. Croix River. Build up vegetation, trees, etc. with twigs, stones, leaves, gathered on playground lawn. The models could be either small plastic pieces from a dime store or they could be made by the students. The activity would re-emphasize the diversity of life found in a river system.

Materials Needed: Dishpan, sand and rocks, water and models of plants and animals of the riverway (or have children draw them on cardboard and cut out).

"Pyramid of Life" -- For each identified habitat, have the children build a food pyramid, with the producers on the bottom, the primary consumers above them, and the secondary consumers on top. Have the children assume a character and have them physically create the pyramid of bodies. Note: Only do small pyramids with three levels using 3 - 6 children at a time on a gym mat. Discuss

how it is necessary for a wider base to support the upper levels. Use this as a springboard into discussions of Biomass levels and population changes.

Materials Needed: Floor mat and an area large enough to build body pyramids.

"To Dam or Not To Dam" -- An Aquatic Wild Program by Project Wild from the Western Regional Environmental Education Council. This activity presents an opportunity for role play. "The Students will be able to evaluate potential positive and negative effects from constructing a dam on a river...by role playing individuals representing differing perspectives and concerns related to a complex issue."

Materials Needed: Aquatic Wild reference book for outline of activity, cards with role title (with string to hang around neck).

Write a report about one of the animals discussed or found at the river.

Materials Needed: Reference books for children to look up information on particular animals.

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Birds	Reptiles and Amphibians
Flowers	Mammals
Insects	Butterflies and Moths
Trees	Non-Flowering Plants
Spiders	Pond life

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ST. CROIX NATIONAL SCENIC RIVERWAY

Program Title: "A LOGGER'S DAY"

Theme: Logging was both a difficult lifestyle and an activity that had a major effect on the St. Croix Valley.

Participants: Fourth grade students

Program goal: Through a hands-on activity, the students will learn some of the occupations in a turn-of-the-century logging camp and will discover some of the lasting effects of logging on the land, the water and the people of the St. Croix Valley.

Background: From August 24, 1839 when the first sawmill on the St. Croix opened at Marine-on-St. Croix, to June 12, 1914 when the last log drive ended, logging was a vital force in the development of the St. Croix and Namekagon river valleys. Men from all over the northern United States, Canada and Europe came to the valley to fill the jobs created by this industry. Cities and towns were built to house these men and their families and to provide some of the services that the loggers needed. Others came to the valley to farm the newly cleared lands. It was a time of great change in the population. The industry also had a profound effect on the land. When the loggers arrived they found towering stands of white pines mixed with red pines, aspen and other species. When the loggers finished in an area, it had been clear-cut and the forests that began to grow back were very different. Wildlife habitat was altered; improved for some animals, but destroyed for many others. Even the rivers were affected. The logging operations led to increased bank erosion and the loss of vegetation meant more runoff and increased siltation. Virtually everyone and everything in the area was affected in some way by this industry.

Previsit preparation:

1. Have the students read the "Camp Tattler" newsletter and discuss all unfamiliar terms.
2. Assign each student a job from the logging jobs list. Some of the jobs have a script to be read during the activity. Students with these jobs can practice reading their parts ahead of time.

On site activity - A day at a logging camp.**Materials needed:**

- logging tools
- sleigh
- historic photos
- cardboard "trees"
- 2 six foot lengths of rope
- 2 short sections of logs
- 6 dowels

The gym, playground or other designated area will be divided into two areas - the camp and the woods. The students will gather in the bunkhouse part of the camp where the bull cook will "wake" them with the call "daylight in the swamp". The students will then proceed to the cook shanty area where the cook and bull cooks will discuss their jobs, read the breakfast menu and show historic photos of dining rooms. After breakfast the foreman will discuss his job and then will direct the "loggers" to the woods where each person will either read their part or demonstrate their job. The road monkeys will read, the sawyers will demonstrate the cross cut saw, etc. There will be a short break in the middle for the bull cook to read the lunch menu and discuss lunch in the "big sticks".

When all the students have demonstrated their jobs and all the cardboard trees have been cut down and hauled to the river, the woods foreman will lead the crew back to the bunkhouse where the rangers will lead a discussion of camp life; food, pay, recreation, sanitation and more. After the discussion the ranger will lead the class to the "river" for the next activity.

Activity 2 - The River Drive**Materials needed:**

- 2 one hundred foot lengths of rope
- 1 short length of rope
- 4 3/4 inch dowels

In this activity the students will be the logs. The students designated as the river pigs and bank beavers will usher them into the river (between the two long ropes) and begin the drive. The river pigs will use the peaveys (the dowels) to urge the logs along. The bank beavers will use their peaveys to keep the logs in the river. The

rangers will use the short rope to create and discuss wing dams and log jams. The drive will end when the logs reach the sawmill.

Wrap-up

After the river drive, the rangers and students will sit and discuss the effects logging had on the land (clearcut forests, erosion, altered wildlife habitat...), the river (siltation, bank erosion, altered fish habitat...) and the people (jobs, increased population, new cities...). The program will end with a look toward the future of the rivers under the management of the National Park Service.

APPENDIX IV

Special Populations: Programmatic Accessibility Guidelines for Interpretive Media

**National Park Service
Harpers Ferry Center**

September 1991
(Version 2.1)

Prepared by the
Harpers Ferry Center
Accessibility Task Force

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Statement of Purpose

This document is a guide for promoting full access to interpretive media to ensure that people with physical and mental disabilities have access to the same information necessary for safe and meaningful visits to National Parks. Just as the needs and abilities of individuals cannot be reduced to simple statements, it is impossible to construct guidelines for interpretive media that can apply to every situation in the National Park System.

These guidelines define a high level of programmatic access which can be met in most situations. They articulate key areas of concern and note generally accepted solutions. Due to the diversity of park resources and the variety of interpretive situations, flexibility and versatility are important.

Each interpretive medium contributes to the total park program. All media have inherent strengths and weaknesses, and it is our intent to capitalize on their strengths and provide alternatives where they are deficient. It should also be understood that any interpretive medium is just one component of the overall park experience. In some instances, especially with regard to learning disabilities, personal services, that is one-on-one interaction, may be the most appropriate and versatile interpretive approach.

In the final analysis, interpretive design is subjective, and dependent on both aesthetic considerations as well as the particular characteristics and resources available for a specific program. Success or failure should be evaluated by examining all interpretive offerings of a park. Due to the unique characteristics of each situation, parks should be evaluated on a case by case basis. Nonetheless, the goal is to fully comply with NPS policy:

"...To provide the highest level of accessibility possible and feasible for persons with visual, hearing, mobility, and mental impairments, consistent with the obligation to conserve park resources and preserve the quality of the park experience for everyone."

NPS Special Directive 83-3
Accessibility for Disabled Persons

Audiovisual Programs

Audiovisual programs include motion pictures, sound/slide programs, video programs, and oral history programs. As a matter of policy, all audiovisual programs produced by the Harpers Ferry Center will include some method of captioning. The approach used will vary according to the conditions of the installation area and the media format used, and will be selected in consultation with the parks and regions.

The captioning method will be identified as early as possible in the planning process and will be presented in an integrated setting where possible. To the extent possible, visitors will be offered a choice in viewing captioned or uncaptioned versions, but in situations where a choice is not possible or feasible, a captioned version of all programs will be made available. Park management will decide on the most appropriate operational approach for the particular site.

Guidelines Affecting Mobility Impaired Visitors

1. The theater, auditorium, or viewing area should be accessible and free of architectural barriers, or alternative accommodations will be provided. UFAS 4.1.
2. Wheelchair locations will be provided according to ratios outlined in UFAS 4.1.2(18a).
3. Viewing heights and angles will be favorable for those in designated wheelchair locations.
4. In designing video or interactive components, control mechanisms will be placed in an accessible location, usually between 9" and 48" from the ground and no more than 24" deep.

Guidelines Affecting Visually Impaired Visitors

1. Simultaneous audio description will be considered for installations where the equipment can be properly installed and maintained.

Guidelines Affecting Hearing Impaired Visitors

1. All audiovisual programs will be produced with appropriate captions.
2. Copies of scripts will be provided to the parks as a standard procedure.
3. Audio amplification and listening systems will be provided in accordance with UFAS 4.1.2(18b).

Guidelines Affecting Learning Impaired Visitors

1. Unnecessarily complex and confusing concepts will be avoided.
2. Graphic elements will be chosen to communicate without reliance on the verbal component.

3. Narration will be concise and free of unnecessary jargon and technical information.

Exhibits

Numerous factors affect the design of exhibits, reflecting the unique circumstances of the specific space and the nature of the materials to be interpreted. It is clear that thoughtful, sensitive design can go a long way in producing exhibits that can be enjoyed by a broad range of people. Yet, due to the diversity of situations encountered, it is impossible to articulate guidelines that can be applied universally.

In some situations, the exhibit designer has little or no control over the space. Often exhibits are placed in areas ill-suited for that purpose, they may incorporate large or unyielding specimens, may incorporate sensitive artifacts which require special environmental controls, and room decor or architectural features may dictate certain solutions. All in all, exhibit design is an art which defies simple description. However, one central concern is to communicate the message to the largest audience possible. Every reasonable effort will be made to eliminate any factors limiting communication through physical modification or by providing an alternate means of communication.

Guidelines Affecting Mobility Impaired Visitors

1. Exhibit space will be free of physical barriers or a method of alternate accommodation shall be provided.
2. All pathways, aisles, and clearances will meet standards set forth in UFAS 4.3. Generally a minimum width of 36" will be provided.
3. Ramps will be as gradual as possible and will not exceed a slope of 1" rise in 12" run, and otherwise conform with UFAS 4.8.
4. Important artifacts, labels, and graphics, will be placed at a comfortable viewing level relative to their size. Important text will be viewable to all visitors. Display cases will allow short or seated people to view the contents and the labels. Video monitors associated with exhibits will be positioned to be comfortably viewed by all visitors.

5. Lighting will be designed to reduce glare or reflections, especially when viewed from a wheelchair.
6. Ground and floor surfaces near the exhibit area will be stable, level, firm, and slip-resistant. (UFAS 4.5).
7. Operating controls or objects to be handled by visitors will be located in an area between 9" and 48" from the ground and no more than 24" deep. (UFAS 4.3)
8. Horizontal exhibits (e.g., terrain model) will be located at a comfortable viewing height.
9. Information desks and sales counters will be designed for use by visitors and employees using wheelchairs, and will include a section with a desk height no greater than 32" to 34", with at least a 30" clearance underneath. The width should be a minimum of 32" vertical, with additional space provided for cash registers or other equipment, as applicable.
10. Accessibility information about the specific park should be available at the information desk and the International Symbol of Access will be displayed where access information is disseminated.
11. Railings and barriers will be positioned in such a way as to provide unobstructed viewing by persons in wheelchairs.

Guidelines Affecting Visually Impaired Visitors

1. Exhibit typography will be selected with readability and legibility in mind.
2. Characters and symbols shall contrast with their backgrounds--either light characters on a dark background or dark characters on a light background. (UFAS 4.30.3)
3. Tactile and participatory elements will be included where possible.
4. Audio description will be provided where applicable.
5. Signage will be provided to indicate accessible restrooms, telephones, and elevators. (UFAS 4.30)

Guidelines Affecting Hearing Impaired Visitors

1. Information presented via audio formats will be duplicated in a visual medium, either in the exhibit copy or by printed material.
2. Amplification systems and volume controls will be incorporated to make programs accessible to the hard of hearing.
3. Written text of all audio narrations will be provided.
4. All narrated AV programs will be captioned.
5. Allowance for Telecommunication Devices for the Deaf (TDD) will be included into information desk designs.

Guidelines Affecting Learning Impaired Visitors

1. Exhibits will avoid unnecessarily complex and confusing topics.
2. Graphic elements will be developed to communicate nonverbally.
3. Unfamiliar expressions and technical terms will be avoided and pronunciation aids will be provided where appropriate.
4. To the extent possible, information will be provided in a manner suitable to a diversity of abilities and interests.
5. Where possible, exhibits will be multi-sensory. Techniques to maximize the number of senses utilized in an exhibit will be encouraged.
6. Exhibit design will be cognizant of directional handicaps and will utilize color and other creative approaches to facilitate comprehension of maps.

Historic Furnishings

Historically refurbished rooms offer the public a unique interpretive experience by placing visitors within historic spaces. Surrounded by historic artifacts visitors can feel the spaces "come alive" and relate more directly to the historic events or personalities commemorated by the park.

Accessibility is problematical in many NPS- furnished sites because of the very nature of historic architecture. Buildings were erected with a functional point of view that is many times at odds with our modern views of accessibility.

The approach used to convey the experience of historically furnished spaces will vary from site to site. The goals, however, will remain the same, to give the public as rich an interpretive experience as possible given the nature of the structure.

Guidelines Affecting Mobility Impaired Visitors

1. The exhibit space should be free of architectural barriers or a method of alternate accommodation should be provided, such as slide programs, videotaped tours, visual aids, dioramas, etc.
2. All pathways, aisles, and clearances shall (when possible) meet standards set forth in UFAS 4.3 to provide adequate clearance for wheelchair routes.
3. Ramps shall be as gradual as possible and not exceed a 1" rise in 12" run, and conform with UFAS 4.8.
4. Railings and room barriers will be constructed in such a way as to provide unobstructed viewing by persons in wheelchairs.
5. In the planning and design process, furnishing inaccessible areas, such as upper floors of historic buildings, will be discouraged unless essential for interpretation.
6. Lighting will be designed to reduce glare or reflections when viewed from a wheelchair.
7. Alternative methods of interpretation, such as audiovisual programs, audio description, photo albums, and personal services will be used in areas which present difficulty for the physically impaired.

Guidelines Affecting Visually Impaired Visitors

1. Exhibit typefaces will be selected for readability and legibility, and conform with good industry practice.

2. Audio description will be used to describe furnished rooms, where appropriate.
3. Windows will be treated with film to provide balanced light levels and minimize glare.
4. Where appropriate, visitor-controlled rheostat-type lighting will be provided to augment general room lighting.
5. Where appropriate and when proper clearance has been approved, surplus artifacts or reproductions will be utilized as "hands-on" tactile interpretive devices.

Guidelines Affecting Hearing Impaired Visitors

1. Information about room interiors will be presented in a visual medium such as exhibit copy, text, pamphlets, etc.
2. Captions will be provided for all AV programs relating to historic furnishings.

Guidelines Affecting the Learning Impaired

1. Where appropriate, hands-on participatory elements geared to the level of visitor capabilities will be used.
2. Living history activities and demonstrations which utilize the physical space as a method of providing multi-sensory experiences will be encouraged.

Publications

A variety of publications are offered to visitors, ranging from park folders which provide an overview and orientation to a park to more comprehensive handbooks. Each park folder should give a brief description of services available to the disabled, list significant barriers, and note the existence of TDD phone numbers, if available.

In addition, informal site bulletins are often produced to provide more specialized information about a specific site or topic. It is recommended that each park produce an easily updatable "Accessibility Site Bulletin" which could include detailed information about the specific programs, services, and opportunities available for the disabled, and to describe

barriers which are present in the park. These bulletins should be in reasonably large type, 18-points or larger.

Guidelines Affecting Mobility Impaired Visitors

1. Park folders, site bulletins, and sales literature will be distributed from accessible locations and heights.
2. Park folders and Accessibility Site Bulletins should endeavor to carry information on the accessibility of buildings, trails, and programs by the disabled.

Guidelines Affecting Visually Impaired Visitors

1. Publications will be designed with the largest type size appropriate for the format.
2. Special publications designed for use by the visually impaired should be printed in 18 point type.
3. The information contained in the park folder should also be available on audio cassette. Handbooks, accessibility guides, and other publications should be similarly recorded where possible.

Guidelines Affecting Hearing Impaired Visitors

1. Park site bulletins will note the availability of such special services as sign language interpretation and captioned programs.

Guidelines Affecting Learning Impaired Visitors

1. The park site bulletin should list any special services available to this group.

Wayside Exhibits

Wayside exhibits, which include outdoor interpretive exhibits and signs, orientation shelter exhibits, trailhead exhibits, and bulletin boards, offer special advantages to disabled visitors. The liberal use of photographs, artwork, diagrams, and maps, combined with highly readable type, make wayside exhibits an excellent medium for visitors with hearing and learning impairments. For visitors with sight impairments, waysides offer large type and high legibility.

Although a limited number of NPS wayside exhibits will always be inaccessible to visitors with mobility impairments, the great majority are placed at accessible pullouts, viewpoints, parking areas, and trailheads.

The NPS accessibility guidelines for wayside exhibits help ensure a standard of quality that will be appreciated by all visitors. Nearly everyone benefits from high quality graphics, readable type, comfortable base designs, accessible locations, hard-surfaced exhibit pads, and well-designed exhibit sites.

While waysides are valuable onsite "interpreters," it should be remembered that the park resources themselves are the primary things visitors come to experience. Good waysides focus attention on the features they interpret, and not on themselves. A wayside exhibit is only one of the many interpretive tools which visitors can use to enhance their appreciation of a park.

Guidelines Affecting Mobility Impaired Visitors

1. Wayside exhibits will be installed at accessible locations whenever possible.
2. Wayside exhibits will be installed at heights and angles favorable for viewing by most visitors including those in wheelchairs. For standard NPS low-profile units the recommended height is 34" from the bottom edge of the exhibit panel to the finished grade; for vertical exhibits the height of 24"-28", depending on panel size.
3. Trailhead exhibits will include an accessibility advisory.
4. Wayside exhibits sites will have level, hard surfaced exhibit pads.
5. Exhibit sites will offer clear, unrestricted views of park features described in exhibits.

Guidelines Affecting Visually Impaired Visitors

1. Exhibit type will be as legible and readable as possible.
2. Panel colors will be selected to reduce eye strain and glare, and to provide excellent readability under field conditions. White should not be used as a background color.

3. Selected wayside exhibits may incorporate audiostations or tactile elements such as models, texture blocks, and relief maps.
4. For all major features interpreted by graphic wayside exhibits, the park should offer nonvisual interpretation covering the same subject matter. Examples include cassette tape tours, radio messages, and ranger talks.
5. Appropriate tactile cues should be provided to help visually impaired visitors locate exhibits.

Guidelines Affecting Hearing Impaired Visitors

1. Wayside exhibits will communicate visually, and will rely heavily on graphics to interpret park resources.
2. Essential information included in audiostation messages will be duplicated in written form, either as part of the exhibit text or with printed material.

Guidelines Affecting Learning Impaired Visitors

1. Topics for wayside exhibits will be specific and of general interest. Unnecessary complexity will be avoided.
2. Whenever possible, easy to understand graphics will be used to convey ideas, rather than text alone.
3. Unfamiliar expressions, technical terms, and jargon will be avoided. Pronunciation aids and definitions will be provided where needed.
4. Text will be concise and free of long paragraphs and wordy language.

APPENDIX V

Selected References

Dunn, James Taylor, *State Parks of the Saint Croix Valley*, Minnesota Parks Foundation, 1981.

Karamanski, Theodore J., *Saving the Saint Croix: An Administrative History of the Saint Croix National Scenic Riverway*, National Park Service, Midwest Region, 1993.

Wittpenn, Richard P., et al, *Final Master Plan, Saint Croix National Scenic Riverway, Minnesota/Wisconsin*, National Park Service, 1976.