

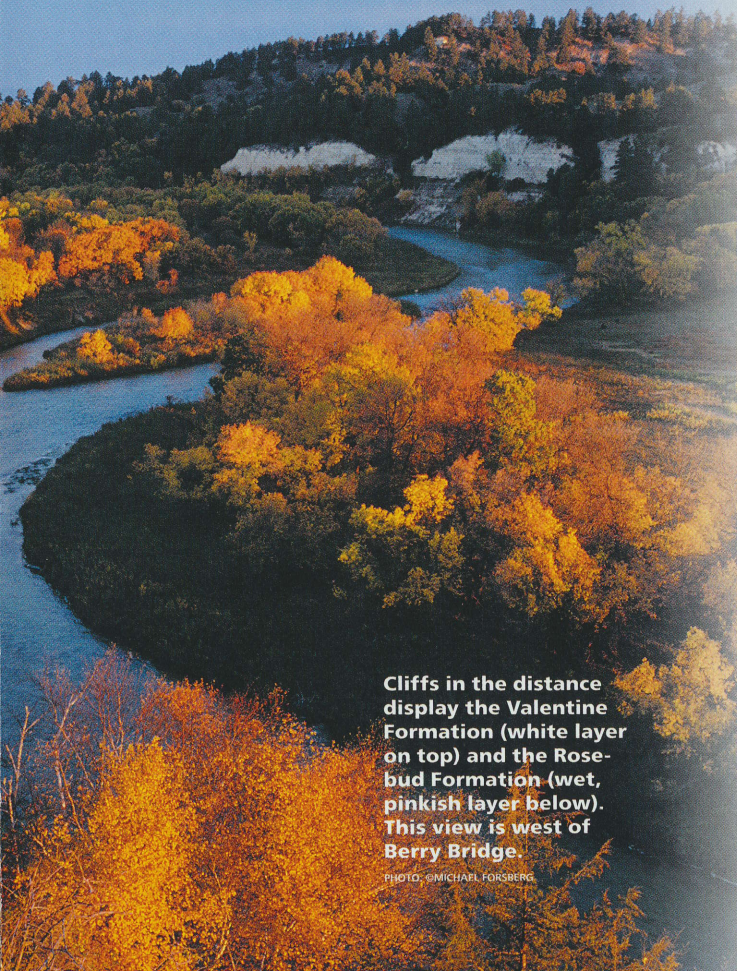
Niobrara

National Park Service
U.S. Department of the Interior

National Scenic River
Nebraska



Ni obhatha ke—spreading water river. For centuries the Ponca and Omaha Indians fished, hunted, and camped along this remarkable river. The Niobrara River, known for its beauty, biological significance, and paleontological resources, is enjoyed as a superb canoeing river of the Great Plains. In 1991 Congress designated 76 miles of the Niobrara east of Valentine, Nebraska, as part of the national Wild and Scenic Rivers System. The Niobrara—a river that deserves recognition and special protection for you and future generations.



Cliffs in the distance display the Valentine Formation (white layer on top) and the Rosebud Formation (wet, pinkish layer below). This view is west of Berry Bridge.

PHOTO: ©MICHAEL FORSBERG

A Past Revealed in Rocks



©CHUCK HANEY

River Valley Geology

The Niobrara River begins in the high plains of eastern Wyoming and flows 535 miles to join the Missouri River in northeastern Nebraska. Springs and seeps feed the Niobrara as it flows eastward through vast rolling grasslands.

Ancient meandering rivers and shallow seas once covered this area and laid down thick layers of sand, gravel, and silt, creating a large alluvial plain extending eastward from the Rocky Mountains. After extensive uplift, cycles of erosion and deposition gradually created the Great Plains. Volcanic activity to the west deposited layers of ash over much of the area. These layers were covered by eolian (wind blown) sand. The Sandhills in Nebraska, the most extensive of these dune areas, abut the Niobrara River's southern shore and cover 19,000 square miles. The

Niobrara River now drains 12,000 square miles and cuts through several rock formations (see diagram below).

On top is the Ash Hollow Formation, a ledge-forming grayish sandstone. It is best seen on hills north of the river and in roadcuts along highways like Nebr. 12.

The Valentine Formation, soft, poorly cemented sandstone, forms cliffs and slopes on both sides of the river. This formation has abundant fossils, including mammals like horses, camels, rhinoceros, and mastodons.

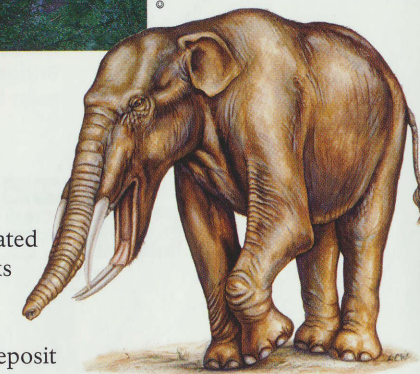
Next lies the Rosebud Formation, a hard pinkish gray to brown sandstone. Because much of the Niobrara River flows directly over this resistant bedrock, the water is clear with frequent stretches of riffles and rapids.



©MIKE WHYTE

The Ash Hollow Formation forms the caprock of the Niobrara River valley (far left). Fossils found here include horses, tortoises, and camels.

Over 200 waterfalls occur along the western part of the river, mostly on north-facing slopes. These tributaries flow over the erosion-resistant Rosebud Formation. Some waterfalls drop into the Niobrara; others into side-streams flowing into the river. Smith Falls (left) plunges 63 feet, then cascades to the Niobrara.

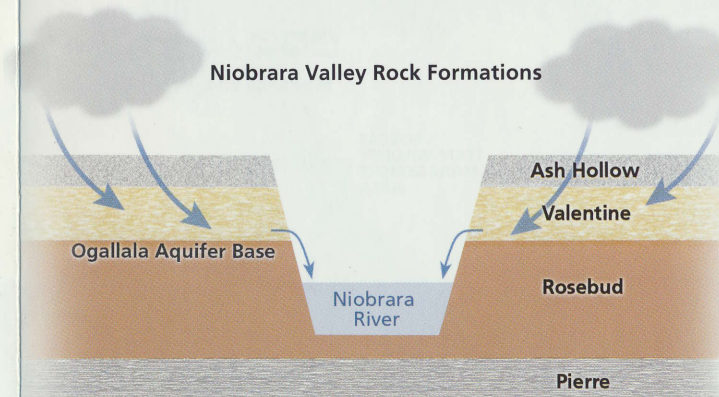


©LAURA WILLIAMS, UNIVERSITY OF NEBRASKA STATE MUSEUM

Gomphoterium (four tuskers) and fossils of other mammal species are found in the Valentine Formation.

The Pierre Formation, laminated shale, holds fossils from sharks and marine reptiles.

The Ogallala Aquifer, a vast deposit of underground water, formed over eons from precipitation saturating sand and rock layers. In the Sandhills, water at or near the surface creates lakes and wetlands. The Niobrara River has cut over 300 feet into the plains, where groundwater seeps from valley walls into the river.





The Niobrara near its confluence with the Missouri River.

Niobrara River Valley: Biological Corridor

In north-central Nebraska the 100th Meridian runs north and south through the Niobrara River valley. Here an unusual blend of climate, geology, and topography creates a great diversity of plants and animals. Varying exposure to sun, wind, and moisture determines plant and wildlife communities. Diversity increases downstream (east) as the mostly western species mingle with other life and are gradually replaced by eastern plants and animals. At least 83 eastern species reach their western range limits and 47 western species approach their eastern limits in the Niobrara River valley.

Rocky Mountain plants include ponderosa pine, serviceberry, and horizontal juniper. These grow on drier hillsides and canyon slopes on both sides of the river.

Eastern deciduous forests grow on moist bottomlands and islands. They include American elm, bur oak, cottonwood, green ash, hackberry, and box elder. Boreal forest species grow on north-facing slopes where shade and abundant groundwater from streams and seeps cause cooler microclimates. Basswood, paper birch, aspen, ferns, and club mosses grow here.

Three types of prairie in the river valley make a transition from the eastern tallgrass prairie, mixed grass prairie of the Sandhills, and western shortgrass prairie. In the river, minnows like sand shiners, red shiners, and flathead chubs search for aquatic insects near streambanks. Larger fish, like rainbow and brown trout, prefer cooler, clear water where spring-branch tributaries enter the river. Channel catfish, popular with

©CHUCK HANEY



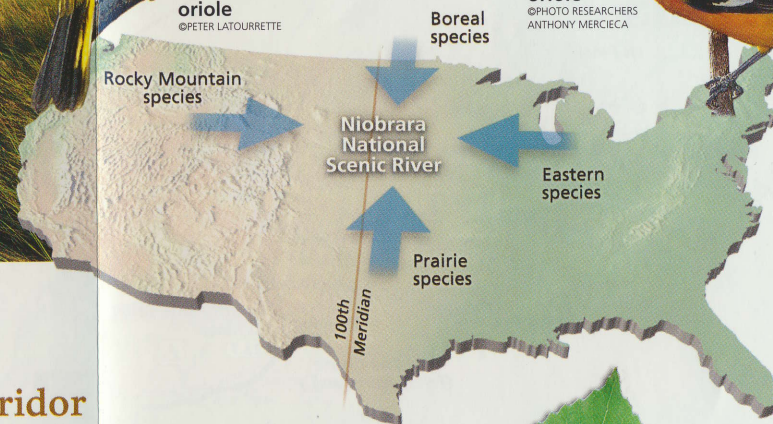
Bullock's oriole
©PETER LATOURETTE

The 100th Meridian, an imaginary line on a map, is a geographic boundary used to differentiate the eastern and western United States. From east to west along this corridor the climate gradually gets drier. This

blending of ecosystems allows some species to interbreed, like the eastern Baltimore oriole (*below*) and western Bullock's oriole (*left*).



Baltimore oriole
©PHOTO RESEARCHERS ANTHONY MERECIA



anglers, prefer deeper water or cover in the day and feed at night in riffles. They can weigh over 30 pounds.

In summer you may spot softshell, snapping, or painted turtles sunning on logs. You may see a bull snake swim across the river or spy a garter snake hunting along the riverbanks.



Spiny softshell turtle
©NEBRASKA GAME AND PARKS COMMISSION



NPS

Thousands of years ago the climate was cooler and wetter in the valley. Both quaking aspen (the most widely-distributed tree in North America) and big-toothed aspen (an eastern species) grew along the river.

As the climate changed, these aspen adapted to survive by developing a hybrid (see leaf above). Today several groves of these unusual aspen grow near Smith Falls State Park.

Floating the Niobrara River



September and October showcase spectacular colors as trees change to fall foliage.

When To Go

Most people float the river from mid-June through Labor Day. Summer weekends can be very busy. Water levels are higher from April through mid-June, but then you may find cooler, wetter weather. Winter trips are possible from Fort Niobrara to Smith Falls, but the river can ice-up and be impassable. Only experienced and properly equipped boaters should attempt a winter trip.

The 22-mile stretch from Fort Niobrara National Wildlife Refuge, near Valentine, to Rocky Ford Rapid is the most frequently traveled. Local outfitters offer trips ranging from one hour to several days.

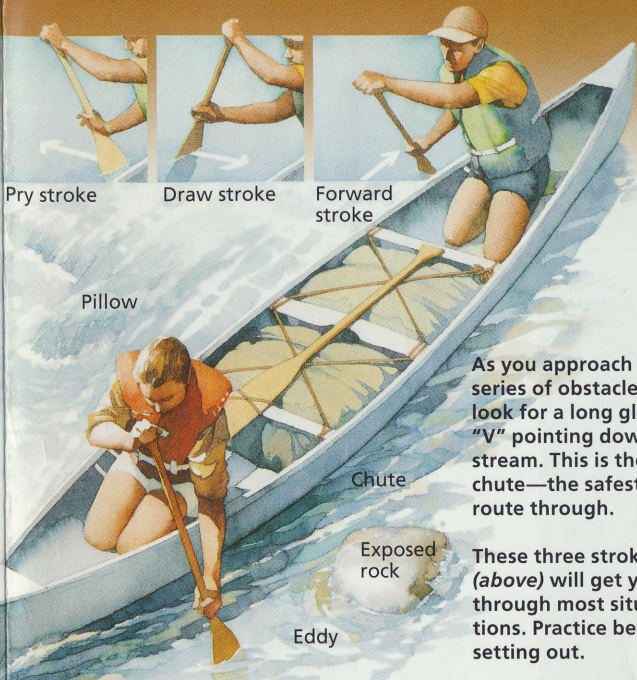
More Information For river conditions and more information call the Valentine ranger station: 402-376-1901.



Tubers enjoy a safe float near Conner Rapids.

PHOTO: NPS/STUART SCHNEIDER; ILLUSTRATION: NPS/GREG HARLIN

NPS/STUART SCHNEIDER



Pry stroke

Draw stroke

Forward stroke

Pillow

Chute

Exposed rock

Eddy

As you approach a series of obstacles, look for a long glassy "V" pointing downstream. This is the chute—the safest route through.

These three strokes (above) will get you through most situations. Practice before setting out.

Safety on the River

- Ask outfitters for tips, especially if you are unfamiliar with canoeing or kayaking.
- Always wear a personal flotation device (PFD). It's no help at the bottom of your boat. Children under 13 must wear a PFD while on the river.
- If you capsize, stay upstream from your boat. Currents pushing against a canoe can trap and hold you underwater.
- If you capsize in rapids, try to swim aggressively to the bank or an eddy. Otherwise, stay on your back and keep your feet pointed downstream, letting your PFD keep you afloat. Swim to shore after reaching calmer water.
- Rapids and unmarked hazards can occur at any time. Scout ahead. In summer major rapids and falls are signed between Valentine and Norden Bridge. You are strongly cau-

tioned to portage around these dangerous obstacles.

- Avoid overhanging limbs and submerged logs that can overturn your canoe or kayak.
 - Wear sturdy shoes. Sharp objects can cut bare feet.
 - Be aware of land hazards like poison ivy, stinging nettles, ticks, slippery banks, crumbling cliffs, and rattlesnakes.
 - If thunderstorms or windstorms occur, quickly get off the water.
 - Do not dive or jump into the river. The Niobrara can be shallow, with many rocks.
 - Tying tubes together is hazardous—you can get trapped under the tubes.
 - Wear sunscreen, sunglasses, a hat, and insect repellent.
 - Cell phones may not work in the river valley. Rocky Ford Rapid has a public phone.
- Emergencies: call 911.**

Exploring the Niobrara River



Niobrara National Scenic River is one of over 390 parks in the National Park System. To learn more about national parks and National Park Service programs in America's communities, visit www.nps.gov.

- Unpaved road
- Road mileage marker from Valentine
- River mileage from Borman Bridge
- Rapids with difficulty classification
- Waterfalls
- Ranger station
- Picnic area
- Food service
- Telephone

Planning Your Visit

Most people come to the Niobrara to float the river by canoe, tube, kayak, or raft. The western portion, from Fort Niobrara to Rocky Ford Rapid, is the most popular section. Outfitters on this stretch offer rentals for boating, tubing, fishing, hunting, horseback riding, camping, and cabins. The eastern portion, from Norden Bridge downstream, is seldom floated. It is often shallow, with a braided channel; it is not served by outfitters. Before setting out, check our website for river conditions and a paddler's guide: www.nps.gov/niob.

On The River

Borman Bridge to Cornell Dam

This stretch includes a section closed to visitors by the U.S. Fish and Wildlife Service to ensure visitor safety and protect wildlife habitat.

Cornell Dam to Berry Bridge

The river flows through a federally designated wilderness. Riverbanks are undeveloped, with pine-covered hills, prairie, and steep cliffs. There are two segments of Class I rapids on this section (see *International Scale of Difficulty* at right). A fee is charged at the Fort Niobrara launch site.

Berry Bridge to Brewer Bridge

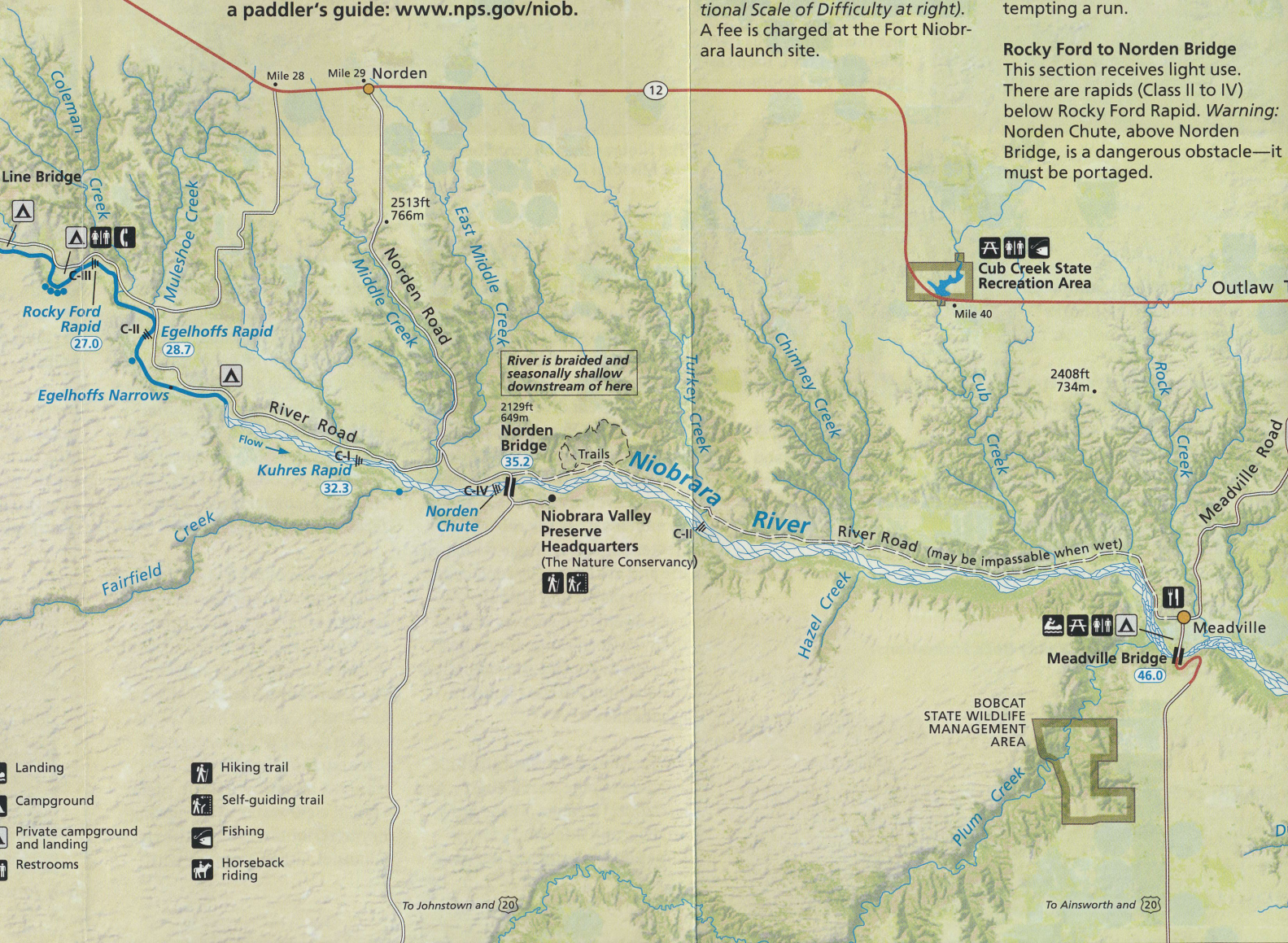
The river runs through forested hills of pine and deciduous trees, with a number of easy riffles.

Brewer Bridge to Rocky Ford

Here rapids (Class I or II) are easily negotiated by most novices. These rapids can change in character with differing water levels. **Warning:** At Rocky Ford Rapid (Class III), canoeists and tubers need to portage the falls; whitewater kayakers should scout the rapid before attempting a run.

Rocky Ford to Norden Bridge

This section receives light use. There are rapids (Class II to IV) below Rocky Ford Rapid. **Warning:** Norden Chute, above Norden Bridge, is a dangerous obstacle—it must be portaged.



- Landing
- Campground
- Private campground and landing
- Restrooms
- Hiking trail
- Self-guiding trail
- Fishing
- Horseback riding

To Johnstown and 20

To Ainsworth and 20

Norden Bridge to Highway 137

This section of the river can be navigated, but seasonably shallow water and sandbars may make the trip difficult.

International Scale of Difficulty

Class I: Fast moving water, riffles, and small waves. Few obstructions.

Class II: Basic rapids with wide, clear channels. Obvious without scouting. Some maneuvering required.

Class III: Rapids with moderate, irregular waves often capable of swamping open-bow canoes. Fast currents and narrow passages require complex maneuvering.

May require scouting from shore.

Class IV: Difficult rapids, irregular waves or dangerous obstacles, rocks, and falls. Powerful and precise maneuvering required in very turbulent water. Scouting required. Rescue may be difficult. Unsuitable for an open canoe.

Guidelines and Regulations

- Private lands border the river in most areas. Respect private property rights—do not trespass. Do not harm plants, collect fossils, or disturb animals.
- Secure and waterproof your belongings and garbage in your craft to keep them from falling into the river. Do not bring glass or plastic foam containers.
- Many visitors come to relax and enjoy a peaceful river experience. Please respect others by refraining from inappropriate noise and behavior.
- Don't climb on crumbling cliffs or delicate waterfalls.
- Using alcohol or drugs while on the river can cause injury and death. Alcohol is prohibited within Fort Niobrara National Wildlife Refuge. The consumption of alcohol is prohibited at Smith Falls State Park and Brewer Bridge.

- Fishing and hunting licenses are required, as is landowner permission to hunt on private land. State fishing and hunting regulations apply within the river boundary. Hunting is prohibited at Fort Niobrara National Wildlife Refuge.
- Use principles of Leave No Trace. Pack it in—pack it out. Get details at www.lnt.org.
- All motorized boats are discouraged due to the shallow, rocky nature of the river. Personal Watercraft (PWC or jet-skis) and airboats are prohibited.

Emergencies: call 911.

Fees Fort Niobrara National Wildlife Refuge charges a launch fee. Smith Falls State Park charges entrance and campground fees.

Services

Lodging, Food, and Services

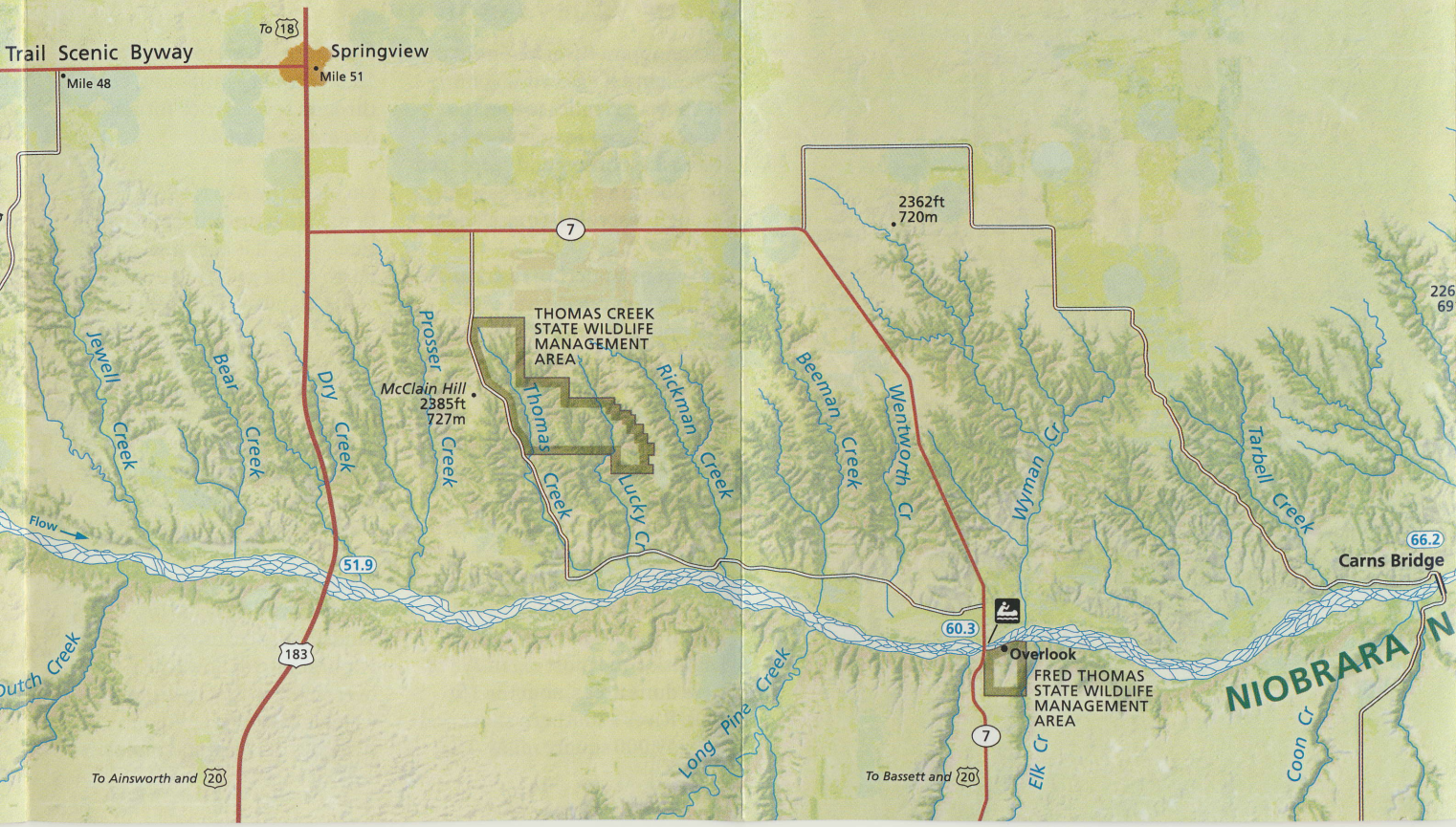
These are found in nearby towns. Contact:

Valentine Chamber of Commerce
239 South Main
Valentine, NE 69201
402-376-2969
www.heartcity.com

Ainsworth Chamber of Commerce
335 North Main
Ainsworth, NE 69210
402-387-2740
www.ainsworthlinks.com

Camping and Boat Launches

Private campgrounds and launch sites are found along the river between Fort Niobrara National Wildlife Refuge and Meadville. Make prior arrangements for camping and river access. Camping is available at Smith Falls State Park and Meadville.



More Information

Niobrara National Scenic River

P.O. Box 319
146 South Hall Street
Valentine, NE 69201
402-376-1901
www.nps.gov/niob

Fort Niobrara National Wildlife Refuge

HC 14, Box 67
Valentine, NE 69201
402-376-3789
www.fws.gov/fortniobrara

Smith Falls State Park

HC 13, Box 25
Valentine, NE 69201-9103
402-376-1306
www.ngpc.state.ne.us

Niobrara Council

280 N. Main Street
Valentine, NE 69201
402-376-2793
www.niobraracouncil.org

☆GPO:2009—349-224/80178 Reprint 2009
Printed on recycled paper.

