



1 | WATER TRAILS IN IOWA

Water trails offer an amazing way to experience remote areas of Iowa. Paddling provides both exercise and relaxation. Beyond directly benefiting people, the thoughtful development and management of water trails offers Iowa a chance to protect fragile ecosystems, as well as to gradually restore low-quality stream reaches and watersheds. Use of water trails, in turn, draws public attention to the state's surface waters and riparian landscapes and can demonstrate the relationship between water quality and land management.

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INTRODUCTION

The voices of nearly 1,000 Iowans are integrated into the content and strategies included in this development manual. These launch, parking, signage, and stream-management designs represent an updated way of thinking about human interaction and manipulation of streams. An example of this is the recommendation for water trail launches. Rather than suggesting a standard, one-size-fits-all approach to launch construction, water trail developers are coached through decisions about launch locations and construction materials, based on the science of river morphology and engineering.

Most paddlers in Iowa who provided input told us the only reason they don't paddle more frequently is limited time. The water trails program would like to change that by supporting the development of more well-designed trails throughout the state to decrease travel time. Paddlers and water trail managers strongly supported standardized features for state-designated water trails. These features — such as signage, a menu of adaptable launch types, a statewide system of numbering river miles and related access for navigable streams, and common mapping symbology — increase water trail user satisfaction and expectations. This manual walks each trail project from its earliest planning stages through to streambank stabilization and vegetation choices. Signage design and placement guidelines standardize how drivers are directed to launches, and they help paddlers navigate trails and exit the water safely to avoid hazards.

Successful water trails thrive through strong social relationships between people. Iowa DNR's publication, *Getting Started*, is a good reference for building these relationships between water trail advocates, local agency staff and outside consultants when needed. The early stages of water trail development include building trust among water trail developers and adjacent stream and riparian landowners. Landowners are critical to trail development because they are often working their land for income and are protective of their property and investments, such as livestock. This trust and understanding, including expectations for how the stream will be used, should be communicated to water trail users at launch sites to foster enduring relationships.

TIMELINE FOR DEVELOPING A WATER TRAIL

The Iowa Water Trails Program supports the responsible development of water trails in all parts of the state. Those trails meeting specific criteria to promote successful experiences are chosen for state designation. Designation, the official recognition that a water trail is part of the state system, occurs after all program requirements have been met and is subject to reversion if conditions are not maintained.

Trail projects seeking state designation are generally new trails developed to meet designation criteria, although existing trails are also encouraged to consider their eligibility by modifying elements as needed. Development of a state-designated water trail generally takes three to five years.

This timeline includes pre-planning, early review, development planning, funding, implementation and, if appropriate, designation (Figure 1-1). Trail implementation is rarely a linear process, instead adapting and re-visioning as opportunities change. Comprehensive plans for water trails are developed before implementation. Funding, however, is generally sought from multiple public and private sources and often arrives in segments rather than all at one time. As such, changes to the original design are sometimes required, including revisions to adapt to design standards or to the amount of funding available. More detail on the development process for water trails is provided in Chapter 2.

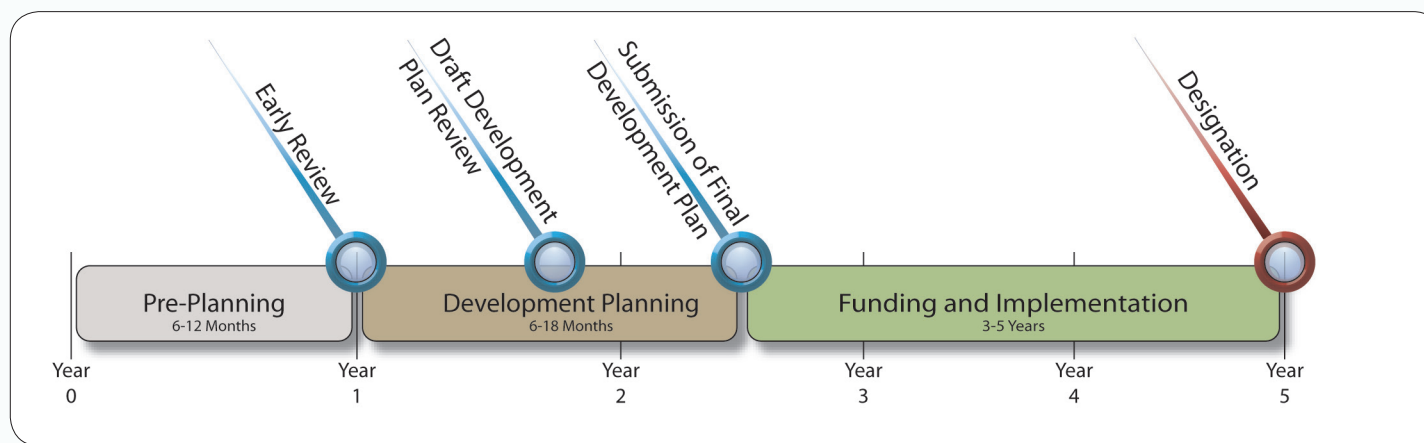


Figure 1-1.

Conceptual Timeline for New Water Trail Development



SUCCESSFUL WATER TRAILS

The state-designation process used in Iowa requires a functional relationship between all those integral to the trail planning, development, use, and management. This relationship is built before applying for state designation. Functional social relationships include community input in trail, launch, and amenity design, as well as considering whether state designation is a critical element of the future trail. Adjacent landowners along a trail route probably have the greatest opportunity to benefit from and also the most concern about water trail development. Water trails are more successful when adjacent landowners support trail use. Likewise, trail sponsors are responsible for developing trust with landowners and ensuring that trail users are informed of trail-use regulations to avoid damaging adjacent property.

Creating water trails that will endure long-term requires significant organization, particularly with multi-county trail routes. Managers of water trail projects are encouraged to foster organization among multiple agencies, such as those responsible for river management, emergency services, and law enforcement, before problems occur.

Water trail sponsorship refers to a relationship among agencies with control over land used for launch sites, trail-maintenance volunteers, and the public. Local paddling groups are a needed part of trail sponsorship, as they often provide important observations about trail use, as well as interest in enhancing water trails. For some construction projects associated with water trails, it is appropriate for paddling group

volunteers to raise money and provide construction labor. Volunteers, through both statewide efforts such as Project Aware and local efforts, are the most important source for trash pickup on streams in Iowa. Some management or maintenance exceeds what is possible with volunteers, however. Regular access maintenance, for example, may require equipment or a tractor. For consistent results, a maintenance commitment from a public manager should be obtained for each access along a water trail.

As with all stages of a water trail project, planning and designing the trail and amenities demands both professional expertise and community involvement. Design expertise and knowledge in the early stages of planning can reduce construction and maintenance costs for a project. For example, carefully choosing the appropriate number and spacing of access points on a trail to match the type of trail experience desired will minimize construction expense and maintenance responsibilities post-construction. Understanding the mechanics of how a river flows and its hydraulic properties is valuable for any project requiring dam modification, bank stabilization, or launch siting.

The water in all Iowa rivers is a valuable public resource. Each stream segment holds the possibility for recreational use of some type. To allow the thoughtful development of varied paddling experiences on water, Iowa uses a set of experience designations to help users match river elements with their needs and abilities.



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WATER TRAIL EXPERIENCE TYPES

Paddlers in Iowa told us they wanted to be able to predict the type of experiences they would have on a particular river before deciding where to paddle. Elements of particular interest included the amount of time likely needed for the trip, availability of amenities such as restrooms, appropriateness for use by older paddlers and special-needs populations, and amount of paddling experience necessary. While rivers are inherently unpredictable from day to day in terms of water level and velocity, some river attributes and development decisions provide reasonable predictability. The Iowa Water Trails program goal is to provide the information necessary to allow users to approximate their experiences.

State-designated water trails in Iowa are designed to provide four basic types of experiences: Gateway, Recreational, Challenge, and Wilderness. Each segment of a state-designated trail is assigned one of these experience ratings. This set of experience types reflects the range of conditions available in the state:

- **Gateway experience segments:** At normal flow conditions, these segments provide the most predictable experiences for paddlers. They are good introductory trails for beginners and those wanting shorter trips. Small hazards such as rock riffles or strainers can be easily navigated around. Portage around major hazards is not required. These segments are intended for high use levels. Launch construction includes stable surfaces, such as concrete, often with gentle slopes. Amenities are often available near launch parking areas.
- **Recreational experience segments:** Recreational experiences generally require more skill and experience compared with Gateway segments. At normal flow conditions, some boat maneuvering around hazards may be needed. Short portages are also possible. Launch locations may be more difficult to access from parking areas or may have been constructed with less stable materials such as gravel. Amenities are sometimes present near launch parking areas.
- **Challenge experience segments:** These segments are not for beginners. At normal flow conditions, paddlers will experience a moderate to high number of hazards including logjams, rapids, or other elements such as larger lakes with long open-water crossings and the potential for high waves or limited egress. Multiple short or long portages may be required. Access spacing varies considerably, and amenities are usually not available. Launch areas are usually more difficult to access from parking areas.
- **Wilderness experience segments:** While some contend that Iowa includes no wilderness, the goal of this experience classification is to provide users with what is possible in the state in terms of a paddling experience with minimal human-made distractions and amenities. Launch design and spacing between access points assumes above-average physical condition. Overnight primitive camping facilities may be present, as paddlers on these routes are often looking for multiple-day experiences. Any facilities present are minimal, primitive, and without signage.



LEGISLATION GOVERNING USE OF STREAMS

Water in streams, rivers, and creeks in Iowa is considered public. People are allowed to paddle or navigate on any stream with enough flow to support a small watercraft. Paddlers need some access to land to launch boats and move around channel obstructions, and they often are interested in lunching on sand bars, fishing, wading the length of streams, and exploring land near streams. When property is publicly owned, river users on all streams are allowed to access adjacent land and sand bars, and they are guaranteed on-foot access to channel bottoms. When adjacent land is privately owned, river users have more limited rights beyond floating on streams. These usage rights are based on how a given stream is classified.

Several Iowa rivers were designated “meandered” in original public land surveys for the federal government completed before Iowa received statehood (Figure 1-2). All remaining rivers are designated “non-meandered.” The streambeds of meandered rivers, up to the ordinary high-water mark, are considered publicly held property. The stream bed and banks of non-meandered rivers are considered part of the adjacent property. Users of non-meandered rivers have only the right to float on the water surface and wade on the stream bottom. DNR does not advise camping on sandbars on non-meandered navigable streams; on meandered streams, sandbar camping is typically allowed unless specifically prohibited.

In summary, on-foot access to privately owned land beyond the minimum required to launch and navigate include the three following scenarios:

- River users on rivers classified as **meandered** have clear on-foot access rights to the channel bottom and streambanks up to the ordinary high water mark, as those lands are owned by the State of Iowa.
- **Non-meandered** streams with water levels allowing navigation have a tradition of public use and implied rights similar to those of meandered streams, as long as private land within the channel is not used. Water trail developers and users should treat the private ownership of beds and banks with great respect.
- Streams without enough water to allow navigation are classified as “non-navigable” and are not generally considered for water trail development, as they would not be large enough for regular public recreation.

It is important to develop water trails in ways consistent with these criteria and also to communicate these rights to river users with signage at water trail launches.

Landowners with non-meandered streams are allowed to build cross-stream fencing to confine livestock. Conventional conservation practices exclude livestock from entering streams; however, some grazing still exists up to the stream edge. Iowa Code requires that river users must be allowed to navigate through fenced water without injury. River users also have a responsibility to not damage or alter fencing across water. This fencing, where it exists, is often barbed-wire or electric and difficult to maintain against high water.

A number of streams classified as meandered are already state-designated water trails. More miles of non-meandered, navigable streams are suitable for public recreation, and some have already been recognized as state-designated water trails.

Protected Water Areas (PWAs) are important stream segments in Iowa, and they offer interesting opportunities for recreational users. Five scenic rivers across Iowa are designated as PWAs through legislative action (Figure 1-3). Each designation includes management guidelines for adjacent habitats. Water trails developed within PWA corridors require integration of management guidelines, available from the Iowa DNR. In addition, PWA segments often receive additional review in the environmental permitting process. River Programs staff can direct trail developers to appropriate considerations for these valuable stream reaches, including techniques to minimize impact. These considerations may exceed this manual’s recommendations for stormwater management, incorporate local ecotypes in vegetative establishment, suggest additional measures for protecting species of greatest conservation need, and incorporate stream restoration principles into access design and construction. The Wilderness experience classification may be appropriate for water trails in PWA corridors, as these regions are typically less developed compared with other landscapes in the state.

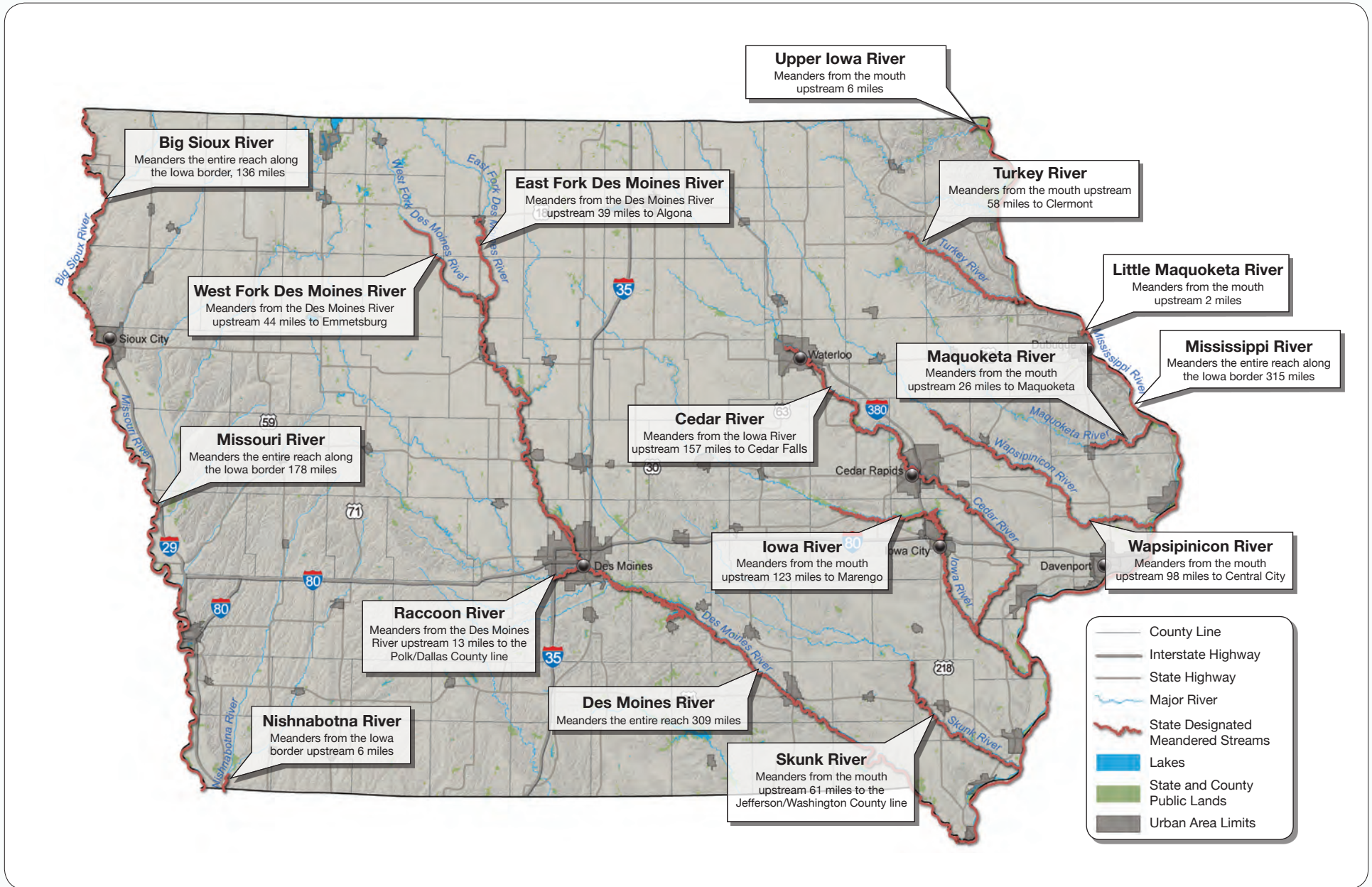


Figure 1-2. State-Designated Meandered Streams

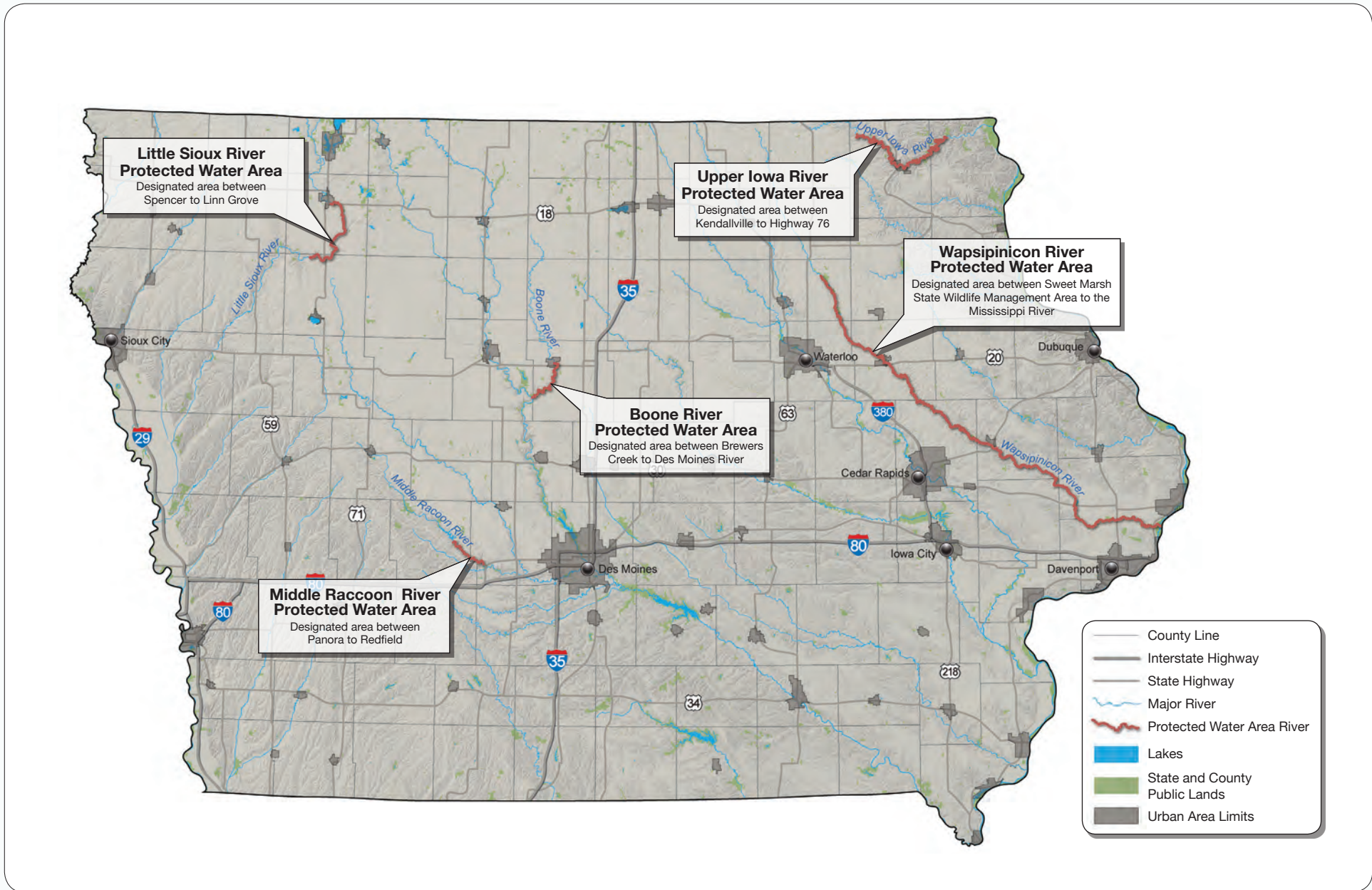


Figure 1-3.
Protected Water Areas



ENVIRONMENTAL PERMITTING

All water trails projects that include moving soil anywhere near a river must file a joint application to Iowa DNR Floodplains, the U.S. Army Corps of Engineers (USACE), and Iowa DNR Sovereign Lands. Projects on streams designated as “meandered” in the State of Iowa must also obtain permission from the Sovereign Lands program. While volunteers can sometimes fill out parts of these applications, the agency in control of the land where the construction will occur is responsible for submitting them. Additional instructions and applications can be found at www.iowadnr.com/other/slands.html.

In some cases, these agencies will issue a response letter stating that a permit is not necessary and, in many cases, the USACE can issue “Nationwide” permits. The Nationwide permit allows a streamlined process when changes or impacts are below a certain threshold. These circumstances include projects that will cause minimal site disturbance and will clearly not result in flood restrictions in the floodplain. Using the following guidelines can reduce turnaround times for permits and response letters. It can also reduce the chance that costs will be incurred for modeling to determine floodplain impacts, wetlands delineation (field surveys conducted by biologists), or mitigation (restoration of wetlands at the site or elsewhere).

Guidelines for a project to be included in the Nationwide permit:

- Use less than 50 cubic yards of net fill. (For example, if you excavate 100 cubic yards of soil and add 150 cubic yards of stone, this can still be permitted.) Certain locations will require zero cubic yards of net fill to be permitted or streamlined.
- Move all extracted material to the upland, or spread excess soil in the floodplain at less than 6 inches in depth.
- Do not discharge soil, water, or other material into an existing wetland.
- Disturb less than 1/10 an acre of wetland.
- Do not place in the water more than 10 cubic yards of material, including riprap, soil, or other materials.
- Do not accumulate debris within a floodplain.
- Do not obstruct the flow of any river.
- Minimize use of bridges or culverts in the floodplain.
- Obtain clearance through the USFWS for Threatened and Endangered Species areas.

Project sites inside a city or county jurisdiction participating in the National Flood Insurance Program may also need local permits before construction. Many cities and unincorporated areas of counties participate. These contacts will be identified by Iowa DNR Floodplains staff as they review application materials.

Additional review during the Floodplains and Sovereign Lands permitting process may apply to project areas along segments of Protected Water Areas.

This information is intended as an aid only. Projects should anticipate at least a 30-day turnaround on permit requests that follow the above guidelines, and some permits for significant channel changes can take as long as a year. Projects exceeding these guidelines may require several months for computations. Please direct specific questions to Iowa DNR Floodplains (515-281-4312), Iowa DNR Sovereign Lands Permitting (515-281-8967), and/or the U.S. Army Corps of Engineers Rock Island District (309-794-5380).

Water trail projects using federal funding are required to develop the projects in compliance with National Environmental Policy Act requirements. Project review by the State Historic Preservation Office is also required. Assistance with these requirements and reviews are usually provided by the funding agency, but project managers should also note that additional time and funds may be necessary. Inventories and reporting, such as archaeological reviews, threatened and endangered species inventory, and other environmental issues may require outside consultants. Specific requirements are variable and based on the scale of the project and the overall project approach.



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