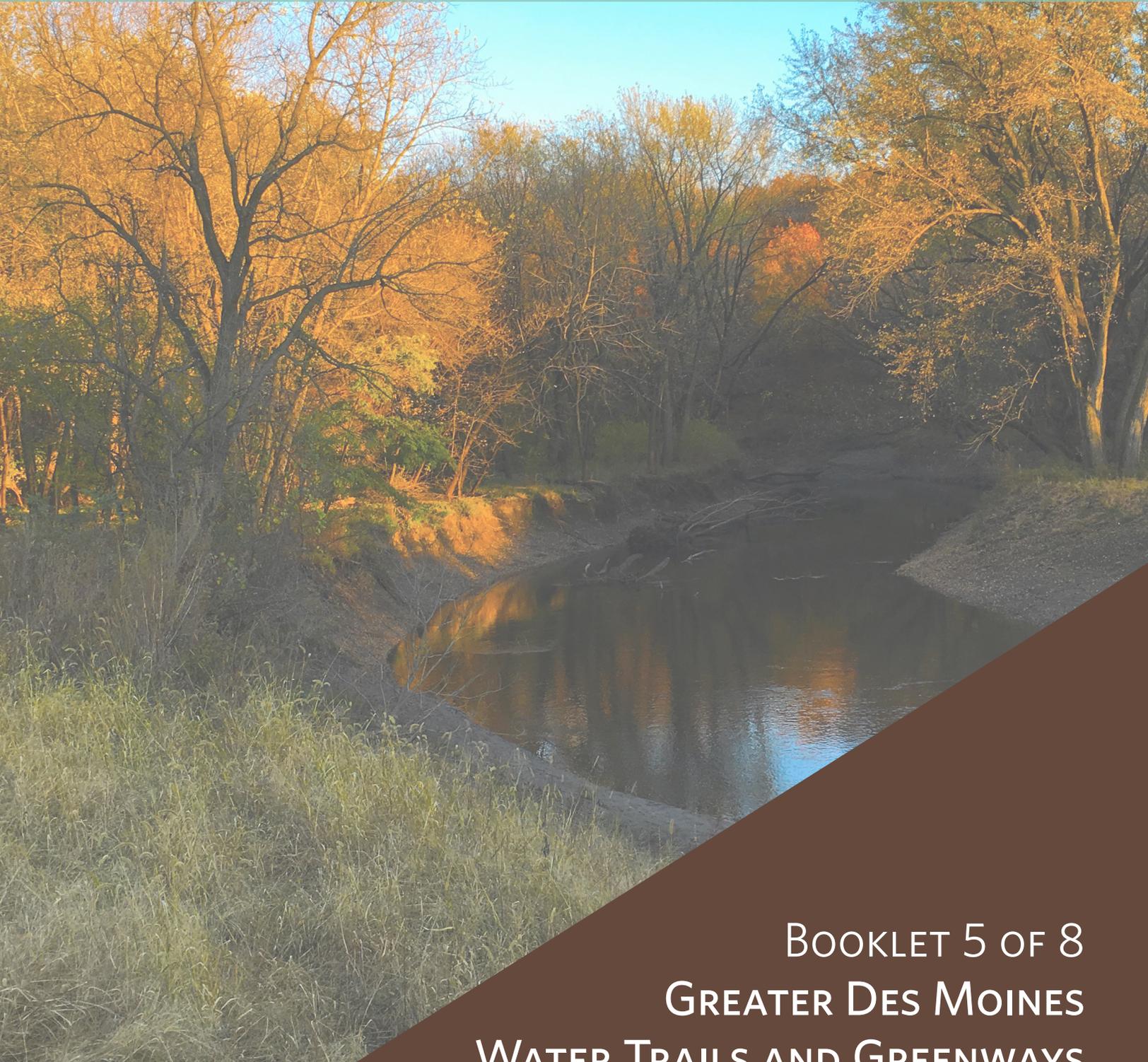




A VISION FOR NORTH AND MIDDLE RIVERS



BOOKLET 5 OF 8
GREATER DES MOINES
WATER TRAILS AND GREENWAYS
2016

Photo: City of Carlisle
North River

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Booklet 1 provides an overview of the broader *Water Trails and Greenways Plan* including vision, goals, strategies, policies, and implementation considerations. Please read through Booklet 1 to understand the larger framework that will directly impact each individual river and creek.

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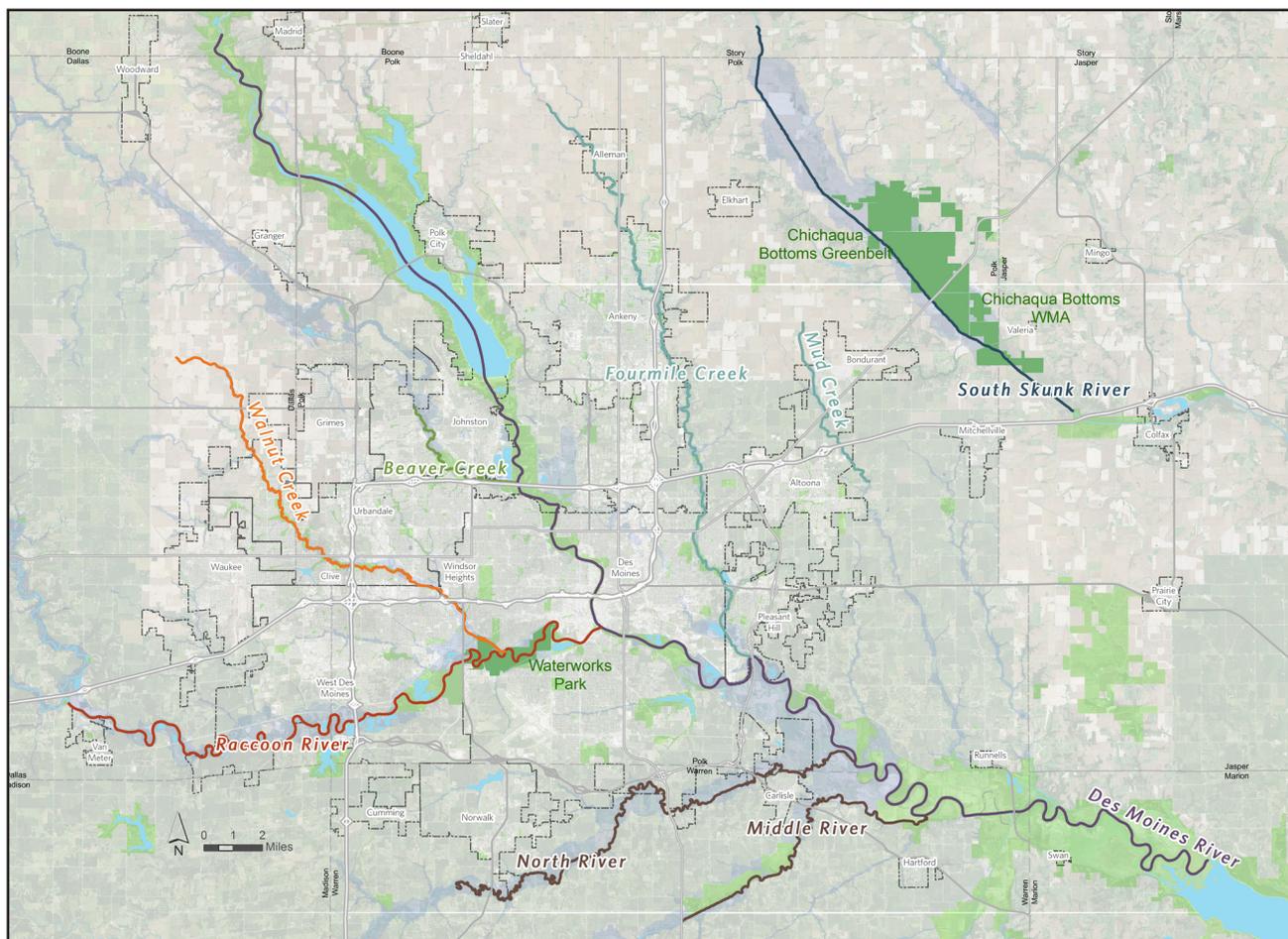
Booklet 8: Walnut Creek

One Vision, Many Communities

The Greater Des Moines Water Trails and Greenways Plan establishes a regional vision for our rivers, creeks, and greenways. Through extensive community engagement, and with the help of a strong steering committee, a clear regional vision emerged.

Regional Vision

The water trails and greenways of Greater Des Moines will be a natural haven, healthy ecosystem, signature recreational destination, economic driver, and community focal point that welcome people of all ages, abilities, interests, incomes, and cultures to connect with their rivers, creeks, and greenways.



Greater Des Moines Water Trails and Greenways planning area

This Booklet

The Greater Des Moines Water Trails and Greenways Plan looks at more than 150 miles of waterways. This booklet provides an overview of North and Middle Rivers, including recommendations to improve its environmental, recreational, and economic potential for the entire community. There are companion booklets for each waterway, as well as an overall Plan booklet covering common strategies and practices.

Existing Conditions

North River

Miles in study area: 40

Floodplain in public ownership: 8%

Jurisdictions within study area: Warren County, Des Moines, Norwalk, Carlisle

Current number of access points: 1

Primary Water Quality Impairment: Category 5, Bacteria

Middle River

Miles in study area: 14

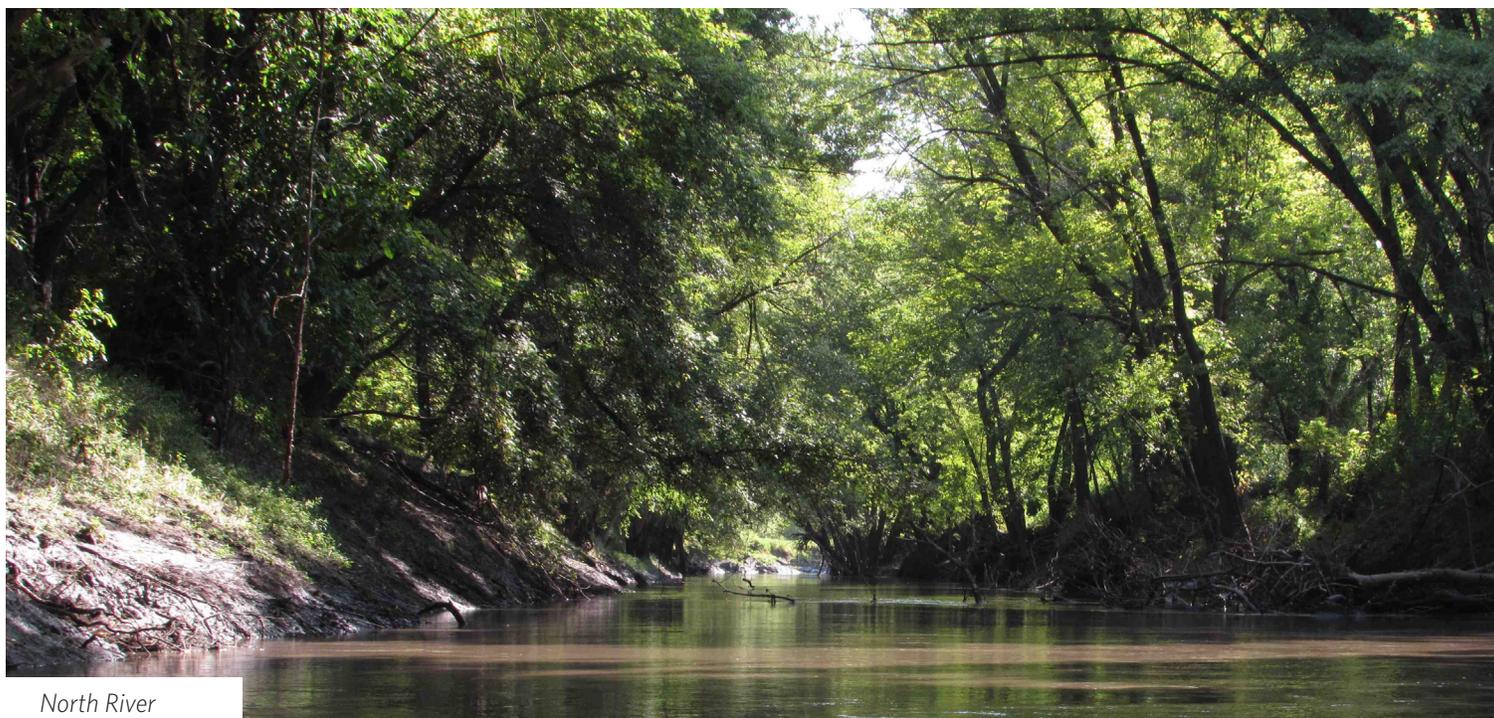
Floodplain in public ownership: 38%

Jurisdictions within study area: Warren County

Current number of access points: 0

Primary Water Quality Impairment: Category 5, Low Biotic Index

The North and Middle rivers are important waterways to the Lake Red Rock system that impact the water quality of Lake Red Rock and currently provide a challenge with sediment transfer. The rivers are quite muddy and challenging to navigate due to the instability of the river banks causing major logjams throughout. Opportunities for the North and Middle rivers primarily deal with conservation. North River has the potential to be navigated by paddlers but not without significant long-term investment in the watershed including upstream preservation, floodplain protection and streambank and channel restoration that would create a more stable river. The river currently suffers from a severe amount of logjams due to the volatility of the watershed.



North River

Both rivers feed into the Des Moines River shortly before entering Lake Red Rock. Both rivers go through very rural areas south of the Des Moines area although the City of Des Moines has development plans along the North River ([Highway 5/ North River Master Plan](#)). With few access points and considerable logjams, these rivers do not currently experience a great deal of user activity. However, both rivers are situated near several parks, amenities and feature impressive habitats and wildlife. The two rivers bisect the trail system and feature impressive parks and greenways along their banks including Summerset State Park, Scotch Ridge Nature Park and the Summerset Trail. Much of the Middle River is wooded supporting woodland and riverine wildlife. The City of Carlisle plans to improve one park through the Scotch Ridge Park Master Plan. For more information about the existing conditions of North and Middle River, please refer to the [State of the Rivers](#) report published in February of 2016.



Logjams and debris on the Middle River

Scotch Ridge Park Master Plan

The Scotch Ridge Trail and Nature Park in Carlisle will be a significant destination attraction and regional node for trails and greenways activity. Tabbed as a hub of discovery, the Scotch Ridge Nature Park will be an educational center that will teach the five critical literacy's of the natural world: ecological literacy, health literacy, aesthetic literacy, economic literacy, and character literacy. Each of these taught through the lens of native lowan ecosystems.

A collaborative project with public and private partners, the [Scotch Ridge Park Master Plan](#) emphasizes natural learning, conservation, physical activity and health, and culture and history.



Scotch Ridge Nature Park Rendering

Recommendations

Conservation and Greenspace

The major recommendation for these rivers is to support watershed improvements, including channel restoration, stream bank restoration, and floodplain protection. Additional improvements throughout the watershed would help to stabilize these rivers, offering the potential of a more navigable waterway in the future.

Currently there is a significant amount of land along the Middle River that has public ownership supporting floodplain protection and wildlife habitat improvement. This plan recommends extending this greenway corridor to include, at a minimum, the 100-year floodplain for both rivers. Prioritization for transitioning floodplain land into protected and restored property could begin with areas with a high frequency of flooding. The Iowa Flood Center can provide communities with maps showing areas in the 5, 10, and 15 year flood zones. This less productive land could be transitioned with support from groups like the Warren County Soil and Water Conservation District. This would not only help improve the water quality of the rivers and Lake Red Rock, but also offer quality birding and other wildlife viewing. Soft trails for birding are recommended in the areas of public ownership.



Natural shoreline restoration

Uses

Boating, including paddling, in the North River is not recommended due to the large number of logjams and the large cost required to make the river navigable. Instead, the river is better suited for birding, fishing, and other shoreline recreation. Access locations at the parks in Carlisle offer the best opportunities to provide access for fishing and to install general play features along the water.

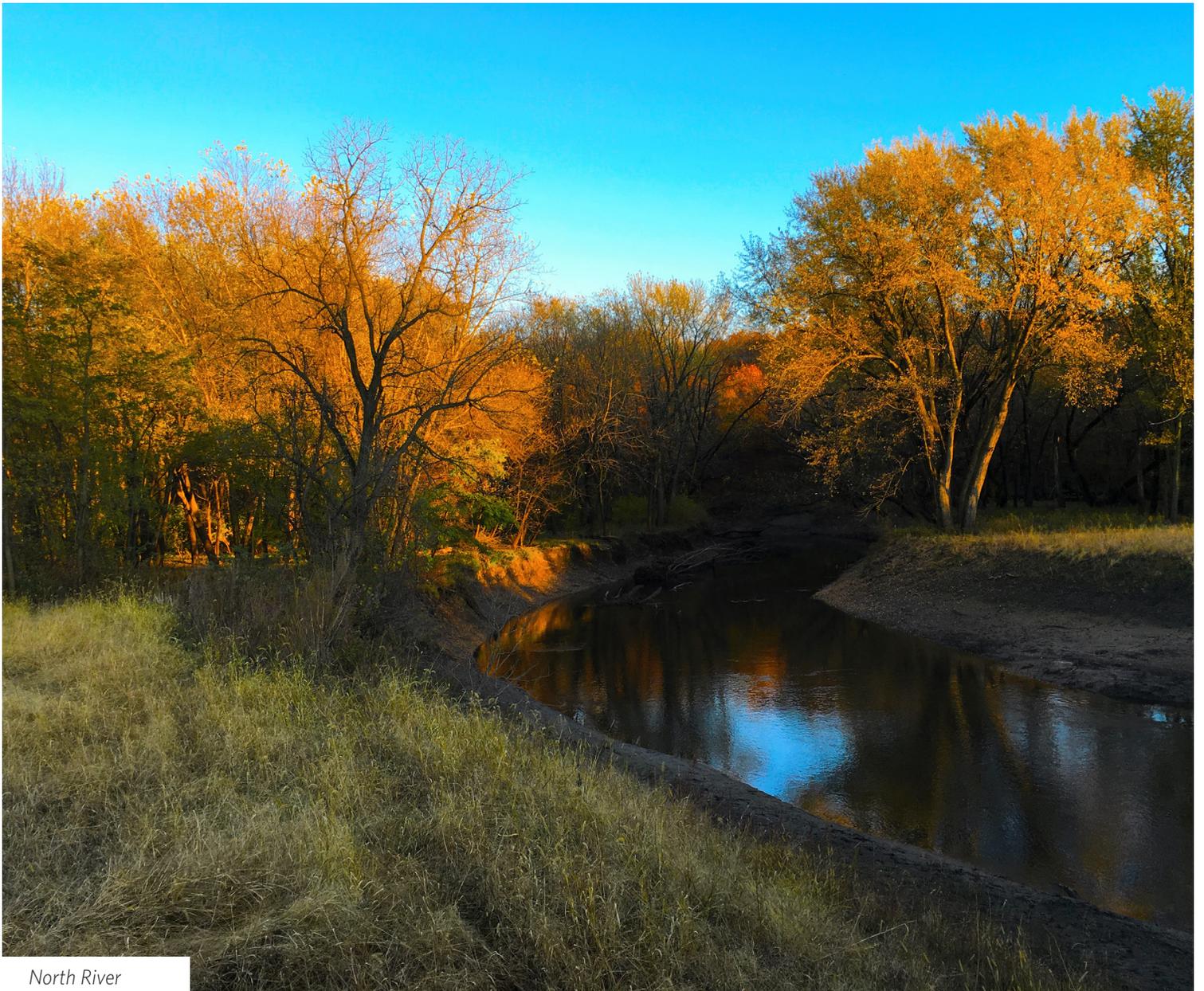
Paddling in the Middle River would be a challenging experience but could provide a 13-mile stretch with a stopping point mid-way to visit a vineyard. A connection from the river to Banner Lakes and Summerset State Park would provide access to the park's facilities and capitalize on existing amenities available in the area.



Soft trails and birding access



Fishing access



North River

Streambank Stabilization

Streambank stabilization techniques can be applied to degraded streambanks to reduce erosion, protect critical infrastructure, improve in-stream habitat, connect floodplain, and improve access to the water. Implementation of streambank stabilization techniques that incorporate natural channel design principles, which includes use of natural materials and native vegetation, are encouraged. Examples include: soil bioengineering, bank reshaping, toe protection with use of toe wood or rock, incorporating a bankfull bench, live plantings, floodplain re-connection, bendway weirs, and straight stone vanes. Hard armoring is another technique that may be applicable to protect critical infrastructure for sites that have space or access restrictions.

Key Projects

North River

Project	Location	Jurisdiction	Key Amenities	Considerations
Activity Hub	Scotch Ridge Park	Carlisle	<ul style="list-style-type: none"> Natural playspaces Restrooms, trash cans, and lighting Interpretive signage 	<ul style="list-style-type: none"> Connect to trails and Carlisle Create family-friendly, multi-activity space with programming Add places for respite near the river
Activity Hub	Carlisle Municipal Park	Carlisle	<ul style="list-style-type: none"> Wading area Fishing spaces Soft trails 	<ul style="list-style-type: none"> Connect to Carlisle Link programming to the river Add places for respite near the river

Middle River

Project	Location	Jurisdiction	Key Amenities	Considerations
Activity Hub	Banner Lakes State Park	State	<ul style="list-style-type: none"> Carry-down access Fishing spaces 	<ul style="list-style-type: none"> Covering a long stretch of the river, this is a great opportunity to better connect the two
Soft Trails	Banner Flats	State	<ul style="list-style-type: none"> Interpretive signage for birding and nature walks 	<ul style="list-style-type: none"> Conserve the natural character of the area
Economic Hub	Summerset Winery	Warren County	<ul style="list-style-type: none"> Carry-down access Walking paths to the winery Programming Birding 	<ul style="list-style-type: none"> Work with the winery early and plan together
Wading Access and Conservation	Lundy Acres	Warren County	<ul style="list-style-type: none"> Expand Lundy Acres to create Middle River connection Low-maintenance wading area 	<ul style="list-style-type: none"> Create connections between creeks and rivers

**Additional initiatives can be found in the Water Trails and Greenways Plan: Booklet 1*

Conservation Improves Recreation

Watershed improvements will lead to more stable shorelines, improved water quality, enhanced habitat and decreased flooding. Therefore a more stable watershed improves the recreational value of the waterway and decreases maintenance through less tree fall, less sedimentation of access points, and a greater sense of safety by users.

See recommendations mentioned in the *Water Trails and Greenways Plan: Booklet 1* for watershed improvements and shoreline restoration.

North River

Color Codes	Other Icons
Existing	Mile Marker
Potential	North River
Potential Hubs	County Boundary
Activity Hub	Conservation and Park Land (Public)
Amenities	100-year Floodplain
Fishing Access	Conservation Area
Wading Access	Bicycle/Pedestrian Facilities
Birding	Existing
Respite	Future
Vineyard	
Livery	
Water Fountain	
Parking	

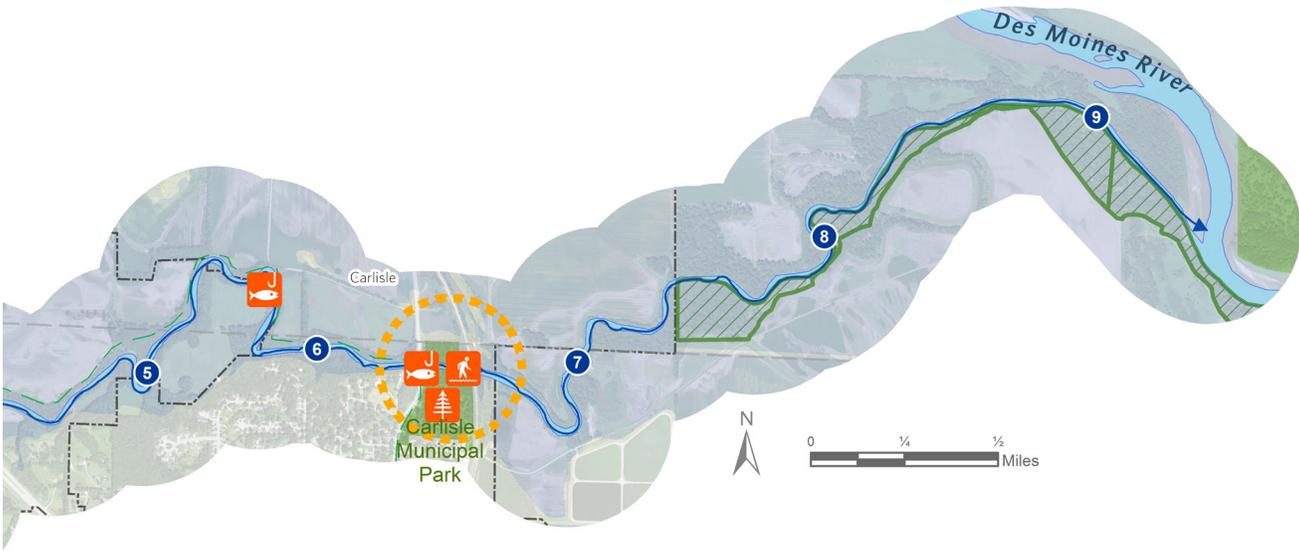


Potential Water Trail Designation: None

Potential Experience Level: None

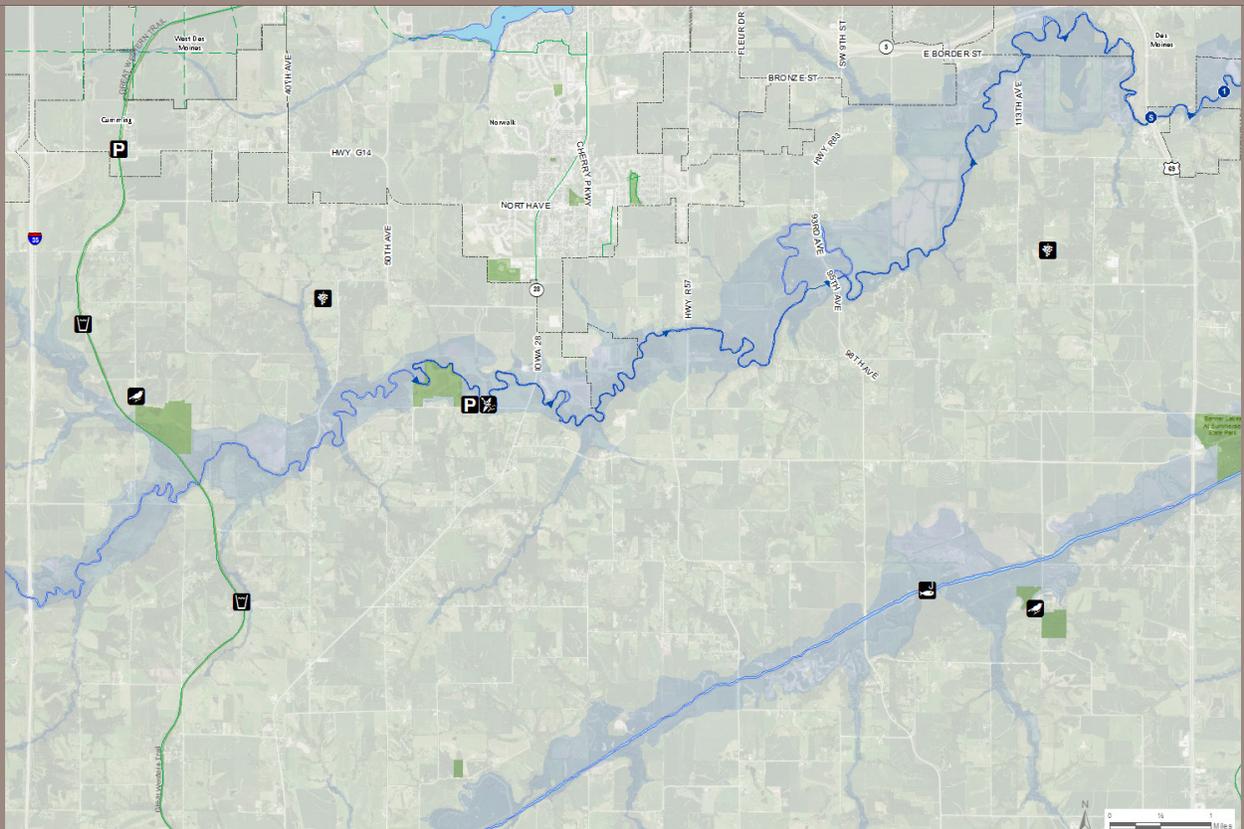
This river is currently navigated by advanced paddlers. Given the volatility of this watershed, there is an extreme amount of logjams that cross the river requiring frequent portaging as well as steep and muddy slopes for access. There is future potential for sections of this to be designated as a water trail after stream conditions stabilize and logjams become less frequent. Other uses such as bird watching, fishing and wading are encouraged.

*See appendix regarding more detailed considerations and implications of these designations.



Warren County Conservation

Warren County has the opportunity to expand the greenway through land conservation and floodplain management strategies. Over time, this could also provide recreational opportunities such as soft trails and river access. The map below highlights the 100-year floodplain, which is a priority conservation area.



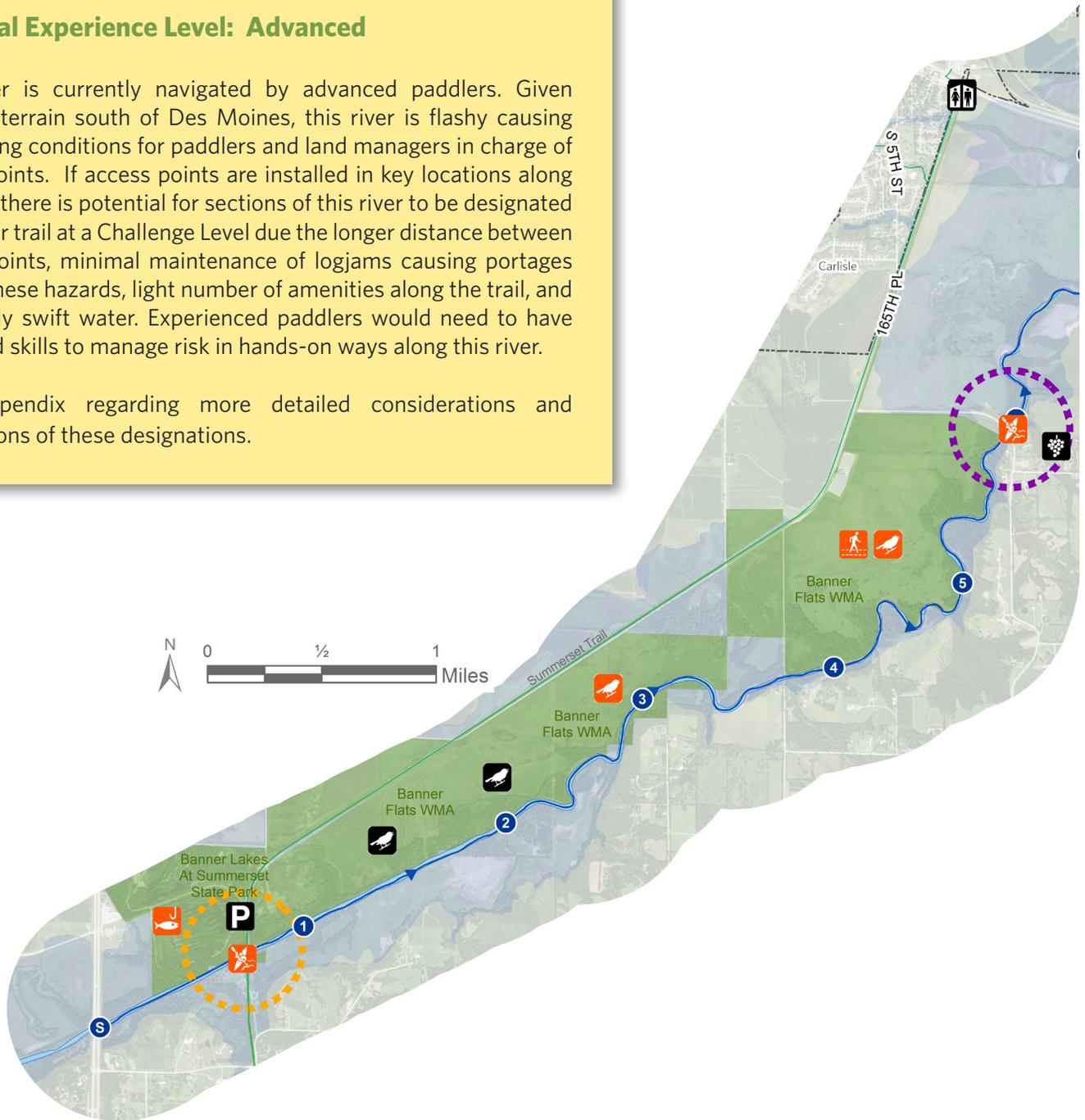
Middle River

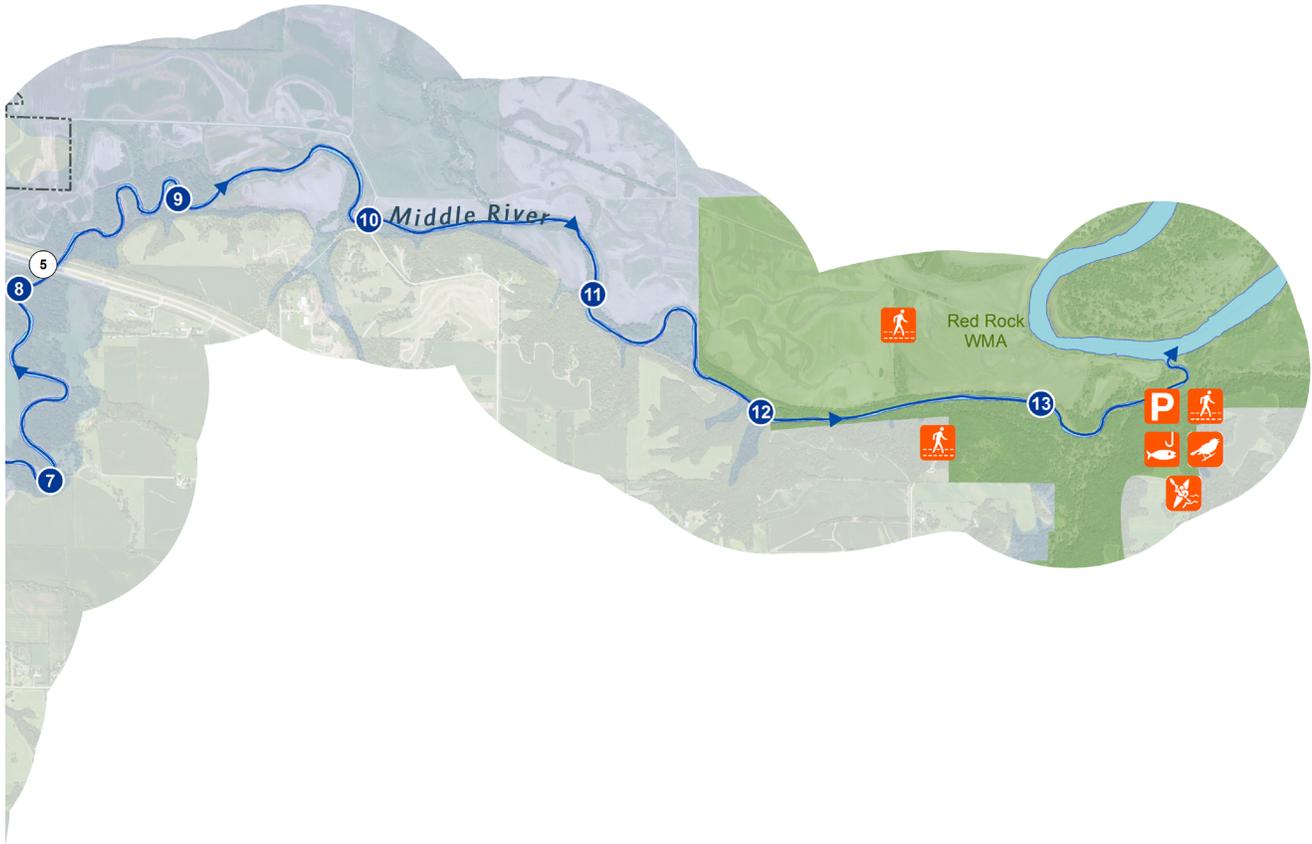
Potential Water Trail Designation: Challenge

Potential Experience Level: Advanced

This river is currently navigated by advanced paddlers. Given the hilly terrain south of Des Moines, this river is flashy causing challenging conditions for paddlers and land managers in charge of access points. If access points are installed in key locations along the river, there is potential for sections of this river to be designated as a water trail at a Challenge Level due the longer distance between access points, minimal maintenance of logjams causing portages around these hazards, light number of amenities along the trail, and seasonally swift water. Experienced paddlers would need to have advanced skills to manage risk in hands-on ways along this river.

*See appendix regarding more detailed considerations and implications of these designations.





Color Codes	Potential Hubs	Other Icons
Existing	Economic Hub	Mile Marker
Potential	Activity Hub	Middle River
Amenities	Bicycle/Pedestrian Facilities	County Boundary
Carry-down Access	Existing	Conservation and Park Land (Public)
Fishing Access	Future	Floodplain
Wading Access		
Birding		
Parking		
Vineyards		

Symbology Explained

Carry-down Access



Carry-down accesses are for non-motorized paddling such as kayaking, tubing, or canoeing. Site design involves many factors, and should first look at the Iowa DNR's *Developing Water Trails in Iowa* guidelines. Lesser accesses are denoted by the portage symbol, and may not require the same level of infrastructure or amenities.

- Lighting and trash cans
- Parking
- Restrooms
- Launch types
- Watercraft and bicycle lockers
- Interpretive and wayfinding signage



Wading Access



Wading spaces are where we can get our feet wet. They can be designed for mucking among natural vegetation and sandbars or as play spaces with steps and stones. No matter the design, wading areas allow us the opportunity to physically connect to the water and nature.

- All ages access
- Restrooms/showers
- Benches and resting points in view of access



Fishing



Fishing is a popular activity all along the creeks and rivers. Creating access points can provide safe and comfortable areas that support anglers. Rock outcroppings, docks, and other designs offer different experiences. Universal design is critical since fishing is often a multi-generational activity.

- Restrooms
- Lights and trash cans
- Spaces for relaxing
- All-ages/abilities design
- Parking and bicycle parking



Respite



Areas to relax, take in the view, and enjoy the river allow people to find a moment of respite in the metro. These areas can be natural greenspaces or more urban like the Principal Riverwalk depending on the context of the area and desire of the community.

- Benches with a view
- Picnic areas and tables
- Paths and trails along water



Economic Hub



Water trails can play a role in developing economic hubs. These hubs typically represent the convergence of multiple assets, such as a river, trails, residential and economic clustering, and other factors. These are destinations that draw in visitors for multiple reasons. The scale changes for smaller or rural communities, but the economic impacts remain. These hubs are opportunities for supportive development along the rivers.

- Event spaces
- Parking
- Restrooms
- Launch types
- Bicycle parking
- Public art
- Restaurants and shops
- Liveries/outfitters
- Shuttle service



Activity Hub



Activity hubs leverage existing attractions into destinations where multiple activities converge. These hubs take advantage of nearby parks and trails to create spaces for longer visits and multiple activities. Often multi-generational and family-friendly spaces, these hubs should be planned with a diverse audience in mind and combine several different reasons to visit.

- Play spaces
- Educational opportunities
- Areas to eat, relax and play
- Programming
- Restrooms and trash cans
- Lights
- Bicycle parking
- Wayfinding



Conservation Area



A key component to fully enjoying the rivers and creeks is ensuring their natural quality and sustainability over time. Creating connected spaces for habitats, restoring wetlands and reducing flooding, and educating the next generation of river stewards are central pieces to the long-term health of the waterways.

- Educational programming
- Interpretive signage
- Habitat connectivity
- Wetlands restoration
- Floodplain management



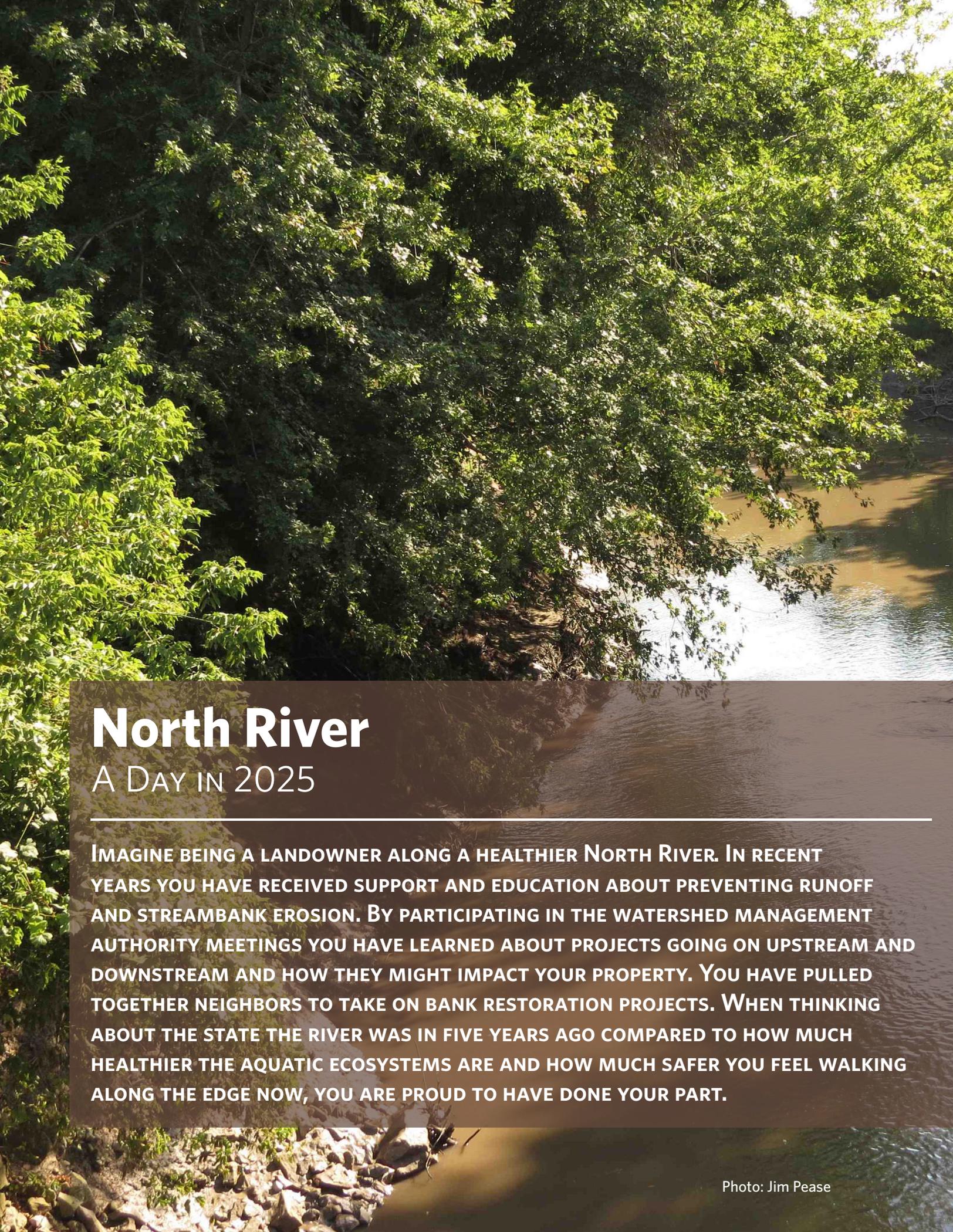
Soft Trails



Unpaved walking, hiking, and birding trails give people access to nature and offer a much different experience than paved trails. They also do not disrupt wildlife connections and can provide the opportunity for education programming.

- Educational programming
- Interpretive signage for history or birding
- Maintenance and conservation





North River

A DAY IN 2025

IMAGINE BEING A LANDOWNER ALONG A HEALTHIER NORTH RIVER. IN RECENT YEARS YOU HAVE RECEIVED SUPPORT AND EDUCATION ABOUT PREVENTING RUNOFF AND STREAMBANK EROSION. BY PARTICIPATING IN THE WATERSHED MANAGEMENT AUTHORITY MEETINGS YOU HAVE LEARNED ABOUT PROJECTS GOING ON UPSTREAM AND DOWNSTREAM AND HOW THEY MIGHT IMPACT YOUR PROPERTY. YOU HAVE PULLED TOGETHER NEIGHBORS TO TAKE ON BANK RESTORATION PROJECTS. WHEN THINKING ABOUT THE STATE THE RIVER WAS IN FIVE YEARS AGO COMPARED TO HOW MUCH HEALTHIER THE AQUATIC ECOSYSTEMS ARE AND HOW MUCH SAFER YOU FEEL WALKING ALONG THE EDGE NOW, YOU ARE PROUD TO HAVE DONE YOUR PART.