
A Guide to Sustainable River Recreation Management Planning



Author

Fay Augustyn, American Rivers

Project Development

Staci Williams, American Rivers

Jamie Mierau, American Rivers

A Guide To Sustainable River Recreation Management Planning

About American Rivers

American Rivers is the leading organization working to protect and restore the nation's rivers and streams. Rivers connect us to each other, nature, and future generations. Since 1973, American Rivers has fought to preserve these connections, helping protect and restore more than 150,000 miles of rivers through advocacy efforts, on-the-ground projects, and the annual release of America's Most Endangered Rivers®.

Acknowledgments

American Rivers would like to acknowledge the generous support of the LOR Foundation.

Thank you to Susan Culp (NextWest Consulting) and Lelia Melen (NPS) for peer reviewing this report. We would also like to thank the following individuals for sharing with us information about sustainable recreation management: Elizabeth Lacy (NPS), Corita Waters (NPS), Alan Ragins (NPS), Elizabeth Riggs (Huron River Watershed Council), Tom O'Keefe (American Whitewater), Amanda Walker (USFS), Bo Shelby (Confluence Research and Consulting), Doug Whittaker (Confluence Research and Consulting), Ericka Pilcher (Boulder Open Space and Mountain Parks), Kerri Cahill (NPS), Rachel Collins (NPS), and Hugh Osborne (NPS).

We also would like to thank the following individuals at American Rivers for their expert guidance and input during the development of this report: Chris Williams, Jenny Hoffner, Amy Kober, Sinjin Eberle, Mike Fiebig and Sofia Corley.

Disclaimer

This report and its recommendations are solely attributable to American Rivers and do not represent the views of the above mentioned individuals.

Page One Photo Credit: Brett Hockmuth



American Rivers
Rivers Connect Us®

1101 14th Street NW, Suite 1400
Washington, DC 20005
(202) 347-7550
www.AmericanRivers.org

Table of Contents

Introduction	4
Step 1: Gather Information	7
Create a Core Working Group	7
Understand Current River Conditions	7
Analyze Existing Recreation and Natural Resources	9
Understand Community Considerations	9
Understand Recreation Use Considerations	10
Understand Legal Considerations	11
Step 2: Solicit Input and Build Community Support	12
Engage the Public	12
Create a River Management Stakeholder Advisory Committee	13
Step 3: Set Management Report	15
Create a Vision for Your Plan	15
Identify Areas of Emphasis and Goals	16
Update Your Plan	16
Step 4: Develop a Monitoring and Evaluation Plan	21
Step 5: Fund Your Plan	25
Summary	27
Appendix: Additional Resources	28

Introduction



Clean, healthy rivers are the lifeblood of our communities and are vital to our health, safety, and quality of life. Most Americans live within a mile of river or stream, and much of our drinking water comes directly or indirectly from rivers and streams. Beyond providing all these useful services, rivers are also just plain fun. Rivers, streams, and their surrounding lands offer endless opportunities for swimming, fishing and boating, hiking, wildlife watching, and picnicking. Whether one is seeking exhilaration, solitude, or a much-needed break from the daily grind, there is a river out there beckoning us to come out and play.

Across the country, people are turning to their rivers and lands to do just that. According to the Outdoor Industry Association (OIA), three out of every four Americans participate in active outdoor recreation each year and watersports are among the fastest growing segments of the industry. River recreation is not only fun, but it also boosts local economies and creates more than 800,000 valuable and sustainable jobs across the US. In fact, the OIA research also stated that outdoor recreation participants spend \$86 billion annually on watersports alone (kayaking, stand-up paddling, rafting, canoeing, and motorized boating), the second highest revenue stream behind camping (at \$142 billion).

There is little doubt that enjoyment of our natural resources is valuable. However, there are challenges such as overcrowding, pollution, and resource degradation that arise when outdoor recreation is not properly managed. Not only is the river at risk, but users may also experience dangerous situations if river health and recreational amenities are not managed properly. For example, when river hazards, such as low-head dams and other potential diversions, are not well marked, kayakers or tubers who are unfamiliar with the river could go over the dam and get caught in a recirculating pool at the bottom of the rapid. Too many users on a river at one time could lead to water quality issues if trash or human waste is not properly managed.

Additionally, conflicts between diverse user groups, such as anglers and paddlers, could pose unique challenges to the management approach. Conflicts may occur when paddlers or tubers disrupt the fishing activity of anglers by overcrowding sections of river, moving into eddy's and other areas where fish naturally hide. Wildlife watchers could also be negatively impacted when other user groups like campers along the river or other river users make noise that scares away birds or wildlife. Lastly, the recreation experience is further diminished by conflicts created by illegal activities such as trespassing, littering, or illegal dredging occur along rivers. While rivers are resilient, like any natural resource there comes a tipping point. River recreation management helps strike a balance between encouraging recreation and protecting our communities' most valuable natural resource.



A framework for designing recreation improvements and managing ongoing use has emerged from collaboration with public land management agencies and local jurisdictions. The framework, referred to as the "Three E's," where recreation amenity design and management is guided by Engineering, Education, and Enforcement.

Engineering refers to the thoughtful design of river access, signage, and other recreational infrastructure in a manner that encourages ethical & responsible river use, and lends itself to self-regulation of crowds and recreational behavior in desired patterns.

While rivers are resilient, like any natural resource, they have a tipping point. River recreation management helps to strike a balance between encouraging recreation and protecting our communities' most valuable natural resources.

Education refers to elements of recreational planning that are focused on providing public information, awareness building around safe river recreation practices, ethical and sustainable river use, etc. Educational measures are important in providing information such as the location of public access, what amenities are available at different sites - particularly restrooms, trash disposal sites, and access points. Educational tools can also inform the public about information like the amount of time it will take to travel between river access points, and the equipment and supplies needed for a safe boating experience. Such efforts may also help reduce conflict between recreational use and private property owners, and curtail littering and encourage safe boating practices.

Lastly, enforcement is critical to ensure accountability for those recreating on and alongside the river. The most common problems around river recreation expressed by residents that live along popular rivers is the dumping of trash and careless litter. Equally important concerns exist around trespass, noise, and other disturbance to riverfront property owners. In planning for recreation, the engagement and collaboration with local law enforcement a critical step in the design process.

The process of creating a river recreation management plan provides an opportunity to engage people around their rivers, educate community members about rivers in general and build support for their long-term protection. It also provides an

opportunity for individuals already actively engaged around their local river to share their knowledge with the community.

The goal of this guide is to provide a framework for local governments, planners, non-profit organizations, and others to develop an effective river recreation management plan that has strong community support. While this plan is not the same recipe for each community, it will provide resources and case studies that shine a spotlight on communities that have navigated the recreation management planning process and developed and implemented successful river recreation management plans.

This guide is organized in the following steps:

- Step One: Gather Information
- Step Two: Solicit Input and Build Community Support
- Step Three: Set Management Priorities
- Step Four: Develop a Monitoring and Evaluation Plan
- Step Five: Fund Your Plan

The creation of a river recreation management plan will help communities enhance recreational and economic opportunities, preserve the outstanding values that make local rivers and their connection to the local community special, and leave a legacy of healthy rivers for generations to come.



STEP 1: Gather Information

The first step in creating a river recreation management plan is gathering information about the river and nearby communities. This will ensure your plan recognizes and supports the benefits of recreation, along with the protection and restoration of the natural and cultural values of your river and community. Important types of information to compile may include current river conditions, existing recreation and natural resource plans, and usage patterns, and other community considerations.

Evaluating the physical characteristics and conditions of the river as well as its history, uses, and users is critical when forming an effective river recreation management plan, as these factors play a significant role in how a river is managed and maintained for recreation. Some suggested sources of data and where to find them are outlined below, but many others could exist for your specific project setting.

Create a Core Working Group

A core working group is often a group of individuals who will shepherd the plan through from beginning to end. This group is meant to be small from the onset, but will collaborate with the larger stakeholder advisory committee as the process develops. Participants in the working group might include a city planner, representative of the parks and recreation department, a county or public lands official, or local non-profit groups.

This group is tasked with a number of responsibilities, such as gathering the necessary information, determining a project timeline, crafting a plan for public engagement, and leading the broader stakeholder advisory committee to determine the vision, mission and management priorities of the plan. The core working group will help to keep participants focused and the plan on track.

Understand Current River Conditions

Understanding current river conditions will help to lay a strong foundation for your planning process and eventual river recreation management plan. The following questions will help to guide your analysis of current river conditions

and potentially help you identify other important issues you may need to consider. To help answer these questions, you may consider contacting parks and recreation departments, city planners, conservation and other groups, city and county councils, and county clerks, as well as online sources like stream gauges, temperature profiles, and other baseline data.

River Landscape

The river channel and its surrounding lands play a critical role in maintaining river health and are important factors when managing recreational use. The following questions will help you better understand how your river landscape may enhance or pose challenges for recreational opportunities. Questions to consider:

- What is the current state, considering both ecological and human impacts, of the river and its surrounding lands, and how does this support or detract from recreational opportunities?
- What development has occurred within the river corridor and what effect may it have on river recreation? Are there parking lots or other impervious areas that cause flash flooding, impair water quality, and pose other challenges to recreation?
- What existing physical features, natural or constructed, might cause challenges for recreation? Has the river been channelized, dammed, or leveed and what challenges does that pose for recreation? Safety to various users could be paramount with these physical attributes of the river channel and surrounding riverside lands.

Vegetation & Wildlife

Understanding the vegetation and wildlife present in and along your river is also an important consideration. The following questions may help to identify the vegetation and wildlife present in your river corridor and guide best management strategies and proper management.

Questions to consider:

- Are threatened, endangered, and/or rare plant and animal species present? If yes, contact your state's department of natural resources or state office of the U.S. Fish and Wildlife Service for guidance on how to manage recreation for these species.
- What, if any, invasive species are present in and along the river corridor? How might this affect recreation in and along the river? Are there areas that could reduce impact via recreational use, such as previously disturbed areas?
- What native species are present? What types of recreation depend on these species (e.g. fishing, birding, or other wildlife watching)? How tolerant are native plant and wildlife species to human impacts? Are there sensitive ecological areas that should be avoided or protected from recreation?
- Is the area a migration corridor for fish and wildlife and/or important location for nesting and spawning that could either be inhibited by recreation or would help to improve the recreational experience without disrupting the species?

Water Flow

Water flows including gradient, volume, and timing of flows may influence recreational opportunities and should be examined. Sufficient flows are critical for many forms of recreation. The following questions may help you to better understand how water flows in your river, how recreation is affected and the best ways to manage the river itself and the recreation that occurs along the river.

Questions to consider:

- What is the gradient and slope of the river? How could this affect recreational access put in points?
- Are there increased or reduced flows at various times of the year that could affect recreation like fishing, hiking, or boating? Are there times of year when it is too dangerous for people to use the river for recreation (high flows associated with spring runoff)? What types of recreation may be affected by these flows? Are there times of year when there is too little flow for certain types of recreation?
- Is there an upstream dam or diversion that has release requirements? What are they and how do they support or restrict recreation?

Swim Guide App

The Waterkeeper Alliance created the [Swim Guide app](#) in response to people wanting more information about safe, swimmable beaches, lakes and rivers. The app provides free, up-to-date, reliable information about water quality and cautionary information for recreational users. The app draws on water quality information that is received from government agencies, Waterkeepers, and volunteers working to collect data, which is then integrated with detailed map-based information. Visit it [here](#).

- What are the flood patterns of the river? Are there variances in flow along different sections of the river? What are the seasonal high and low flows of the river? How might that affect recreation?
- Are there expected changes to river as a result of climate change or a change in use (agriculture or water supply) that will alter flow and could affect current recreation?

Water Quality

Clean water is one of the most important factors for high quality river recreational experiences. Managing recreation in a way that supports water quality is of utmost importance in recreation management planning. The following questions may help you determine current water quality and identify potential risks associated with increased recreational use.

Questions to consider:

- Are there any current issues with water quality that could affect recreational use?
- Have there been issues with water quality in the past?
- What is the predominant land use surrounding the river? How does land use affect water quality?
- Has the river been listed on a water quality watch list? How would this affect recreation like swimming or fishing?
- Is it safe for people to come into contact with the water?
- Will increased recreational use impact water quality?

Analyze Existing Recreation and Natural Resource Plans

There are a number of existing community and natural resource plans available that can help you analyze the current conditions of the river and surrounding areas and understand the recreation and conservation efforts taking place nearby. These plans may be found at sources like the local planning, parks and recreation, or state department of natural resources. Examples may include recreation master plans, land-use plans, conservation plans, and economic development plans. It is important to build upon, coordinate, and support these existing plans when possible.

Understand Community Considerations

Local knowledge and understanding of the community is critical to successful recreation management, as it steeps the work in the specifics of the place and its people. There are a number of community considerations to take into account during your planning, including historical and current uses of the river, land use and characteristics, and community values.

Historical and Current Uses

Historical and Current uses of the river provide insight into potential protection and restoration activities to consider when developing your river recreation management plan. Additionally, it is important to consider the river's current uses and users as you will need to engage current river users in your planning process. Questions to consider:

- What were the historical uses of your river and surrounding lands and what impact have they had on the river and recreational use (e.g. shipping, milling and extraction industries may have led to dredging and sediment issues that could impact the river and recreational use)?
- Have there been any efforts along the river to help cleanup or improve the river to help mitigate effects of previous uses? Has recreation benefited from these improvements?
- What are current uses of your river and how do they affect potential recreation and how does recreation affect their use (e.g. shipping, recreation, agriculture, water supply)?
- Do illegal activities occur in and along the river corridor? If so, what types and how prevalent are they? What entities are attempting to address these illegal activities?

Community Values

Every community is unique. Rivers bring people and communities together. When diverse communities congregate at a river, it is an opportunity for communities and their values to connect. It is important to consider the strengths and exceptional characteristics of the communities that connect to the river when planning for your river recreation management plan. Given that there may be multiple existing or potential communities connecting to the river, it will be important to ensure that each community has an opportunity to address the following questions.

Questions to consider:

- What are the demographics of the communities along the river? Are there many young people, children or older people? Are communities mostly rural, urban or suburban? What is the population size of the communities along the river and is it expected to increase or decrease?
- What are the biggest challenges facing the communities?
- What values are most important to the community/communities that connect to the river?
- Are there cultural, socio-economic, environmental or recreation sensitivities or concerns surrounding your river or its historical and current uses?
- Does your community or do your communities benefit from healthy rivers? What are the benefits that your community/communities derives/derive from your river?



PHOTO CREDIT: TAKE ME FISHING

Understand Recreation Use Considerations

Another important factor to consider is the type and amount of recreational use and amenities that already exist on and near your river. Developing a recreational management plan is an opportunity to identify two things. First, if there is an opportunity to enhance the current recreational experience in a way that restores and protects the areas natural resources. Second, whether your river is or could be negatively impacted by existing or future recreational use.

Questions to consider:

- What types of recreation occur along the river (boating, fishing, hiking, bird watching, picnicking, etc.)?
- What public/private recreational amenities already exist (e.g. access, parking lots, parks, trails, greenways, etc.)? Does existing infrastructure adequately support current recreational needs?
- Is there overuse in and around the river corridor? Does recreational use negatively impact your river and surrounding lands? If so, how and where?
- Is the river corridor popular with out-of-town visitors? Are there particular months that are more popular than others for recreation?
- Do commercial outfitters operate on the river?
- What opportunities exist for new or improved recreational activities?



PHOTO CREDIT: TAKE ME FISHING

Understand Legal Considerations

Legal considerations such as private property, water rights, and liability are important factors to be carefully considered when developing a river recreation management plan. Landowners are sometimes left out of the initial planning process, however they are critical stakeholders and should be included in your efforts early on. They often have a different perspective than other stakeholders because of liability concerns and the impact to property values and the land. In some instances, landowners may even have rights to the river bed and the water itself.

Property and water rights differ from state to state and individual state laws could impact the management practices you employ in your river recreation management plan. Liability also differs from state to state. Be sure you understand these important details before moving forward. Questions to consider:

- How is water managed in your state and how does it affect recreation?
- What are the private property and water rights, and access laws within your state and how will they affect existing and new recreation?
- Who owns the properties along the river? Does your state allow for people to own the riverbed itself? How does this affect recreation in your community?
- Are there water rights associated with the properties? How is recreation affected here and what issues may users face?
- How do local landowners feel about recreation and conservation?
- What liability issues related to recreational use need to be considered for your state?
- Are there state laws in your state to help reduce liability for public and private land?

Working With Landowners

[Working with landowners](#) is an important part of ensuring a community driven, inclusive process. There are a number of ways to help landowners become a part of the process and address concerns or questions they might have. Learn more about ways to work with landowners through the “Working With Landowners” section of the [Blue Trails Guide here](#).



Understanding Management Liability

[American Whitewater](#), a national recreation advocacy group, prepared the [Liability Toolbox](#) to serve as a starting point to understand the public’s rights related to recreational use of private lands near rivers and streams. The toolbox identifies rights, laws and statutes in all 50 states.

The [River Management Society](#), a national nonprofit, created [Guidance for Landowner Liability](#) to assist river managers understand liability related to recreational access on private and public lands. It also provides guidance on negotiating with landowners to provide access to private lands and provides information for landowners who currently allow recreational access or are considering allowing access on their property.

STEP 2:

Solicit Input and Build Community Support

The success of your river recreation management plan largely depends on community support and involvement. You need engaged partners, stakeholders, and the community members. To develop a plan that enjoys broad and deep support, there must be early and extensive outreach. The community should be involved in every stage of development from planning to implementation and monitoring.

Engage the Public

There are a number of strategies you can use to engage the public in a way that is as inclusive as possible. These strategies include:

- **Public survey:** Develop an online public survey allows for a high number of results with tangible information about river use, concentration of river access points, community concerns around recreation, protection and restoration opportunities, and additional information.
- **Web comments:** Create a Facebook page or community homepage where you can describe information about the river recreation management plan and solicit feedback.
- **Direct outreach (phone calls and email):** Target specific, important stakeholders for feedback.
- **Community open house: or public forum:** Host a gathering for community members to learn about the planning process and how such a process might work. Leave plenty of time for questions and dialogue.
- **Issues workshop:** Moderate workshops for different river user groups and/or specific issues/concerns



City of Durango River Recreation Management Plan

The [City of Durango, Colorado](#) led a collaborative process during the creation of its river recreation management plan. With the help of the National Park Service's Rivers, Trails and Conservation Assistance Program, Durango engaged the public in the process, giving residents an opportunity to clearly articulate issues and concerns to ensure collaborative solutions that addressed concerns of all users.

They did this through a survey, community open houses, and workshops focused on addressing specific issues. They provided an opportunity for recreationalist, property owners and conservationists to discuss issues and concerns, strategies and potential solutions. Each of the three groups were asked to focus on a particular river experience and explore whether and how that desired experience could maintain its character while addressing the interests and needs of the other groups. The groups then explored a variety of management possibilities to accomplish their objectives. By the end of the community engagement process, the participants had developed a set of recommendations for management in all of the categories. [View it here.](#)

Outreach Campaign: Musconetcong Wild & Scenic River

The [Musconetcong National Wild and Scenic River](#) in New Jersey is managed through the Wild and Scenic Rivers Partnership program, which engages local municipalities, towns and other stakeholders. During the process of creating its management plan, the Musconetcong River Advisory Committee employed an expansive public outreach campaign. They created a sub-committee specifically to manage the public outreach and engagement process organizing public meetings and events to promote involvement and diverse input into the plan.

Monthly Advisory Committee meetings were held at various locations throughout the watershed and were open to the public. Meeting notices, minutes, and report drafts were distributed to local officials, county and state agencies, meeting attendees, and others. Public opinion surveys were mailed to 750 residents of the 18 river municipalities, including 300 riverside landowners. Special meetings were sponsored to promote awareness of the river and its unique values, including a historical perspective presented by a National Park Service historian, driving tours, and canoe and hiking trips to remote reaches of the river.

Once the draft river management plan was in the final stages, copies were provided to each river municipality and others on their mailing list. Public workshops were held to present the plan and address questions. A revised draft was then prepared and mailed to each municipality with a request for a resolution in support of the plan and the designation of the river. Thirteen of the fourteen municipalities approved resolutions of support at local public meetings demonstrating the success of their outreach process. [Learn more about it here.](#)

Create A River Management Stakeholder Advisory Committee

A river management stakeholder advisory committee is the larger team (including the core working group) to determine how the management plan will be developed, monitored, funded, and eventually implemented. It is important that your advisory committee is made up of diverse stakeholders that represent both existing and potentially new river users. Together, the committee will identify common goals, convene dialogues about difference, and identify paths forward for managing the river together for the benefit of the river, communities, and users.

Traditional river stakeholder interests include anglers, boaters, commercial outfitters, elected officials and conservationists. Other non-traditional stakeholders to include are private landowners, healthcare institutions, schools, community development organizations, chambers of commerce, and arts groups. Rivers managed by the federal government require a diverse steering committee or stakeholder groups to advise on management decisions. Often the makeup and size of the advisory committee depend on the goals of the river management plan and length of the river or size of area you are managing.

Responsibilities of the stakeholder advisory committee include:

- Identify common goals and gauge interests from different user groups to encourage positive user experience and sustainable river management
- Create a mission statement for the steering committee and determine how the steering committee will work collectively and with the broader community
- Develop the plan, create a timeline, and identify stakeholders to engage in the process
- Implement the plan

Meeting In A Box

The [Rails-To-Trails Conservancy](#) created the “[Meeting in a Box](#)” to help organize productive and enjoyable meetings when trying to gain public support for your project. It includes tips for planning your agenda, doing your homework, developing speech outlines, and managing question and answer sessions.

Boise River Resource Management Plan

To better manage an increase in recreational activity on the [Boise River in Boise, Idaho](#), the community created a 21-member steering committee that included municipalities, city planners, an irrigation organization, non-profits, state and federal agencies, recreational users, and businesses. Their charge was to update the management plan in a way that enhances recreational opportunities and protects their valued natural resources.

During the planning process, the steering committee learned about river conditions, issues, and user trends. They participated in tours, heard presentations by experts in key management areas, and discussed policy and project priorities such as emergency management and budget issues.

They held public open houses to solicit feedback from residents, online open house that included an interactive planning area map, and created an online comment form to solicit input. The Boise Parks and Recreation website had links to steering committee presentations and background information and the public could email comments through their website. The Plan was reviewed and approved by the BPR Board of Commissioners and the City of Boise Planning and Zoning Commission. The Boise City Council gave final approval and adopted the plan in December 2014.

[Learn more about it here.](#)



PHOTO CREDIT: MARK ELLSWORTH, IDAHO FISH AND GAME

STEP 3:

Set Management Priorities

River recreation management plans seek to ensure that user experience is managed in a way that protects the values of the natural resources as well the recreational experience of designated users. This means considering the carrying capacity or total number of users capable of sustainably utilizing the resource at a given time. The plan should take into consideration the variety of river users and how to manage potential conflicts between them.

Creating a river recreation management plan is not a one size fits all process. Natural resource and recreational needs and opportunities vary from community to community. It is important to work with your steering committee to utilize all the background information gathered as well as your collective experience and expertise to inform the process and determine management priorities.

This section identifies your community's priorities and develops an effective plan to manage both recreational use and the effects on the resource. Below are steps to create a vision for your plan and the river overall, as well as identifying management areas on which to focus and the strategies and objectives that will support your community to meet their goals

Create A Vision For Your Plan

A vision statement is important to define the long-term goals of your river recreation management plan and create a shared sense of ownership and a commitment from the community at-large.

The vision is informed by the steering committee and public input. Consider the common themes raised as you solicited community input for your plan. Your vision statement should be an aspirational description of what you want to achieve in the long-term. It is intended to serve as a clear guide for choosing current and future courses of action.

Arkansas Headwaters Recreation Area Vision Statement

Below is an example of a [vision statement](#) from the [Arkansas Headwaters Recreation Area](#) management plan:

"The Arkansas Headwaters Recreation Area shall be managed to emphasize its natural resources, resource sustainability, and the standards for public land health, recognizing and respecting private property, while embracing numerous recreational, educational, and commercial activities. Such management will require balancing the many uses that preserve the existing natural settings and conditions as well as recognizing existing agriculture, rural and urban conditions throughout the river corridor. Maintaining these expectations and settings for visitors and residents alike will require individualized management through different sections of the river, in recognition of varying natural and manmade influences. Where conflict over goals and objectives occurs, balance and compromise should be found that recognizes the value of authorized recreational activities without diminishing the standards for public land health or the water resources."

Identify Areas of Emphasis and Goals

Once you have a vision for your river recreation management plan, you will want to identify areas of emphasis, key ideas or topics on which your community wants to focus, and goals for each area of emphasis. The areas of emphasis serve to organize the management plan.

When identifying areas of emphasis, take into consideration the feedback you heard through your process of soliciting public input and building community support. While each community will have different interests and needs, potential areas of emphasis might include:

- Recreation
- Conservation
- Wildlife and Habitat
- Education and Outreach
- Public Safety

Each area of emphasis should have clear objectives to help accomplish the goal associated with it. This will ensure that you achieve your overall vision.

A goal is something specific you seek to complete in a 15-20 year time span to achieve your vision. Goals are bold, but achievable statements that represent big-picture strategic thinking rather than a sum of smaller ideas. In addition to the goals, key indicators or ways of knowing if your goal is being achieved should be discussed. This will help to monitor the progress and success of your management strategies moving forward. More about this will be discussed in Step 4.

Objectives are essentially “sub-goals” that are associated with each long-term goal and will be achieved in the shorter term or over smaller spatial scales to make progress towards and accomplish your goals. You should have multiple objectives for each goal.

Updating Your Plan

River recreation management plans are normally reviewed and updated as needed approximately every five years. This allows managing entities to address any issues or make changes to ensure the protection of the natural resources as well as the user experience.



PHOTO CREDIT: BRETT HOCKMUTH

Managing Fossil Creek, AZ

[Fossil Creek](#), one of only two Wild and Scenic Rivers in Arizona, is widely known for its scenic waterfall, lush vegetation and cool canyons. The secret about this exceptional resource was out by 2013, when photos and videos from the site exploded on social media. After being loved almost to death, with 115,437 visitors in 2015 leaving behind nearly six tons of trash and ripping limbs off trees to start fires, the U.S. Forest Service (USFS) adopted new techniques to try to better manage its use. Starting in 2016, the USFS now requires a printed permit to enter the Fossil Creek Permit Area and vehicles must display an accompanying parking pass. The USFS is hopeful that the new permit system will help to protect both Fossil Creek and the visitor experience. [Learn more about it here.](#)

Example Goals and Objectives

In order to achieve both the objectives and overall goal of the area of emphasis, actions or specific activities and strategies are needed. These are activities that you will undertake to accomplish your objectives. Usually, there will be more than one action for each objective. See below for two examples.

Example One:

Area of Emphasis: Recreation

Goal 1: Opportunities for river access are available, diverse and maintained for all types of recreation in and along the river that maximize user experience.

Objective 1.1: Rivers are accessible from multiple points across the river

- **Action 1.1.1:** Survey the river for suitable access points
- **Action 1.1.2:** Create signs/kiosks for a sub set of identified access points

Objective 1.2: Access points allow for different types of recreation to occur

- **Action 1.2.1:** Conduct a survey to determine the types of recreation that may occur along the river
- **Action 1.2.2:** Determine the needs for recreational access

Example Two:

Area of Emphasis: Conservation

Goal 2: Recreation access is improved by a strong conservation ethic with native plants, clean water and adequate flows for river recreation.

Objective 2.1: Native plants and species are prevalent along the river

- **Action 2.1.1:** Survey native plants and species along reach of the river
- **Action 2.1.2:** Plant additional native plant species

Objective 2.2: Water quality exceeds minimum standards for recreation and human contact

- **Action 1.2.1:** Determine water quality standards for the reach of river
- **Action 2.2.2:** Implement volunteer water quality monitoring program to test different reaches of river



PHOTO CREDIT: NORTHERN FOREST CANOE TRAIL

Determining Carrying Capacity

Carrying capacity refers to two specific pieces. The first is the level of use that a recreation area can receive without suffering negative impacts to its natural resources or the visitor experience. Overcrowding and overuse are often a concern for recreation opportunities in and along river corridors. The second is how much disturbance a river and the surrounding corridor can take before damage effects the resource.

When recreational use is high, visitors encounter each other on a frequent basis. These interactions can either be a positive recreational experience or a negative experience. Complaints heard by river recreation managers include overcrowding, congestion, and conflicts among different types of users, which leads to a reduction in the quality of their recreation experience.

When a river corridor experiences a significant amount of recreational traffic, the resource values such as wildlife or flora and fauna present can be altered and disrupted. Additionally, erosion, invasive species or other significant changes to the resource itself are experienced. When thinking about this aspect of carrying capacity it is critical to think about the type of use that is occurring in addition to the number of users.

Determining the carrying capacity of your river and surrounding lands is an important part of your river recreation management plan. This includes thinking not only about the number of visitors that allow for an ideal experience to occur, but also the impacts that the number of users or the type of users have on the river and its surrounding lands.

While there is no magic formula to determine carrying capacity for your river, there are a number of factors to keep in mind. Many of these factors are covered in Step One of this report.

Environmental Resources

- Considerations of water quality and quantity as well as local habitat and native species are important to consider. Limitations on the suitability of certain areas for recreation such as foot traffic, paddling, etc.

Recreational Experience

- Considerations of how well utilized a river is, as well as the types of recreation and available access points are important to consider.

Management System

- Considerations include who is responsible for maintenance and emergency response as well as their costs, how often and with how many staff/resources can the area be maintained, repaired, actively managed.

Evaluation

- Considerations include evaluating carrying capacity on a periodic basis and including evaluation and metrics in your river recreation management plan.

Recreational use, regardless of the level of visitor use requires a proactive approach to sustain high quality recreation opportunities and respond to the increasing demand for recreation in and along rivers and other bodies of water. Determining the carrying capacity of your river and surrounding lands is an integral part of the river recreation management process.

Examples of Managing Carrying Capacity



PHOTO CREDIT: EYEWIRE

There are a number of management strategies that can help monitor use so that natural resources are not loved to death.

- In Utah, the Dead Horse Point State Park employs a sign-in and sign-out sheet, which asks recreational users to document the type of recreation they engaged in, the length of their visit, and asks for suggestions for improvements.
- Clarkdale, Arizona charges a fee for recreational use for commercial guides and parking fees for all visitors which fund all maintenance at the site. They also fund the ambassadors program, which provides on-the-ground enforcement to manage recreational use, ensure accountability, and provide assistance to the users.
- The Bureau of Reclamation limits recreational users on the Colorado River through Ruby Horse Thief Canyon by requiring day or camping permits.
- National Park System requires permits on popular stretches of the Colorado River through a lottery system.

Permits are not the solution for every community; however, they can help manage high volumes of recreational users and raise funding to implement management strategies.



PHOTO CREDIT: LISA COCHRAN

Organize River Cleanups

Identified in your management plan may be the need to have a strong and organized set of volunteers. Developing a volunteer based [river clean-up program](#) is an effective way to remove trash in and along the river and engage the community in stewardship. National River Cleanup®, launched in 1991, offers support to anyone interested in organizing a cleanup on their local river. By registering a cleanup with American Rivers, organizers receive free trash bags, assistance with online and print media coverage, volunteer promotion online and technical support. [Learn more about river cleanups here.](#)

STEP 4:

Implement and Monitor the River Management Plan

Implementation and Monitoring

By now you have gathered information about your river and surrounding lands, solicited input and built community support, and developed your river recreation management vision, mission, goals, objectives, and actions.

The next step is to develop a plan for monitoring and adapting your management plan. Monitoring plays a key role in protection and stewardship, and is a way for people to learn about the river. Monitoring is observing or measuring selected features in order to assess their health, gauge the ability of the ecosystem to support human uses, detect early warning of changes, provide insight into the causes of problems, and track whether you have achieved management and conservation goals.

There are two main reasons why monitoring is important. First to ensure the plan is being implemented and you work to achieve all of the actions set out in the plan. Second, to determine if the actions implemented are helping to achieve the overall goal and objectives for each area of emphasis. For example, if your area of emphasis is recreation, are the different actions you have implemented to achieve the overall goal for improved recreation? Choosing key indicators as a part of the planning process help determine if the plan is working or whether additional safeguards are needed.

When you develop a monitoring plan to ensure that your river recreation management strategies are working you need to determine the following information:

- Define the type of information to be collected,
- Choose indicators that demonstrate the success or challenges associated with each action,
- Identify methods and sites for monitoring,
- Determine the time of year, day, and frequency of monitoring, and assure the quality of the results.

You might consider creating a separate monitoring work group tasked with ensuring that the monitoring and evaluation plan is implemented. Participants could include those who help with the monitoring work and could include local non-profits, land management agencies, and parks and recreation departments. This group should coordinate to make sure results are compiled and monitoring strategies are implemented. If your community does not have the capacity to do the monitoring themselves, it may be helpful to bring in additional partners to help.

Northern Forest Canoe Trail Maintenance

The [Northern Forest Canoe Trail](#) (NFCT) extends for 740 miles across contiguous rivers, streams, and lakes from Old Forge, New York through Vermont, Quebec, and New Hampshire to Fort Kent, Maine. To manage a trail of this size, the NFCT Stewardship Committee created a cohesive management plan that maintains the entire length of the trail.

The Stewardship Committee works with private landowners and land managers to create management agreements, which allows their land or recreational amenity (access, portage, or campsite) to be considered part of the NFCT corridor. A timeframe is identified and a management plan is created for each parcel taking into account the landowners individual wishes. When the agreement has expired, it is re-evaluated and necessary changes are made.

The Stewardship Committee also created Trail Maintainers, a volunteer group dedicated to maintaining sections of the water trail. Usually, there are a minimum of two designated Trail Maintainers for each segment. Trail Maintainers visit their segments once a season depending on conditions. Maintenance tools are stored and available along the trail. [Learn more about their plan here.](#)

Adopt A River Trail Programs

[Adopt-A-River Trail](#) and similar programs are great ways for your community to help monitor your river. Anyone with an interest in the outdoors can participate. School and youth groups, scout troops, church, community and service organizations, businesses, families, and individuals are all examples of volunteers who are helping maintain and preserve recreation trails. Program volunteers can assist in managing and maintaining and provide safe, enjoyable access to the outdoors. Activities may include:

- Keeping launch sites free of debris
- Maintaining launch sites, parking lots, campsites, and trail and interpretive signage
- Ensuring the site is clean and free of debris
- Reporting erosion problems, illegal activities, vandalism, and safety issues

Typically, a section of river and surrounding lands is adopted for a period of one to two years, renewable annually thereafter upon approval by the program manager. This agreement usually can be terminated at any time by the volunteer or program manager. Typically, volunteers are asked to visit at least 4 times a year (approximately once every 3 months). Volunteers choose the days and time they visit the trail. After each visit, volunteers send a written report to the program manager so that they can keep track of volunteer efforts and any issues. [Learn more about the Adopt-A-River Trail here.](#)



Example Monitoring Plan

To demonstrate different types of monitoring, we will use the same example used in Step 3 (page 13) to demonstrate how to develop potential monitoring strategies including tracking whether or not you have completed the actions and measures of success associated with objectives.

Example One:

Area of Emphasis: Recreation

Goal 1: Opportunities for river access are available, diverse and maintained for all types of recreation in and along the river that maximize user experience.

Objective 1.1: Rivers are accessible from multiple points across the river

■ **Track Action:** Did you survey the river for suitable access points, as planned? Did you encounter or anticipate any challenges?

■ **Monitor Success:** How many access points are in place and being used?

Objective 1.2: Access points allow for different types of recreation to occur

■ **Track Action:** Did you survey the river for different types of recreation as planned? Did you encounter or anticipate any challenges?

■ **Monitor Success:** How many different types of recreation are occurring at each access point?

Example Two:

Area of Emphasis: Conservation

Goal 2: Recreation access is improved by a strong conservation ethic with native plants, clean water and adequate flows for river recreation.

Objective 2.1: Native plants and species are prevalent along the river

■ **Track Action:** Did you survey the river for native and invasive species as planned? Did you encounter or anticipate any challenges?

■ **Monitor Success:** What are the numbers of native species and what is the percentage of cover?

Objective 2.2: Water quality exceeds minimum standards for recreation and human contact

■ **Track Action:** Did you determine the minimum water quality standard for your river and develop a volunteer program? Did they monitor different reaches of the river as planned? Did you encounter or anticipate any challenges?

■ **Monitor Success:** Did the water quality meet or exceed the water standards for the reach of river?

River Watch Colorado

River Watch Colorado works with voluntary stewards to monitor water quality and other indicators of watershed health and utilize this high quality data to educate citizens and inform decision makers about the condition of Colorado's waters. This data is also used in the Clean Water Act decision-making process. River Watch volunteers consist primarily of Middle and High School students, but also include citizen groups, individuals, colleges, and local governments. Since 1989, they have involved more than 70,000 individuals in Colorado and provided data on 3,000 stations covering more than 300 rivers.

Emergency Management and Enforcement

Enforcement plays an important role in monitoring rivers and riverside land. Emergency management representatives should be included in your planning from the early stages. This could include fire, law enforcement, and emergency medical personnel as well as environmental, health and safety, and operations representatives from state and federal offices. When developing emergency management plans, be aware of what entities are first responders, who is liable, and what different layers of response might be needed. When dealing with enforcement of laws and potential illegal activities, understand what entity is in charge of different reaches of river. Have a protocol for how the different entities will work together and keep each other informed about incidents, response and challenges along the river.

There are a number of ways that emergency management and enforcement can be integrated into river recreation management including safety signage, an emergency response plan, and safety features along access points. Communities may decide to use different systems for emergency response plans including the U.S. National Grid system, GIS mapping as well as the Trails Emergency Access System.



Des Moines River Emergency Response Planning

In Webster County, Iowa, public land managers, local Emergency Management Services, law enforcement, and city and county staff have created a coordinated and timely response plan utilizing the [U.S. National Grid System](#), which allows a community to pinpoint accidents, missing persons, or evidence throughout the county, especially in remote areas.

Emergency Location Markers mark locations such as trail intersections, camp sites, buildings, boat landings, and other response locations with a marker that works with GPS, is location specific, unique across jurisdictions, and is nationally consistent. Many times, in an emergency “normal” methods used to describe locations, such as street signs, are not available. The U.S. National Grid provides a standardized grid reference system that is seamless across jurisdictional boundaries and allows for pinpointing exact locations. [Learn more about Emergency Response Plans in Iowa here.](#)

STEP 5: Fund Your Plan

Funding river recreation management can be challenging. Traditional funding sources are not always interested in supporting recreation management. Generally speaking, it is easier to fund projects where communities “break ground” and “cut ribbons,” and where there are clear and measurable changes the community can see. These projects are often capital projects in which physical changes to the landscape are involved. Management is challenging to fund because it is often invisible to the user and to the funder. Management also is a sustained, long-term funding need that stretches beyond the timeframe and interest of most funding sources.

Rivers, Trails and Conservation Assistance Program

The National Park Service’s RTCA Program provides technical assistance to help communities define project vision and goals, engage partners and stakeholders, assist in creation of river recreation management plans as well as identify sources of funding for implementation. Applications for the program occur on an annual basis.



Blue Trails Guide Funding Database

In 2014, American Rivers created [The Blue Trails Guide Funding Database](#), an online database of funding and assistance programs for recreation and conservation projects. It includes more than 80 federal, 30 state and 10 corporate programs for projects ranging from new river access points to habitat restoration to land protection to monitoring and management. [Explore new funding sources here.](#)

Funding recreation management requires creative thinking, considering the long term and developing partnerships and structures that can sustain the ongoing nature of the work. There are a number of ways that communities across the country have funded the implementation and monitoring of management actions. Potential funding could include:

- Municipal funding from local Parks and Recreation Departments, Planning Departments, Open Space Programs or other programs can be repurposed for recreation management
- State funding sources from Department of Wildlife, Natural Resources or other that support the development and management of river recreation
- Federal funding and technical assistance programs to help plan and implement recreation management
- Corporate gifts through in-kind donations and cash support for recreation management
- Fees for use, through payments for entrance, permits, concessions, product sales or special activities that support recreation management
- Private foundations or individual donations for recreation management
- Kickstarter campaign or other online technology where supporters can contribute to a specific cause
- Lottery or raffle sponsorship with funds going towards recreation management

Verde River@Clarkdale Permits and Fees

Since 2013, Clarkdale, Arizona has raised money for the management of their two river parks and access points on the Verde River through recreation fees. They have successfully implemented two types of permits: parking and commercial recreation fees. Not only do these permits manage the number of users that visit the parks and recreate on the river, but it also provides all of the funds to manage the park and the associated river access sites.

For more information about state and federal funding programs as well as corporate opportunities for recreation and conservation projects, visit the [Blue Trails Guide Funding Database](#). The database includes more than 80 federal, 30 state specific and 10 different corporate programs.

For more information on funding from private foundations that support conservation and recreation projects in your area visit the [Free Foundation Directory Online](#).

Outhouse Raffles

Since 2006, Georgia River Network has employed a very creative technique to fund their annual Paddle Georgia trip and festival. Each year GRN obtains sponsorships for the port-a-potties used during the event to help offset the rental costs. This is done by way of an auction, either online or at one of their events, where the winning bidders receive signage rights on a Paddle Georgia port-a-potty. Over the years, sponsors have found creative ways to make this fundraiser fun for the individual winner and businesses. The only request is that the message be child friendly. Some porta-toilets have reportedly been named of least favorite presidents, mother-in-laws, best friends, and businesses.

Summary

River recreation management plans help enhance recreational opportunities and protect a river's natural, social, and economic values. When communities work together to develop and implement a comprehensive river recreation management plan, the river and communities along it will thrive.

This guide provides a framework for developing an effective community driven river recreation management plan. While this plan is not the same recipe for each community, it does provide key components that will help to ensure success for your community, the user experience as well as protection of the river resource. It outlines steps of process to consider including when creating a management plan from gathering and soliciting information to building community support, and creating, implementing, monitoring and funding your plan.

The development of management plans provides the opportunity for your community to collaborate and have the necessary conversations and make the decisions needed to best manage an important recreational and natural resource in your back yard. Including diverse and nontraditional stakeholders allows your community to consider the different needs and wants of each user group, while creating a cohesive and comprehensive way to manage the river.

Like all plans, river recreation management plans require the continued work of the stakeholders who helped to create it. Monitoring, evaluation and periodic reviewing is critical for the success of the plan for both users along the river and the resource itself. Management strategies are dynamic and consistently changing as the use and the impacts to the river change as well.

The creation of a river recreation management plan will help you enhance recreational opportunities, preserve the outstanding values that make your river and your community special, and leave a legacy of healthy rivers for generations to come.



Additional Resources

Planning Tools		
TITLE	AUTHOR	WEBLINK
Water Trails Toolkit	Iowa Department of Natural Resources	http://www.iowadnr.gov/Things-to-Do/Canoeing-Kayaking/Water-Trail-Development-Tools/Water-Trails-Toolkit
National Water Trails Planning Toolkit	National Park Service	http://www.nps.gov/WaterTrails/Toolboxes/Planning
Partnership Wild and Scenic Rivers	National Park Service	https://www.nps.gov/orgs/1912/upload/PWSRforweb.pdf#suasco
Crowding and Carrying Capacity in Outdoor Recreation	Robert E. Manning, University of Vermont	https://www.uvm.edu/parkstudieslaboratory/publications/Crowding_and_Carrying_Capacity.pdf
Truckee River Resources	One Truckee River	http://www.onetruckeeriver.org/resources/
Blue Trails Guide Funding Database	American Rivers	http://www.bluetrailsguide.org/funding-resources/
Blue Trails Guide Building Trails	American Rivers	http://www.bluetrailsguide.org/build/
Blue Trails Guide Resources and Case Studies	American Rivers and Partners	http://www.bluetrailsguide.org/resources

Example River Recreation Management Plans		
TITLE	AUTHOR	WEBLINK
Recreation Management Plans for Montana	Montana Fish, Wildlife and Parks	http://fwp.mt.gov/recreation/management/
Yampa River Management Plan	City of Steamboat Springs, CO	http://steamboatsprings.net/DocumentCenter/Home/View/1595
Beaver Head and Big Hole River Recreation Management Plan	Montana Fish, Wildlife and Parks	http://fwp.mt.gov/recreation/management/beaverheadBig-Hole/
Blackfoot River Recreation Management Plan	Montana Fish, Wildlife and Parks	http://fwp.mt.gov/recreation/management/blackfoot/
Durango River Recreation Management Plan	City of Durango, CO	http://www.durangogov.org/DocumentCenter/View/1749
Clear Creek Management Plan	City of Golden, CO	http://www.cityofgolden.net/media/ClearCreekManagementPlan.pdf
Boise River Recreation Management Plan	City of Boise, ID	https://parks.cityofboise.org/media/994797/boise-river-resource-management-and-master-plan_final-12-29-14.pdf
Bronx River Greenway	Bronx River Alliance	http://www.bronxriver.org/puma/images/usersubmitted/greenway_plan/
Upper Nooksack River Recreation Plan	Upper Nooksack Recreation Advisory Committee	http://www.americanrivers.org/assets/pdfs/reports-and-publications/UNRRP_March%202015_Final.pdf?9160f1

Funding		
TITLE	AUTHOR	WEBLINK
Fund Your Park	National Recreation and Parks Association	http://www.nrpa.org/fund-your-park/
Private Funding of Public Parks	Resources for the Future	http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-IB-14-01.pdf
Blue Trails Guide Funding Database	American Rivers	http://www.bluetrailsguide.org/funding-resources/

Liability and Recreational Use Statutes		
TITLE	AUTHOR	WEBLINK
Landowner Guidance	River Management Society	http://www.river-management.org/assets/WaterTrails/land-owner%20guidance_final_web.pdf
Liability and Recreational Use Statutes	American Whitewater	http://www.americanwhitewater.org/archive/article/123



American Rivers
Rivers Connect Us®

1101 14th Street NW, Suite 1400
Washington, DC 20005
(202) 347-7550
www.AmericanRivers.org