Community Support

Best Management Practice Goal: The water trail actively engages local communities and trail users, who provide support and advocacy for the maintenance and stewardship of the water trail.

Key Questions

Public Opinion

- ☐ What is the public opinion of the water trail? What is the community's opinion about or reaction to increased use?
- ☐ Have surveys been conducted to assess public opinion?
- ☐ How do local media cover the water trail?
- ☐ How does the trail reach out to local media?
- ☐ Who uses the trail? In what capacity? What improvements would they like to see?
- ☐ Have local governments supported the trail?
- ☐ Is there opposition to the trail? If so, has it been addressed?

Partnerships and Outreach

- ☐ Does the trail have a broad support base (a variety of individuals and organizations, including local business and industry (eg. outfitters and water supply companies), state, federal, and local government, landowners, and conservation, recreation, and tourism advocates)?
- ☐ Does the water trail have partner organizations? Is annual contact made with the partner organizations?
- ☐ Does the water trail association or do partners host events? How often? How many people attend?
- ☐ How many volunteers have been involved in the water trail?

- ☐ Does the water trail actively seek or attain publicity for its efforts?

Landowner Relationships

- ☐ Have landowners along the waterway been contacted about the water trail or surveyed?
- ☐ Are agreements in place with landowners?
- ☐ Have landowners provided support (written, through stewardship/volunteer efforts, or otherwise?)
- ☐ Is annual contact made with landowners?

Funding

- ☐ Do organizations, foundations, or local municipalities support the trail with dollars, grants, or in-kind services?
- ☐ Do state or federal agencies support the trail with dollars, grants, or in-kind services?

Economic Impacts

- ☐ Have any studies been completed on the economic impact of the water trail?

Waccamaw River Blue Trail

Examples

Public Opinion

- Riverside Kayak Connections created web-based pre- and post-program surveys to assess previous program attendance, their level of paddling experience, and collect demographic information.
- A Sea Kayak Survey in Minnesota examined sea kayak use along the north shore of Lake Superior, interest in and barriers to sea kayak use and kayak-camping in this area, and characteristics of sea kayak owners. The Minnesota Department of Natural Resources wanted information about use before it provided additional amenities and maps for the Lake Superior Water Trail.

Partnerships and Outreach

- The Willamette River Water Trail has a memorandum of understanding that formalizes partnership relationships in order to accomplish mutually-held goals.
- The Northern Forest Canoe trail has an agreement with a partner organization to maintain kiosks and access sites along the trail.
- The Roanoke River Partners have an adopt-a-platform contract for groups that agree to be stewards for access along the trail.
- The Waccamaw River Blue Trail has a blank adopt-a-landing agreement for partner groups.

Landowner Relationships

- A 2010 study assessed landowner attitudes along the Luling Paddle Trail in central Texas before and after the paddle trail opened.
- A landowner permission form is geared toward landowners providing river access on their properties and includes language stating that the landowner has liability protection unless they charge a fee.
- *Public Access Guide for Landowners, Water Trails, and River Managers at* www.river-management.org/water-trails

Funding

- The Mississippi National Recreation River works with the Friends of the Mississippi River to host an annual Mississippi River Challenge to raise money for a cleaner, healthier river.
- Funding Resources available from www.bluetrailsguide.org/funding-resources/

Economic Impacts

- *Making an Economic Case for Watertrails at* www.river-management.org/water-trails
- A 2012 Pennsylvania Water Trail Economic Impact Study reviewed economic impacts of water trail visitors and water trails on the state economy.
- A 2007 economic impact study was completed by the Northern Forest Canoe Trail

Conservation

Lake Red Rock Water Trail

Best Management Practice Goal: The water trail provides opportunities for communities to develop and implement strategies that enhance and restore the health of the local waterways and surrounding lands.

Key Questions

Cleanups and Invasive Removal

☐ Have there been community trash cleanups?

☐ Have any invasive species been removed by partner groups, as part of a community outreach, or by staff?

Restoration

☐ Have habitat restoration projects been accomplished on land or in the river?

☐ Is the organization engaged with local, state and federal agencies and conservation groups for major waterway protection and rehabilitation activities?

☐ Have degraded lands such as brownfields been restored for habitat or recreational use?

☐ Have fish ladders or natural fish passages been installed at dams?

☐ Have any tributary streams been daylighted (if formerly covered)?

☐ Have any natural flood-storage-and-protection projects been completed (i.e. constructing wetlands)?

Conservation

☐ Have priority river conservation areas been identified?

☐ Is there a strategy for protecting priority conservation areas (buffers) along the river?

☐ Have local or state river and wetland protection laws been passed?

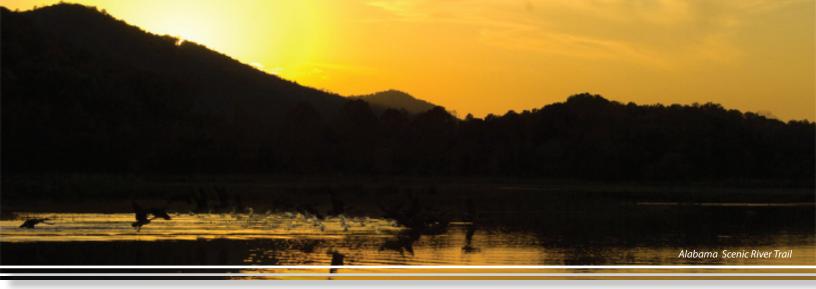☐ Does zoning promote protection of natural areas where resources are sensitive and concentrate development in less sensitive or already-developed areas?

Green Infrastructure

☐ Have rain gardens been installed at access or launch sites? Are there signs explaining their function?

☐ Have launch areas been designed with green infrastructure including permeable pavement, green roofs, infiltration planters, bioswales, rain barrels, etc? Is there educational material about these practices?

☐ Have impermeable surfaces been replaced with permeable and semi-permeable surfaces in specific locations or throughout the watershed?

☐ Is there an informational or incentive program for developers and homeowners about the value of green infrastructure?

Monitoring, Inventory, and Mapping

☐ Is there a program for water quality testing and monitoring?

☐ Is there a program to communicate weather conditions?

☐ Is there a map of existing vegetation types or natural communities? Has a natural resource or open space inventory been completed?

☐ Are there programs for citizens to get involved with water quality testing or monitoring?

☐ Is anyone working to enforce water quality standards?

☐ Is anyone working to improve water quality?

Examples

- American Rivers lists many conservation strategies related to water trail conservation at www.bluetrailsguide.org/funding-resources/

Water Quality, Cleanups, and Invasives

- The Chattahoochee River National Recreation Area partners with the Upper Chattahoochee Riverkeepers on a number of conservation strategies, including a yearly clean-up of the river called "Sweep the Hooch."
- The Chattahoochee water trail provides information on bacteria count, flow, and water quality through model partnerships.
- Northern Forest Canoe Trail created a "Clean Drain Dry" video for paddlers that shows simple steps to help protect water quality and prevent the spread of aquatic invasives.
- The Anacostia Watershed Society operates a trash trap on Nash Run. The trash is sorted into several categories, allowing staff to study its characteristics by volume.

Restoration

- In 2010, partner groups worked together to construct an oyster reef in the Bronx River. Oysters filter large amounts of water, cleaning it and creating a better habitat for fish, crabs, worms and barnacles.
- The Rock River Trail Initiative has distributed 40,000 oak trees to be planted within sight of the Rock River to improve the health of rivers in the Midwest by re-establishing hardwoods.
- Originating in Europe, "nature-like" fishways are now being constructed on some U.S. rivers where removing dams is not an option. Unlike traditional fish ladders, these passages use a natural approach.
- The Middle Channel Reef Project on the Island Loop Water Trail worked to enhance fish reproduction and help rebuild native fish populations. Project partners restored an acre of fish spawning habitat by constructing nine rock reefs in the Middle Channel of the St. Clair River.

Conservation

- The Chattahoochee National River and Recreation Area partnered with the Trust for Public Land to help protect land along the river.

Green Infrastructure

- The Friends of the Kaw built a rain garden at the boat ramp in De Soto, Kansas in order to improve water quality and reduce runoff into the Kansas River.
- The St. Clair county health department sold rain barrels to homeowners in the community around the Island Loop Water Trail.

Education

Best Management Practice Goal: The water trail users are provided with opportunities to learn about the value of water resources, cultural heritage and boating skills and outdoor ethics.

Key Questions

Education Topics

☐ Are there education programs about a wide variety of topics, including science, natural history, the environment, safety, history and culture, best practices, and boating skills?

In-Person Education

☐ Are classes, workshops, or educational seminars provided?

☐ Is there interpretive programming?

☐ Are there guided tours or trips?

☐ Are there programs, tours, or events aimed specifically at new paddlers?

☐ Have members presented at conferences or group meetings?

☐ Is there a volunteer program for paddlers to get involved?

☐ Are there any museums or visitors centers highlighting the water trail?

☐ Have any festivals or events been held?

☐ Have there been any design competitions to engage the public?

☐ Is there safety training available (swiftwater resuce, boater safety, proper PFD use)?

☐ Does signage (interpretive, safety, directional, etc.) provide training information?

Youth programs

☐ Are youth programs being provided for varying age groups?

☐ Do youth programs provide education on a variety of topics?

☐ Is there a direct formal or informal relationship with a school?

☐ Do youth programs provide hiring or training opportunities?

Media

☐ Have any educational films been created about the water trail?

☐ Have any webinars or presentations been given?

☐ Are there educational brochures on aspects of the water trail?

☐ Does the water trail website contain educational information?

☐ Have there been any radio segments or podcasts about the water trail?

☐ Do signs or kiosks contain educational information?

Examples

Events and Festivals

- The Bronx River Festival is a community festival celebrating the river and introducing people to canoeing and bicycling.
- Hudson River Days is the annual celebration of the Hudson River estuary and its watershed.
- The South Dakota Kayak Challenge is a 72-mile kayak race on the wildest stretch of the Missouri River between Yankton and Sioux City.
- The Kawnivore 100 Race is a hundred-mile ultramarathon canoe race through the heart of the Kansas Flint Hills.
- The Floatzilla Paddlesports Celebration on the Rock River Water Trail is a large community paddling event. 959 paddlers attended in 2014.

Programs

- The Chattahoochee River National Recreation Area hosts events throughout the summer.
- The Rock River Coalition and Environmental Law Institute present monthly webinars.

Youth Programs

- Rocking the Boat empowers young people challenged by severe economic, educational, and social conditions.. Students work together to build wooden boats, learn to row and sail, and restore local urban waterways.
- Kids 4 The Kaw: The Kansas River Water Trail has a program for kids including a lesson plan for teachers.
- River Science Curriculum: A science curriculum based on the Kansas River and developed by the Friends of the Kaw.
- RiverKids Program: The Alabama Scenic River Trail has developed a statewide school to teach any child in the state of Alabama to safely paddle a kayak at no cost to participating families.

Museums and Visitors Centers

- Okefenokee National Wildlife Refuge's Richard S. Bolt Visitor Center contains interactive exhibits, a film, wildlife viewing, and a bookstore. 1
- The Port Huron Museum on the Island Loop water trail has exhibits and programs and three satellite facilities.

Maintenance

BMP Goal: The water trail managers demonstrate ability to support routine and long-term maintenance investments on the water trail. Facilities are designed, constructed, and maintained by incorporating sustainability principles.

Key Questions

Launch and Access Site Design

☐ Given the characteristics of the water body, flow, shoreline, riparian vegetation, and types of users accessing the launch, which site location is most appropriate?

☐ What types of watercraft will be launched? What is the user experience level? How frequently will the launch be used and how many people will use it at one time? Is the launch large enough to accomodate users on a typical day?

☐ Do any environmental issues need to be addressed?

☐ Is there a firm and stable surface with sufficient space to accommodate watercraft length?

☐ Can paddlers easily get in and out of their watercraft? Is the access safe?

☐ Can the launch withstand varying flow levels (floods, droughts, tides), currents, and exposure to the elements throughout the year? Does the design take into account possible channel migration or bank changes over time?

☐ Does the launch design minimize riverbank and vegetation disturbance during construction and over time?

☐ Do the designs comply with regulations?

☐ Is the launch designed with maximum user accessibility in mind?

Trail Maintenance

☐ Is it clear who maintains which segments of trail?

☐ Are there partnership or adopt-a-trail agreements?

Signage

☐ Is there a plan for creating and locating signs?

☐ Do signs along the water trail follow consistent standards ? What information do signs provide (for example, safety, navigation, stewardship, interpretation)?

☐ Are hazards adequately and consistently signed?

Examples

Launch and Access Site Design

- *Prepare to Launch! Resource: Guidelines For Assessing, Designing & Building Access Sites For Carry-In Watercraft*
- Willamette River Design Notebook: This notebook sets forth a design methodology for riverbank design concepts. Its main purpose is to establish a common frame of reference and common goals for all parties concerned with development at the river's edge.
- *Developing Water Trails in Iowa:* See Chapter 3, Design Development, for guidelines and sample designs for launches and access sites. This resource is specific to Iowa but is adaptable for any river with similar conditions.
- St. Clair County, home of Island Loop Water Trail, created a powerpoint on how they created launches accessible to users who might be limited by existing facilities.
- A document inventoried and analyzed existing access sites as part of a planning process during the creation of the Lake Michigan Water Trail.

Trail Maintenance

- The Roanoke River Partners have an adopt-a-platform group contract for adoption groups.
- The Connecticut River Water Trail has come up with a guide for developing campsites including selecting locations, working with landowners, and campsite maintenance, including a checklist of tasks to complete during campsite opening, mid-season, and closing.
- The Northern Forest Canoe Trail has a kiosk maintenance agreement with partners.

Sign Creation

- Delaware River Sign Plan: A plan for creating consistent signs for the water trail, including flowcharts of possible sign types and a basic description of management of a GIS-based sign database.
- NASBLA Paddlesports Committee has created universal sign recommendations.
- Schuykill River Sign Design Manual: A sign master plan document that can be used as a reference for others creating sign design guidelines or manuals.

Planning

Best Management Practice Goal: The water trail managers maintain a water trail plan that describes a vision, desired future conditions, and strategies to strengthen best management practices.

Key Questions

Planning

- ☐ Have you read "Water Trail Planning 101" (see examples below)?
- ☐ Has a water trail plan been completed?
- ☐ Have any wildlife, habitat, greenways, or open space plans been started or completed?
- ☐ Has a recreation plan been started or completed?
- ☐ Have any local, state, or other governing bodies created master plans or studies that include water trails?
- ☐ Does a sign plan, access site plan, maintenance plan, or related plan exist?
- ☐ Has a communications plan or citizen engagement plan been started or completed?
- ☐ Is there a strategic plan or financial plan for the trail, trail organization, or managing entities?

- ☐ Is the organization supporting long term sustainability (evidence of long-term committment, leadership development, partnership agreements, etc.)?
- ☐ Is there a long term management plan for the trail?

Conservation Planning

- ☐ Have current land-use practices been mapped?
- ☐ Have current and ideal conditions of each body of water in the watershed been evaluated?
- ☐ Have best land uses been determined? Will future development enhance the watershed?

Examples

General

- Water Trail Planning 101: A brief document to help groups plan, inventory, access, implement, promote, operate, and maintain water trails.
- Developing Water Trails in Iowa: Practical guidelines and templates for planning, site design, signage, and construction in Iowa. A useful reference for how to plan for water trails on a statewide level.

Water Trail-Specific Plans

- The 2012 Rock River WT Plan describes the vision, structure and organization of the water trail.

Kitsap Peninsula Water Trails

- The 2009 Huron River Water Trail Vision & Opportunity Plan seeks to document current conditions and identify any potential obstacles or opportunities for enhancement.
- The 2005 Vermillion Water Trail Plan includes engaging graphics, maps, and photos.

General

- Water Trail Planning 101: A brief document to help groups plan, inventory, access, implement, promote, operate, and maintain water trails.
- Developing Water Trails in Iowa: Practical guidelines and templates for planning, site design, signage, and construction in Iowa. A useful reference for how to plan for water trails on a statewide level.

Water Trail-Specific Plans

- The 2012 Rock River Water Trail Inventory, Analysis, and Plan deals with the establishment of the trail and describes the vision and organization of the water trail.
- Passaic River Canoe & Kayak Trail Action Plan: Contains specific launch site evaluations and recommendations for the trail.
- The 2009 Huron River Water Trail Vision & Opportunity Plan seeks to document current conditions along the water trail and identify any potential obstacles or opportunities for enhancement.
- The 2005 Vermillion Water Trail Plan includes engaging graphics, maps, and photos showing analyses and potential river access locations.

Conservation Plans

- The 2005 Ecological Restoration & Management Plan and the Bronx River Greenway Plan were published by the Bronx River Alliance. These describe a vision for a restored river and a continuous Bronx River Greenway in the lower Bronx River.
- The US EPA Handbook for Developing Watershed Plans to Restore and Protect Our Waters handbook is intended to help groups develop and implement watershed plans to meet water quality standards and protect water resources

Maintenance and Infrastructure Plans

- A sign plan created by the Delaware River Water Trail.
- An inventory & analysis of access sites in support of a Lake Michigan Water Trail.

Local, County, and State Plans

- The North Kitsap String of Pearls Trail Plan presents a vision for North Kitsap communities to connect to each other and to parks, local businesses, schools, ferries, buses, open spaces, forest lands, and wildlife habitats through multi-use land and water trails.
- The Northeastern Watersheds Management Plan for St. Clair County, MI describes the status, sets goals, and describes actions that will be used to protect, restore, and enhance resources in the watersheds.
- The North Carolina Paddle Tourism Study was conducted by the North Carolina State Trails program as part of an ongoing effort to enhance and encourage paddling experiences in North Carolina.

Black Canyon Water Trail
Credit: Izzy Collet, Desert Adventures

Best Management Practice Goal: The public is provided with accessible and understandable water trail information, including details for identifying access and trail routes; cultural, historic, and natural features; hazards; and water quality. The water trail is promoted to the community and broad national audience.

Key Questions

Access, Routes, and Maps

☐ Is trip planning information (directions, access, logistics) easily accessible?

☐ Is there an overview map of the entire water trail?

☐ Are there detailed segment maps for navigation?

☐ Is there an interactive online map or online application for navigation?

☐ Where are maps available? Are online maps formatted for printing and of a high enough resolution to print clearly? Are paper or waterproof copies available?

☐ Is there a guidebook and website with detailed paddling descriptions, distances, and information? Is this guidebook also online and formatted for printing?

☐ Is interpretive and wayfinding information provided on maps and on the trail?

Safety, Hazards, and Water Quality

☐ Is safety information available through a wide variety of channels including postings at access sites, on websites and social media, through a call-in recording, etc?

☐ Are regulations clearly posted and written on maps and guidebooks?

☐ Are dams and other hazards clearly and consistently signed on maps and on the water trail itself?

☐ Does safety information need to be posted in more than one language?

☐ Are current flow conditions including flood or drought information available through a wide variety of channels?

☐ Is there a way to communicate with water trail users in case of an emergency?

☐ Are boating public safety programs offered?

Hudson River Greenway Water Trail
Credit: Bob Campbell

Examples

Access, Routes, and Maps

- The Willamette has a waterproof, bound map and an online map of the water trail with details showing access and features along the 216-mile trail.
- The Bronx River Blueway Map is a well-designed map that clearly shows access points, amenities, and detailed maps of portages.
- A map of the Missouri River National Recreational River Water Trail designed for print publication and display.
- The map of the Kitsap Peninsula Water Trail is graphically-pleasing.

Events and Festivals

- For information about events and festivals, see the Education section of the NWTS Toolbox.

Brochures/Fact Sheets

- An example of a one-page fact sheet on the Alabama Scenic River Trail.
- A brochure with historic information about the lost towns under Lake Red Rock on the Red Rock Water Trail.
- A two-page brochure about the Red Rock Water Trail.

Safety, Hazards, and Water Quality

- The Chattahoochee water trail provides flow and water quality information through model partnerships with the USGS, the upper Chattahoochee Riverkeeper, and the Army Corps of Engineers.
- Buford Dam flow website for Chattahoochee.

Recreation

BMP Goal: The water trail route has established public access points that accommodate a diversity of trip lengths and provide access to a variety of opportunities for recreation and education.

Key Questions

Recreation Info and Facilities

☐ What is the total trail length?

☐ Has a gap analysis been done to determine distances between access points? What user groups will paddle these distances? Is there a need for a greater variety of segment lengths?

☐ What types of watercraft will the trail support?

☐ Are segments categorized by the types of experience they provide to users (for example, Iowa categorizes segments as gateway, recreational, challenge, and wilderness)?

☐ Are stopping points categorized by access type (hike-in, drive-in, water access, emergency only)?

☐ Are there safety considerations that should be addressed on the trail?

☐ Are there any portages due to dams or obstructions?

☐ Have universal design practices been taken into account to construct all facilities in ways that integrate users of varying abilities?

☐ Has accessibility information (ramp slope, material, design, public information, etc.) been described so that users with varying levels of ability can determine whether they will be able to use facilities? Is this information widely available?

☐ Have existing facilities been listed and mapped at each site (including launch type, parking, picnic tables, visitor centers, toilets, grills, firepits, electricity, campsites, cabins, camp platforms, swimming, beaches, overnight parking, public water supply, etc.)? What facilities need to be planned?

☐ Are there any outfitters, marinas, rental shops providing equipment or access to the river?

Rules and Permitted Activities

☐ Are there regulations about topics including trip length, group size, permits or reservations, navigability, overnight stays, motorized vs. nonmotorized use, hours open, times of year open, etc.? Are these regulations communicated to the public in a variety of ways?

☐ What recreational activities are allowed in which sites along the water trail?

☐ Is the infrastructure in place for these activities to occur safely and legally?

Connectivity

☐ Are there connections with other water trails? What connections could be created?

☐ Are there connections with land trails? What connections could be created?

☐ Are there connections with public transit networks including buses, bike trails, rail systems, sidewalks, and pedestrian paths? What connections could be created?

Examples

General

- *Prepare to Launch! Guidelines for Assessing, Designing, and Building Launch Sites for Carry-in Watercraft* is a resource designed to help river and water trail managers and park planners build put-in and take-out sites as they address the evolving needs of paddlers and other users.

Recreation Info and Facilities

- The Department of Natural Resources in Iowa has categorized its river reaches, segments, and access sites into the types of experiences that are available to users (see section 2).
- The Seaside Water Trail in Virginia has done an an excellent assessment of the environmental impacts of facilitating visitor camping and how to potentially minimize those impacts.
- Sunfish Lake Park in Ramsey, MN has a free self-serve canoe rental system with a swipe-card so registered users can check out boats.

Access, Routes, and Mapping

- To find information and documents pertaining to access, routes, and maps, see the Public Information section of the toolbox.

Connectivity

- The Mississippi National River and Recreation Area has created an online interactive map to integrate the water trail into the regional transportation networks. The map shows bikeshare stations, bike routes, bus stops, rail stations, and streets so people can access the river through many forms of transportation.