

ROSEAU RIVER WATER TRAIL

ROSEAU, MINNESOTA

MASTERPLAN



Northwest Regional Sustainable
Development Partnership
UNIVERSITY OF MINNESOTA
EXTENSION



COLLEGE OF
DESIGN
UNIVERSITY OF MINNESOTA

ROSEAU RIVER WATER TRAIL MASTERPLAN

ROSEAU, MINNESOTA

Final Report
September 10, 2018



DESIGN AND REPORT DEVELOPMENT

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PARTNERS



It is the intention of the Board of Managers to manage the waters and related resources within the Roseau River Watershed district in a reasonable and orderly manner that will improve the general welfare and health of the residents of the district.

It is the stated intent of the Managers that no person shall be deprived or divested of any previously established beneficial use of right, by any rules of the District, without due process of law. All rules of this district shall be construed according to this intention.

Northwest Regional Sustainable
Development Partnership

UNIVERSITY OF MINNESOTA
EXTENSION

We bring together the talent and resources of northwest Minnesota with the knowledge and seed funding of the University of Minnesota to drive sustainability in agriculture, food systems, tourism, resilient communities, clean energy, and natural resources. Our innovative initiatives are community driven and valued, citizen led, University engaged, and collaborative, so we are local in many places.



The Northwest Minnesota Foundation invests resources, facilitates collaboration, and promotes philanthropy to make the region a better place to live and work.

Through the concept of Quality of Place, we focus our resources on meeting the needs of our rural region. Quality of Place is something all communities need to be successful in the future, and is found in four asset areas: natural assets (outdoor recreation, clean air and water, lakes and forests), structural assets (housing, healthcare, education), social assets (leadership, effective organizations, community character), and economic assets (jobs, family incomes, business opportunities).



The Center for Urban and Regional Affairs (CURA) strives to be a nationally recognized model for university-community engagement. CURA is founded on the belief that partnership between the university and the community is mutually beneficial. Communities determine issues important to them, and provide an understanding of the context and how they can best be addressed to create vital places to live and work. The university contributes extensive knowledge and expertise to understand community issues and discover new approaches to address them. This model of engaged research leads to outcomes that strengthen the community and enrich academic research.



The Center for Sustainable Building Research (CSBR) is working to transform the built environment in ways that provide for ecological, economic, and social needs of the present without compromising those of the future.



CSBR's Design for Community Resilience program works with Minnesota communities to offer place-based, integrated solutions using state-of-the art sustainability and regenerative design research to address economic, social, and environmental dimensions at multiple scales.

ADDITIONAL PARTNERS

City of Roseau
Roseau Outdoor Activities and
Recreation (ROAR)
Minnesota DNR
Roseau County Historical Society

Explore Minnesota
Go Minnesota
Roseau Convention and Visitors Bureau
HDR Engineering
Roseau County 4-H

ACKNOWLEDGMENTS

We express sincere thanks to all those who contributed to the project and to the design process for their participation and contribution to the vision for the Roseau River Water Trail.

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Torin McCormack

Tracy Bergstrom

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STAKEHOLDER MEETING I, JUNE 14, 2018

Linda Kingery

Jack C. Pellinen

Tim Williamson

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Torin McCormack

Tracy Halstensgard

Tracy Bergstrom

ROSEAU RIVER LAUNCH PARTY, JUNE 25, 2018

We wish to thank the many people who attended the Launch Party and provided feedback on the Roseau River Water Trail through surveys or individual conversations. Some of whose names are included below.

Janie Lovold

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Tiarah Olmsted

Adrian Larsen

Ian Larsen

Brittany Larsen

Mark Reese

Chantal DePriest

Ryan Lisell

STAKEHOLDER MEETING II, JULY 17, 2018

Randy Prachar
Jack Swanson
Tracy Halstensgard
Linda Kingery

Katy Spoden
Jack Pellinen
Dave Bergman
Tracy Bergstrom

ROSEAU COUNTY FAIR, JULY 18, 2018

We thank the fair visitors who spoke with us at the Roseau County Fair and shared their insights on the Roseau River and the Roseau River Water Trail project.

MEDIA

Kari Cooper	Communications Specialist, Northwest Minnesota Foundation
Jack Swanson	Host, KJ-102 Morning Show
Brad Dokken	Outdoor Writer and Columnist, Grandforks Herald

EXECUTIVE SUMMARY

The Roseau River Water Trail Masterplan proposes designs for six sites that were selected along the Roseau River that are significant in terms of access and use of the Roseau River at the following specific locations: Hayes Lake State Park, Malung Town Hall, City Park, City Center, Stoe's Bridge and Ross Town Hall.

The Roseau River is a 214 mile-long tributary of the Red River of the North, in southern Manitoba in Canada and northwestern Minnesota in the United States. The Roseau River Watershed is located in the extreme northeastern portion of the Red River Basin. The watershed includes 1,128 square miles of drainage area that is a tributary to the Roseau River, the primary watercourse of the watershed, before it enters Canada.

It is the intent of the Roseau River Watershed District (RRWD), a local governmental agency in Roseau County, to work with project partners to plan, implement, and promote the Roseau River as a water trail. A water trail is a stretch of river or lake that is mapped and managed for recreation.

The goal of Roseau River Water Trail (RRWT) is to promote the enjoyment and conservation of the natural, cultural, and historical resources of the Roseau River by encouraging responsible, quality, public access opportunities through partnerships and stakeholder advocacy.

The RRWT aims to do the following:

1. **Capitalize on the Roseau River's potential for, increased accessibility for motorized and non motorized watercraft, fishing, camping, and birding opportunities by actively promoting the water trail.**
2. **Utilize the Roseau River for educational opportunities to study water quality, habitat, and responsible recreation practices.**
3. **Ensure the water trail plan is sustainable by utilizing low maintenance structures and working with local groups for long-term upkeep.**

The Roseau River Water Trail Masterplan document has five sections. The first section, **Introduction**, sets the context for the project including area history, descriptions of habitat and ecology of the region, information about regional recreation, Roseau County demographic and economic data, and site selection criteria.

The second section, **Research and Precedents**, describes some of the projects and additional research that informed the development of ideas for the Roseau River Water Trail.

The third section, **Community Engagement**, documents the community participation and input given by the community members and stakeholders for the Roseau River Water Trail project between June and August 2018

The fourth section, **Design and Recommendations**, documents the design brief, design principles and recommendations, the design features, and the Masterplan for each access site along the Roseau River. Based on the principles and recommendations, conceptual designs were developed for all six of the chosen sites. Designs for three locations on the trail close to or in the City of Roseau were selected to develop more in-depth designs. They are Roseau City Park, Roseau City Center, and the Malung Town Hall. A summary of **Design Recommendations** is included below. These recommendations are proposed to guide the project forward, and it is expected that the implementation will depend on various factors including funding and community input and stakeholder decisions.

Design Recommendation 1: Promote Recreation and Develop Active Lives

1. Encourage connections to the Roseau River, the proposed RRWT, and to other recreational opportunities using design in an integrated way.
2. Address safety concerns through design.
3. Address cross-sector land ownership concerns through design.

Design Recommendation 2: Respect Wildlife and Nurture Habitat

1. Teach about the diverse wildlife of the area through design.
2. Use design to educate about interacting with wildlife and nurturing habitat.

Design Recommendation 3: Understand the Past and Learn for the future

1. Teach about the rich and complex history of the region through design.
2. Use design to educate about contemporary institutions, amenities, and networks.

Design Recommendation 4: Integrate Art and Foster Creativity

1. Use design to connect to the work of many artists in the region.
2. Integrate the arts in many of the events and activities related to the Roseau River and Roseau River Water Trail.
3. Use a simple, modern character for the design elements across the RRWT to allow for the integration of regional, individual art at specific sites.

Design Recommendation 5: Support Local Business and Build Local Economy

1. Connect sites to local businesses with signs wherever appropriate.
2. Partner with local businesses for events related to the Roseau River and the proposed Roseau River Water Trail.

Design Recommendation 6: Create a Connected, Virtual Presence

1. Create a virtual location where information about the Roseau River and the Roseau River Water Trail resides online and is kept current.
2. Connect physical sites to the virtual location using technology such as quick response (QR) codes.







SECTION 1

INTRODUCTION

This section provides context for the project through area history, descriptions of habitat and ecology of the region, information about regional recreation, Roseau County data.

PROJECT INTRODUCTION



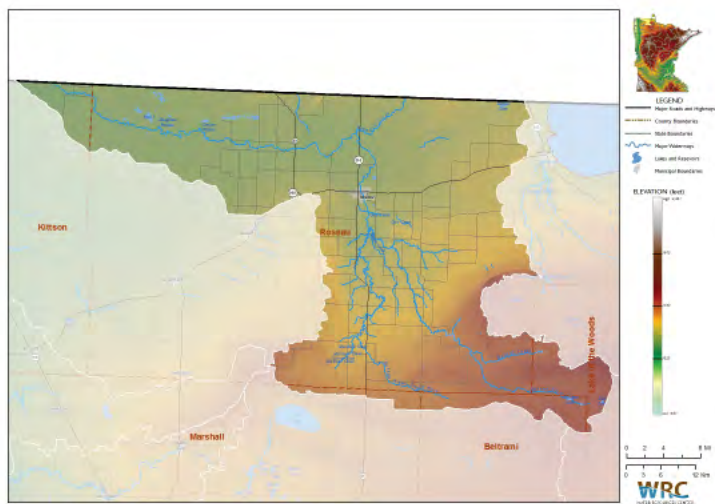
The Roseau River is a 214 mile-long tributary of the Red River of the North, in southern Manitoba in Canada and northwestern Minnesota in the United States.

The Roseau River Watershed is located in the extreme northeastern portion of the Red River Basin within Minnesota.

Left: Extent of the Red River Basin and its rivers. (*Karl Musser*)

The watershed includes 1,128 square miles of drainage area that is a tributary to the Roseau River, the primary watercourse of the watershed, before it enters Canada. Significant portions of the Roseau River and its tributaries have been affected by diversion and channelization projects. The Roseau River continues on into Canada and eventually joins the Red River. The watershed occupies an additional 929 square miles in Canada. The watershed lies mainly in Roseau County,

with a small amount of its area in northeast Kittson County, northeast Marshall County, northern Beltrami County and western Lake of the Woods County. The Roseau River lies in the northeastern portion of the Red River Basin in Minnesota. The Roseau River Watershed District (RRWD) office is located in Roseau, MN. The District is bordered by Canada to the north, the Warroad River and Rapid River basins to the east, the Red Lake River basin to the south, and the Two Rivers basin to the west.



Above: Extent of the Roseau River's Watershed in the US

PROJECT HISTORY

Through informal conversations with the public, the RRWD board and staff realized there was a diverse group of residents utilizing the river for paddling opportunities. An offer was made by HDR Engineering, a consultant to the RRWD, to conduct a community outreach activity.



Above: Roseau City Park's new canoe/kayak launch at the July 26th Launch Party. (Kari Cooper)

After some research and discussion, the RRWD board focused on installing a kayak/canoe launch at the Roseau City Park. A group in Roseau that organizes weekly paddling events, supported this suggestion as well as the idea to create a mapped water trail for the Roseau River. Once the District had the support of the local group, the idea was further discussed with the Roseau Park Board, the City of Roseau, and the Roseau River International Watershed (RRIW). These entities conveyed broad support for the project.

It is the intent of the RRWD to work with project partners to plan, implement, and promote the Roseau River as a water trail. A water trail is a stretch of river or lake that is mapped and managed for recreation.

Right: Current state designated water trails in Minnesota (Minnesota DNR)

MISSION

The Roseau River Water Trail promotes enjoyment and conservation of the natural, cultural, and historical resources of the Roseau River by encouraging responsible, quality, public access opportunities through partnerships and stakeholder advocacy.

VISION

Opportunity: Capitalize on the Roseau River's potential for increased accessibility for motorized and non motorized watercraft, fishing, camping, and birding opportunities by actively promoting the water trail.

Education: Utilize the Roseau River for educational opportunities to study water quality, habitat, and responsible recreation practices. The RRWD will seek partnerships with the Roseau School District and local and regional organizations including Boy Scouts, Girl Scouts, 4-H, River Watch, and River Keepers.

Sustainability: Ensure the water trail plan is sustainable by utilizing low maintenance structures and working with local groups for long-term upkeep.

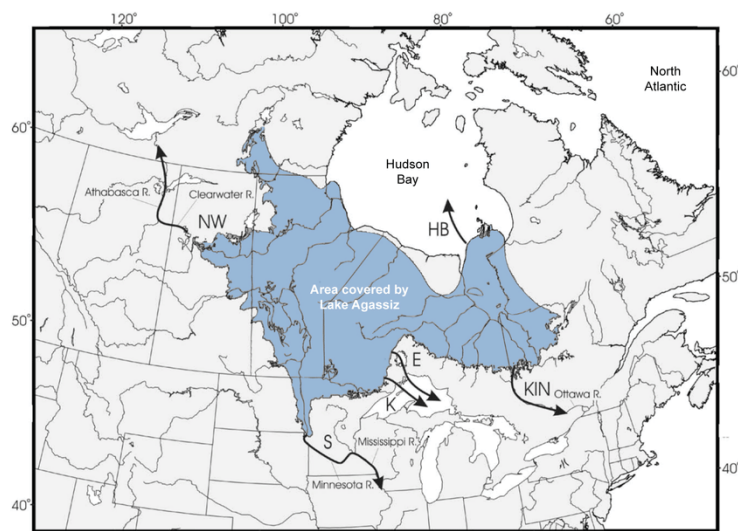


AREA HISTORY

NORTHWEST REGION

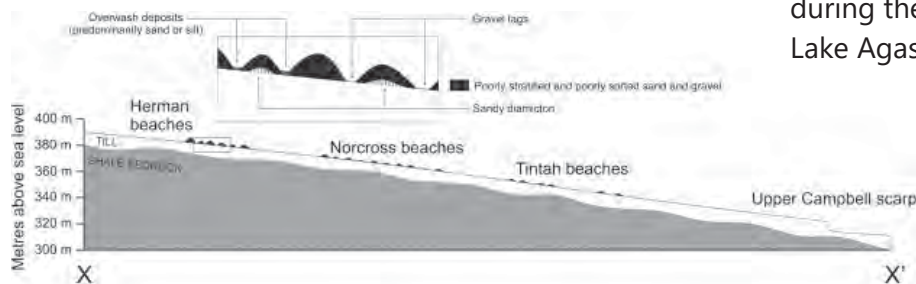
GLACIAL ERA

Lake Agassiz was the largest lake in North America during the last ice age. Much of it extended across the Canadian Provinces of Saskatchewan, Manitoba, and Ontario, with its most southern reach extending into eastern North Dakota and northwestern Minnesota. As the ice sheet that fed Lake Agassiz went through climatic freeze and thaw cycles, the depth and extent of the lake fluctuated.



Above: Location and total area covered through the 5000 year lifetime of glacial Lake Agassiz. (Nicholas Golledge, 2009)

At one point the depth of Lake Agassiz dropped to almost nothing before again refilling resulting in two distinct lake periods. Below, these periods are referred to as Lake Agassiz I and II. It is this fluctuation of Glacial Lake Agassiz during different periods of time that directly shaped the landscape, lakes, and rivers across northwestern Minnesota that we see today. Lake Agassiz's interaction with Roseau County can be broken into stages based on the periods high water line and the beach it marked. All of Roseau County was under water during the Herman Beach stage of Lake Agassiz I.



Left: Diagram of shorelines of glacial Lake Agassiz.

As a new outlet opened to the north, the lake level fell to what is called Norcross Beach. Beltrami Island emerged at this time as the lake level lowered. This lowering of the lake left behind "ghost" beaches; the most prominent of these beaches in Roseau County is on the north side of Beltrami Island, locally called Bemis Hill.

By the Tintah Beach stage a large portion of the southern and southeastern parts of Roseau County were dry land. During this time the first streams formed, the Roseau River and several of its tributaries, most of which flowed separately into Lake Agassiz south of Wannaska. These tributaries joined with the Roseau River when Lake Agassiz I was drained and the rest of the river formed.

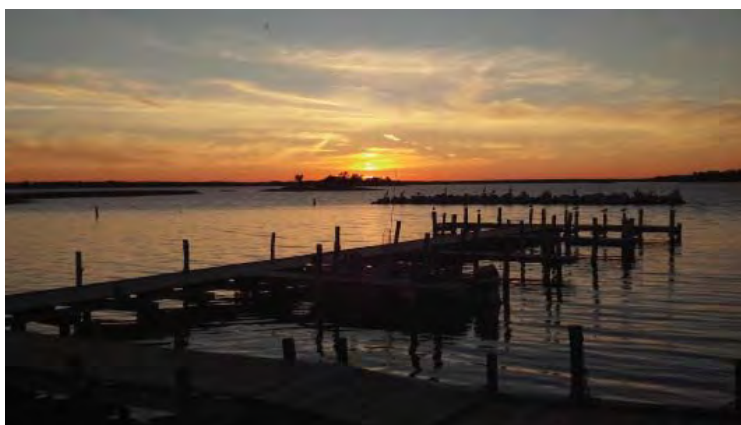


The Roseau River channel that is seen today probably follows much the same course as the channel that formed at this time. However, because Lake Agassiz II came into being later, the area was again put under water. It is possible that this lake's wave action could have filled the channel with sediment while the lake level was rising, or when it was falling during its final drainage.

Right: Bemis Hill and Hayes Lake State Park signage off Thompson Forest Road. (*Tony Webster, 2017*)

As more outlets emerged to the north the lake level continued to drop until it was largely drained and all of Roseau County was dry land. At this time Lake Agassiz I ceased to exist as a geological and geographic feature. This did not last long as the climate continued to change and brought on another intensely cold period causing the ice sheet that fed Lake Agassiz I to freeze again.

This ice sheet was far to the north of Roseau County but it blocked the Lake's drainage to the north, and thus Lake Agassiz II was born. Campbell Beach formed at this level and ran through Greenbush, Badger, and Fox to a point about 4 miles west of Roseau. This later became known as the Sandridge Trail. This beach ridge also continues from east of Roseau to east of Warroad and was known as the Summer Road.



Above: Dock of Flag Island Resort, located in the Northwest Angle of MN on Lake of the Woods. (*Andrew Ragas, 2013*)

The streams below the Campbell Beach, in Roseau County and elsewhere, are the youngest streams in the United States and have not yet had enough time to create meander valleys. In part this is due to the extreme flatness of the land.

Eventually Lake Agassiz II fully drained, but its remnants still exist. Lake of the Woods was once part of it as was the now-drained Roseau Lake.

NATIVE AMERICAN HISTORY OF ROSEAU VALLEY

Historical records show that in the year 1734 a large band of Cree and Monsoni warriors began preparations to invade the Roseau Valley, where their “hereditary enemy” the prairie Dakota (Sioux) lived. The leaders of this group asked Jean Baptiste, son of the French trader and explorer La Vérendrye who had arrived in the valley in 1732, to accompany them to witness their valor in battle. They likely followed the route from Muskeg Bay up the Warroad River and across a portage to Hay Creek, a tributary of the Roseau River, following it all the way to its confluence with the Red River. This was a period much earlier than the arrival of settlers in larger numbers in the 1880s.



Above: A Cree Indian, Painting (*Charles Marion Russel*)

When the settlers arrived in the Roseau Valley, they found the Indians of the valley to be peaceful and friendly. The two groups traded and were mutually helpful and this was documented by the valley’s pioneer historians J.W. Durham and Jacob Nelson. Nevertheless, the Indian Scare of 1891 was a significant event. It followed the 1890 revolt by the Dakota at Pine Ridge, South Dakota. Though the revolt was quickly put down it created an uneasiness among the settlers. There were rumors throughout Northern Minnesota that the Dakota chief had visited the Ojibwe people of the Red Lake reservation to incite them to revolt and it was reported at one point that 3,000 Indians had passed Sprague’s lumber camp. Later investigation revealed three Indians had passed the camp.



Above: Chief Mickinock and Dendix Holdahl at Roseau, MN (*Earl V. Chapin, 1943*)

In the panic and confusion that followed the rumors, in January 1891, settlers loaded their carts and headed out of the valley in the dead of winter. When scouts were sent to explore further it was reported that the Ojibwe were friendly. On the other side, when Chief Maypuck and his band learned about the incident, they were “almost as frightened as the settlers” and journeyed to Roseau to find out more about the matter. Friendly help of the Indians prevented settlers who had abandoned their homes from suffering big losses: an Indian, Mickinock,

found the livestock suffering from a lack of food and water, and watered and fed them. He told people to send word to those who had fled to return, as “he could not take care of their stock all winter.” The emissaries persuaded most of the fleeing settlers to return and the scare resolved itself with most people back to their homes by February 1891.

FUR TRADE

The first white men to enter the Roseau Valley were Frenchmen associated with the French Canadian fur trade at Fort St. Charles on Magnusson's Island in Lake of the Woods in 1734.

Right: Artist Frances Anne Hopkins *Voyagers at Dawn*, 1871. (National Archives of Canada)



After the Treaty of Paris (1814) ended French sovereignty in the New World, the fur trade in the northwest suffered disorganization. In the early 1820's the American Fur Trade Company was operating a post at the mouth of the Warroad River. By the middle of the 19th century the Hudson's Bay Company began to push its fur trading activities to the region drained by the Roseau River.

Records of the Hudson Bay Company of London reveal that its representatives visited the valley in 1847 and investigated the vicinity of Roseau Lake. The report is accompanied by a map of part of Roseau River and Lake, on which a Hudson Bay Company's post is indicated on the south shore of the river where it enters Roseau Lake. The company's archives in London indicate that the post was abandoned in 1851, though the exact site has never been determined.

EARLY PIONEER COMMUNITIES



Above: Two boys fishing on the banks of the Roseau River, 1900. (Roseau County Historical Society)

The vast majority of settlers who entered the Roseau Valley came along the historic Sandridge Trail from the west and the Summer Road to the east. These trails followed the former Campbell Beach shoreline of glacial Lake Agassiz, which offered an easy route across a territory with otherwise frequent barriers. The incoming settlers were attracted to the region for its timber, the abundance of wild game, pasturage, and hay that grew abundantly on the banks of the Roseau.

After 1887, more and more people began to settle in the Roseau Valley and living conditions steadily improved. By 1889 it is estimated that between 700 and 800 people had entered the valley, and the community activity grew.



Above: First jail and Post Office in Roseau, 1880 - 1900. (*Roseau County Historical Society*)

As early as 1888, settlers began to concentrate about a point known as Pelcher's Crossing. H.W. Sutton opened the first store, which also served as the first hotel, first post office, first polling place, first jail, and the first courtroom. Other businesses soon joined, and the area became the nucleus of the village of Roseau. In 1892, the village was platted. Roseau County was formed on January 1, 1895, and Roseau was appointed the county seat.

The city and county take their names from the Roseau Lake and River. Although the name Roseau is taken from the French '*Riviere Aux Roseaux*' or River of Rushes, it is a translation from the Ojibwe word '*Gashahaggunushkokawiskbi*', meaning the place of rushes river, or more briefly, rush river. The name is given because of the rushes growing in the water.

INDUSTRY ALONG THE WATER

Commerce in the frontier period was characterized by barter, free giving, and co-operation, and as the population continued to grow, they formed co-operative enterprises and were able to better their living conditions. One early example was the building of a rudimentary sawmill where "two operators could cut a hundred feet of lumber a day."



Above: Jacklin Flour and Saw Mill in Roseau, 1900-1905 (*Roseau County Historical Society*)

Mills for timber and grain came and went over the entire county from 1896 through the first quarter of the 20th century. The first dredge was built on the Roseau River through Roseau Lake in 1906 for the Standard Drainage Company of Windom, MN.

In 1909, William Oveson built a planing mill in along the Roseau River in Roseau and evidence of it is still visible at the railroad bridge below 7th Avenue SE.

RECENT PAST

Though the Roseau River and its tributaries provided early communities in the area with the economic opportunities that allowed them to grow, it has also been a source of difficulty. Flooding has always been an issue, and the natural hydrology of the area has been heavily altered in the past in attempt to mitigate this.



Above: What remains of Roseau Lake is clearly visible from the air (*Brad Dokken, April 2017*)

For instance, Roseau Lake was drained in the early 1900's for agricultural purposes but attempts to farm the lake basin have since been abandoned due to frequent flooding. Another modification to the land that can be seen is State Ditch No. 51, which was originally constructed in 1906 and consisted of 10 river cut-offs. A number of other networks of ditches have been constructed in more recent years to drain their respective surrounding lands of water.

In June of 2002, widespread downpours dropped as much as 20 inches of rain in a 24 hour time period on the city of Roseau and across the surrounding area, causing the Roseau River to flood. The river rose 15 feet in the city limits, cresting at 23.4 feet, inundating much of the city, and causing widespread flooding problems throughout the county.

The city of Roseau lost many key facilities including the police department, library, museum, and city hall; 90% of businesses and 85% of homeowners were affected by the flooding. Over 15 years later the town is beginning to thrive again but still feels the effects of the disaster.

Right: Downtown Roseau Minnesota, June 12, 2002, morning (*Pete Honl*)



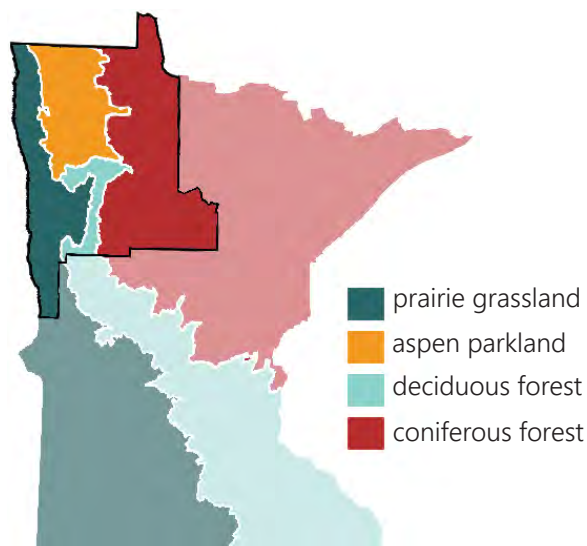
HABITAT AND ECOLOGY

NORTHWEST MINNESOTA

LANDSCAPE

The Northwest region of Minnesota includes 23 counties and spans through all four of Minnesota's biomes: prairie grassland on the western edge, tallgrass aspen parkland north-central, deciduous forest south-central, and coniferous forest on the eastern edge. Roseau County is located in this region where "the prairie meets the north woods" and is home to some of Minnesota's largest lakes.

Right: Northwest region of Minnesota and its biomes.



Northern Minnesota includes the historic Red River Valley with agricultural fields and native prairie fragments, the majestic pines of the Itasca and Bemidji areas, the brush lands of the far northwest, and the vast forested peatlands, as well as the scenic Red Lakes and Lake of the Woods. Additionally, visitors to the area may see deciduous woodlands, sand dunes (remnants of Glacial Lake Agassiz), calcareous fens, white cedar swamps, raised bogs, and marshes.

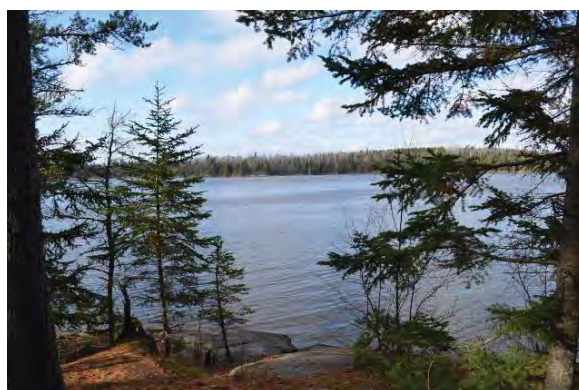


Above: Minnesota's four biomes aspen parkland, coniferous forest, prairie grassland, and deciduous forest. (*Minnesota DNR*)

LAKES AND RIVERS

Minnesota is home to 11,842 lakes and 6,565 natural rivers and streams. Northwest Minnesota contains six of Minnesota's 15 deepest lakes (Ten Mile Lake, Lower LaSalle Lake, Leach Lake, Cass Lake, Lake Winnibigoshish, and Upper Red Lake) and five of its 10 largest lakes (Lake of the Woods, Red Lake, Leach Lake, Lake Winnibigoshish, and Cass Lake).

Since 1850, Minnesota has lost over 8 million acres of wetlands. It is estimated that Minnesota has lost about 50% of its original wetland acreage.



Above: Lake of the Woods, Minnesota (*Hope S. Philbrick*)

PLANTS

The prairies of Northwestern Minnesota are home to approximately 500 species of native flowering plants. Well over 1,000 species of flowering plants can be found among the different wooded areas.



Right: *Pulsatilla (Anemone) patens*, 'American pasque flower/prairie crocus' (Doug Waylett, 2009)



Heavy logging of Minnesota's northern forests has left only a few patches of old-growth forests. Approximately one percent of Minnesota's original tallgrass prairie remains. Northwestern Minnesota prairie types range from wet to dry. Some of our rarest are mesic prairies, moderate in moisture and well suited to agriculture, most of which were tilled by early Europeans settlers. Some of our most threatened prairies are dry prairies.

Left: *Cypripedium acaule*, 'stemless lady-slipper' (Earth to Humans, 2009)

WILDLIFE

Large numbers of reptiles, amphibians, fish, birds, mammals, and invertebrates can be found in northwest Minnesota. It is also home to some more rare species such as the elk, the lake sturgeon, and short eared owl. These species were once relatively common in Minnesota but as the human population has increased, many of these populations have been lost for a variety of reasons. Elk, for example, were almost lost due to over-harvesting and land conversion to agriculture during the 1800s. However in 1935, elk were released into the wild in northwest Beltrami County, where they successfully established a breeding population near Grygla, MN. For the lake sturgeon, overfishing and water pollution, as well as some agricultural practices, and dam construction, have resulted in the reduction of its population. It is a long-lived, slow-growing, late-maturing, fish species that does not do well under heavy exploitation, and since the early 1890s catch estimates have declined 99.4%. The short-eared owl's nesting habitat includes native grasslands, marshes, and open peatlands, all of which have been and continue to be greatly reduced in extent by cultivation and drainage, and because of this the species has declined significantly in Minnesota in recent years.



Above: Pictured from left to right; elk (*Cervus elaphus*), lake sturgeon (*Acipenser fulvescens*), and short-eared owl (*Asio flammeus*) (US Fish and Wildlife Services, Konard P. Schmidt, and George H. Jameson)

REGIONAL RECREATION

NORTHWEST MINNESOTA

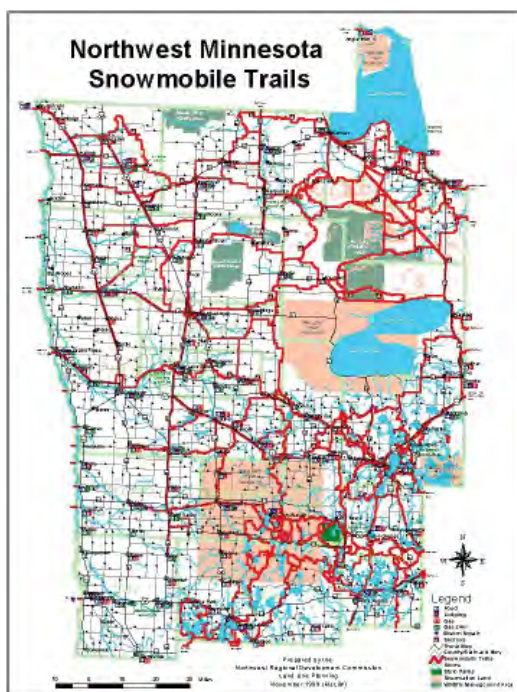
This variety of landscape makes for a broad array of outdoor opportunities that anyone can enjoy. Among the forests, lakes, and prairies, there are opportunities for fishing and boating; biking miles of scenic paved trails; hiking in state parks; and bird watching in a variety of habitats. This region of Minnesota also has a well developed network of ATV trails.

PARKS

This area is home to an abundance of protected outdoor areas people can visit, from state parks and forests to wildlife management areas. State parks include Hayes Lake, Zippel Bay, Lake Bronson, Old Mill, Lake Bemidji, Itasca, Buffalo River, and Maplewood. State forests include Beltrami Island, the Lost River, Lake of the Woods, Pine Island, Red Lake, Mississippi Headwaters, Paul Bunyan, White Earth, Two Inlets and Smoky Hills. In addition, there are a variety of recreation areas throughout the region such as Grand Island State Recreation Area on Lake of the Woods and Detroit Mountain Recreation Area in Detroit Lakes.



Above: Sunrise in Beltrami island State Forest, Adam Johnson, 2009 (*Minnesota Countryside Blog*)



Above: Northwest Minnesota snowmobile trails (*Visit Minnesota*)

TRAILS

Northwest Minnesota offers a variety of trail experiences. Bicyclists have the opportunity to choose from the long flat paved trails, short family friendly trails, or the hilly mountain biking trails that can all be found here. This region is home to the Paul Bunyan State Trail, the nation's longest continually paved trail. Additionally, mountain biking is permitted on all Minnesota DNR state forest roads and trails unless posted. Combined, these forests offer hundreds of miles of trails for biking, hiking, horseback riding and more.

As the area is also home to Polaris, one of the worlds largest outdoor vehicle manufacturers, the region has an extensive network of snowmobile, OHV, and ATV trails.

BIRD WATCHING

The unique collection of habitats in this region provide homes for a tremendous variety of birds. The transition zone between the prairie and coniferous forest biomes that runs through this region offers visitors a chance to see over 275 species of birds.

The Kittison-Roseau Important Birding Area lies mostly on the lake bed of Glacial Lake Agassiz and contains the largest, most intact areas of aspen parkland remaining in the state. It harbors the highest number of breeding birds of any area on the continent.

Additionally, the Pine to Prairie Birding Trail runs through this region and features 45 sites for people to stop and view birds. Some of the unique birds in Roseau County year round include the northern goshawk, ruffed grouse, greater prairie-chicken, yellow rail, american woodcock, snowy owl, northern hawk owl, great gray owl, three-toed and black-backed woodpeckers, boreal chickadee; bay breasted, Connecticut and mourning warblers, red and white-winged crossbills, and pine and evening grosbeaks.



Above: One of the many sites for people to stop and watch the birds along the trail. (*Go Roseau*)



Above: Crappie caught on Lake of the Woods near the Northwest Angle. (*Mark Romanack*)

FISHING

This region offers an amazing breadth of fishing experiences. At one end is legendary Lake of the Woods, which covers 307,010 acres in Minnesota and another 643,390 acres in Canada. At the other end is the small lake experience a cozy cabin on a little lake where panfish and bass are under the dock or never far away. In between these options, of course, are the many medium-sized fishing lakes.

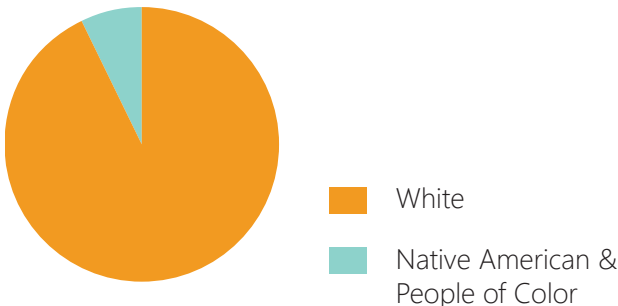
Collectively, these lakes provide hundreds of thousands of acres of prime water for fishing walleye, northern pike, bass, perch and other species. This part of the state is known for trophy-sized walleye and muskellunge fish. It is also known as the "go to" destination for state's largest fish species, the lake sturgeon. Lake sturgeon in the 100-pound range have been caught and released in recent years on the state's northern border waters.

ROSEAU COUNTY DATA

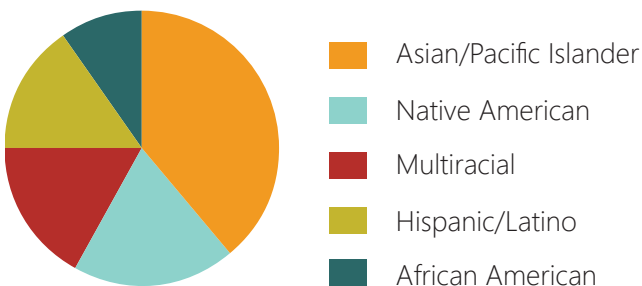
POPULATION

Following is the demographic and economic data of Roseau County drawn from Data USA. As of 2016, 98.4% of Roseau County residents were US citizens, which is higher than the national average of 93%. Citizenship has increased since 2015 and will likely continue to increase. When compared to other counties, Roseau County, MN has a relatively high number of residents that are native Laotian speakers.

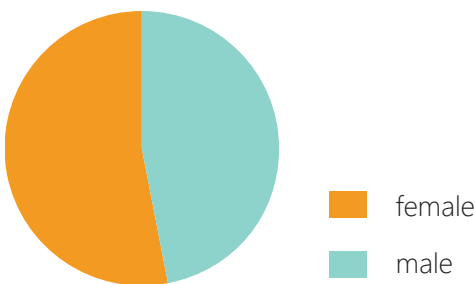
It is estimated that in 2016 Roseau County, MN had a population of 15,609. Of that population, **92.8%** is white and **7.2%** Native Americans and People of Color.



Among People of Color, **2.8%** are Asian or Pacific Islander, **1.4%** are Native American, **1.2%** are Multiracial, **1.1%** are Hispanic/Latino, and **0.7%** are African American.

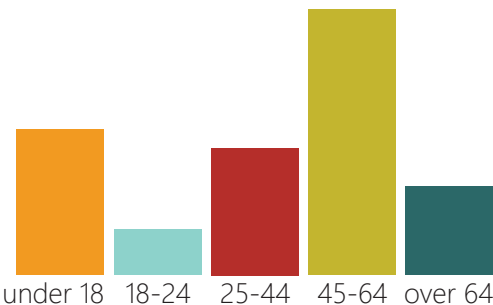


There are slightly more females (**52.8%**) than males (**47.2%**) in Roseau County.



The median age of Roseau County is **41**.

The poverty rate of Roseau County is **8.37%**.

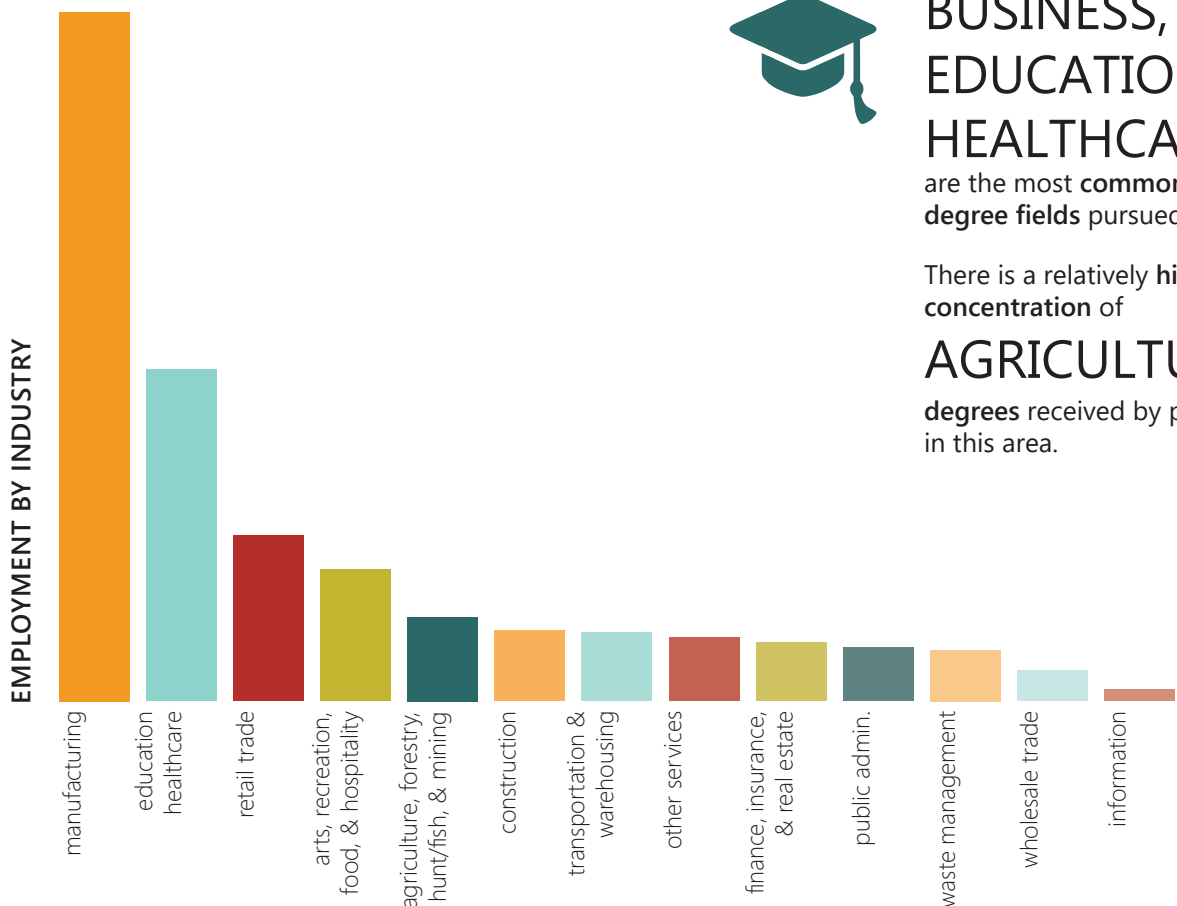


ECONOMY

The economy of Roseau County, MN employs **8,420** people.

The economy of Roseau County is specialized in **manufacturing; agriculture, forestry, fishing, and hunting; and management of companies and enterprises**, which employ respectively **3.68; 3.42; and 1.66** times more people than what would be expected in a location of that size.

The largest industries in Roseau County are manufacturing, healthcare and social assistance, and retail trade. Polaris Industries Inc., with its annual sales of 5.4 billion (2017), which designs, engineers, and manufactures off road and on-road vehicles was founded in Roseau in 1952.



In 2016, the median household income was **\$54,827**

and the median property value was **\$115,700**



There were **6,106** households with **79.5%** homeownership



BUSINESS, EDUCATION, & HEALTHCARE

are the most common degree fields pursued.

There is a relatively high concentration of

AGRICULTURE

degrees received by people in this area.





SECTION 2

RESEARCH AND PRECEDENTS

This section describes some of the projects and additional research that informed the development of ideas for the Roseau River Water Trail.

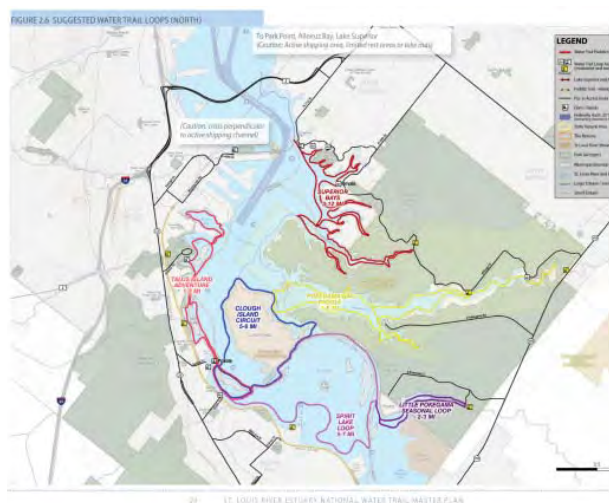


ST. LOUIS RIVER ESTUARY WATER TRAIL

DULUTH, MINNESOTA

The City of Duluth along with its partners, has been working with local and regional stakeholders to implement the St. Louis River Estuary Water Trail Plan since its approval by the Duluth City Council in March of 2017. Additionally, the City of Duluth is seeking a National Water Trail designation which would bring broader awareness to this vital water body, allow for greater management assistance, and open additional funding streams.

The St. Louis River Estuary Water Trail has goals to enhance recreation and education opportunities, implement restoration and conservation projects, and to increase community support and engagement with this unique expanse of water that is a unifying feature in the region. As of 2018, the St. Louis River Alliance, which has become home to this initiative, is working on a map for the community, the installation of the Water Trail Kiosks at key water put-ins, along with a completed Water Trail Logo.

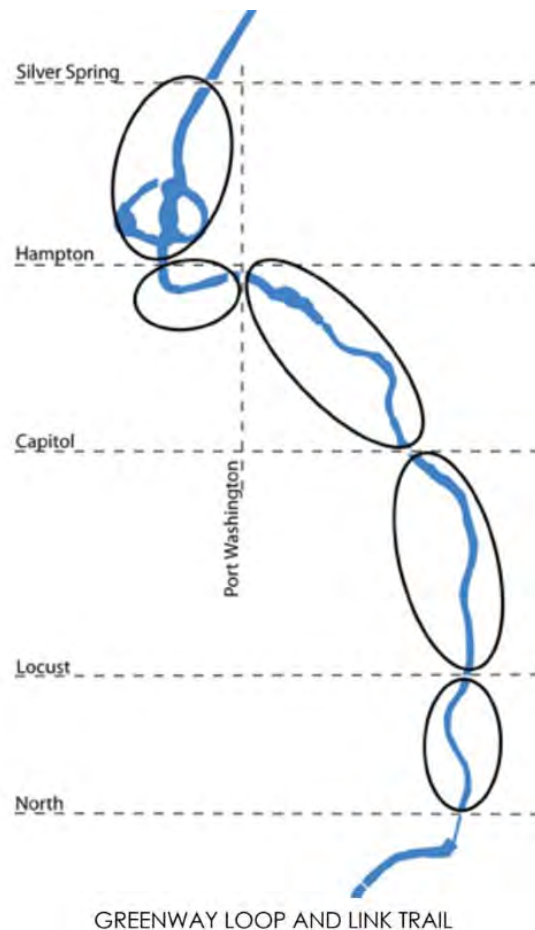


MILWAUKEE RIVER GREENWAY MASTERPLAN

MILWAUKEE COUNTY, WISCONSIN

The Milwaukee River Greenway Masterplan was a project of the Milwaukee Environmental Consortium prepared by Plunkett Raysich Architects in 2010. The Masterplan was created through an inclusive public planning process that included design workshops where community members identified priority areas for improvement and developed group visions for the corridor emphasizing natural habitat, neighborhood connections, and recreation. This community engagement process led directly to the development of the project's four design principles: ecological integrity, stronger links (between community and river), imaging and signage, and high protection recreational elements.

The development of a logo and unified signage was important to this project because it created an identity for the space and also gave users a way to learn more about the area.



SOUTH SKUNK RIVER WATER TRAIL

STORY COUNTY, IOWA

Prepared by Mimi Wagner, Landscape Architecture LLC (MWLA) in 2016 for the Story County Conservation Board, the master plan looks at the 38 miles of the Skunk River that Run through Story County, Iowa. The major goal of this plan is to enhance public access to the water for recreational purposes in order to build stewardship and natural resource conservation. Additionally, the plan aims to celebrate and interpret the interaction that all peoples have had with this river throughout its history.

This plan provides a thorough analysis of the past and present cultural, economic, and environmental conditions of the South Skunk River and the area that surrounds it. This deep analysis allows understanding of the complexity of the river, leading to design decisions that are well informed.



MINNESOTA RIVER GREENWAY PLAN

MINNESOTA RIVER VALLEY, MINNESOTA

This plan describes a comprehensive set of interpretive experiences that promise to transform a trail through woods and marshlands into a trail through the history, culture, and ever-changing ecosystems. The plan is organized around three kinds of interpretive features: trail wide signage and interpretation, either interpretive nodes, and park-like destinations. With each feature, the objective is to encourage pause and reflection.

The 17-mile trail travels through five municipalities, Fort Snelling State Park and the Minnesota Valley National Wildlife Refuge. This plan builds on the 2012 Dakota County Minnesota River Greenway Master Plan.



THE WOMEN'S TABLE

NEW HAVEN, CONNECTICUT

Installed in 1993 on the Yale University Campus, the simple granite blocks of artist Maya Lin's Women's Table organically emerge from the pavement and a string of figures marks the number of female students at Yale each year since its founding in 1701. These numbers grow with time as they spiral out toward the table's edge, swelling like the rings of water that bubble from the central spring and spill over on all sides.

This project serves as an example for how educational information can be made artistic, or abstracted and shared in a physical form on site. It also illustrates how a information can be made into an interactive experience for those who view it.



SITE INDEX RAPSON GROUP

MINNEAPOLIS, MINNESOTA

Several granite slabs in the plaza/garden are identified with the exact geographic locations of their point of origin etched in the upper corners. In addition, three text panels are etched into the facade of the Rapson Hall building directly on the materials from which the building has been built. The texts describe the geologic orientation of where the materials originated and what the materials are made up of. The public artwork creates a level of awareness of building materials not usually present even in a building where architecture is taught.

This project serves as an example for how educational information can be made artistic, or abstracted and shared in a physical form on site. It also illustrates how a information can be made into an interactive experience for those who view it.



WEBSITE PRECEDENTS

ONLINE



SkinnySki.com, was started by Bruce Adelsman in the 1994-95 season as a simple listing of races. SkinnySki.com is currently dedicated to covering cross-country skiing in the upper Midwest and providing up to date information on trails, trail conditions, training programs, equipment, lodging, races and race results, and general notices. Though this website is maintained by Bruce Adelsman it depends on contribution of trail reports, photos, race results, news, and more from those engaging with the trails across the region.



"Minnesota Off-Road Cyclists (MORC) is a non-profit volunteer organization dedicated to safeguarding the future of mountain biking in Minnesota through the promotion of responsible riding, establishment and maintenance of mountain biking trails, and preservation of Minnesota's natural resources."



"Mississippi River Paddle Share is a new and exciting recreational and transportation opportunity for people who have some kayaking experience, don't own a boat, and want a safe and enjoyable river experience. Equipment can be reserved at paddleshare.org"



AGNISSON CENTER FOR FARM EXHIBITS

What is the purpose of this?
The purpose of this is to provide information about the various exhibits and activities available at the Agnisson Center for Farm Exhibits. This information is intended to help visitors plan their visit and make the most of their time at the center.

WEATHER EMERGENCY

Weather emergencies can be a serious threat to life and property. It is important to have a plan in place for what to do in the event of a weather emergency. This information is intended to help visitors plan their visit and make the most of their time at the center.

BOISEAU INFO

Boiseau Info is a website that provides information about the various exhibits and activities available at the Agnisson Center for Farm Exhibits. This information is intended to help visitors plan their visit and make the most of their time at the center.

TAKE ONE



www.bordierstatebank.com



SECTION 3

COMMUNITY ENGAGEMENT



This section documents the community participation process and input given by community members and stakeholders for the Roseau River Water Trail project from June to July 2018.

OVERVIEW AND GOALS

Community engagement on the project was critical to the project process and outcomes. There were three levels of community engagement - one, with the Steering Committee on a weekly basis via conference calls throughout the project; two, with community stakeholders in four instances (two stakeholder meetings, the Launch Party at City Park, and the RRWD booth at the Roseau County Fair) and three, with specific individuals and teams whose input was relevant to the project.

The Roseau River Water Trail NEEDS YOUR INPUT

What does the *community* need?



A design team from the Center for Sustainable Building Research, College of Design, University of Minnesota ©Twin Cities seeks community input for the Roseau River Water Trail project. From June to August the team will explore design possibilities with community stakeholders related to the following sites:

Ross Town Hall, Stoe's Bridge, Roseau City Park, Malung Community Center, and Hayes Lake State Park

Please join us for an interactive discussion

THURSDAY, JUNE 14 from 6-8pm

Roseau River Watershed District Office: 714 6th Street SW, Roseau

Kids are encouraged to join the discussion!



STAKEHOLDER MEETING I: PROJECT GOALS

JUNE 14, 2018, ROSEAU RIVER WATERSHED DISTRICT OFFICE

The first meeting was held for the design team to understand the stakeholder group's ideas for the Roseau River Water Trail. A brief presentation was made to share the preliminary research that had been done about Roseau and the surrounding area, as well as precedent projects that may help inform the planning process for the Roseau River Water Trail.

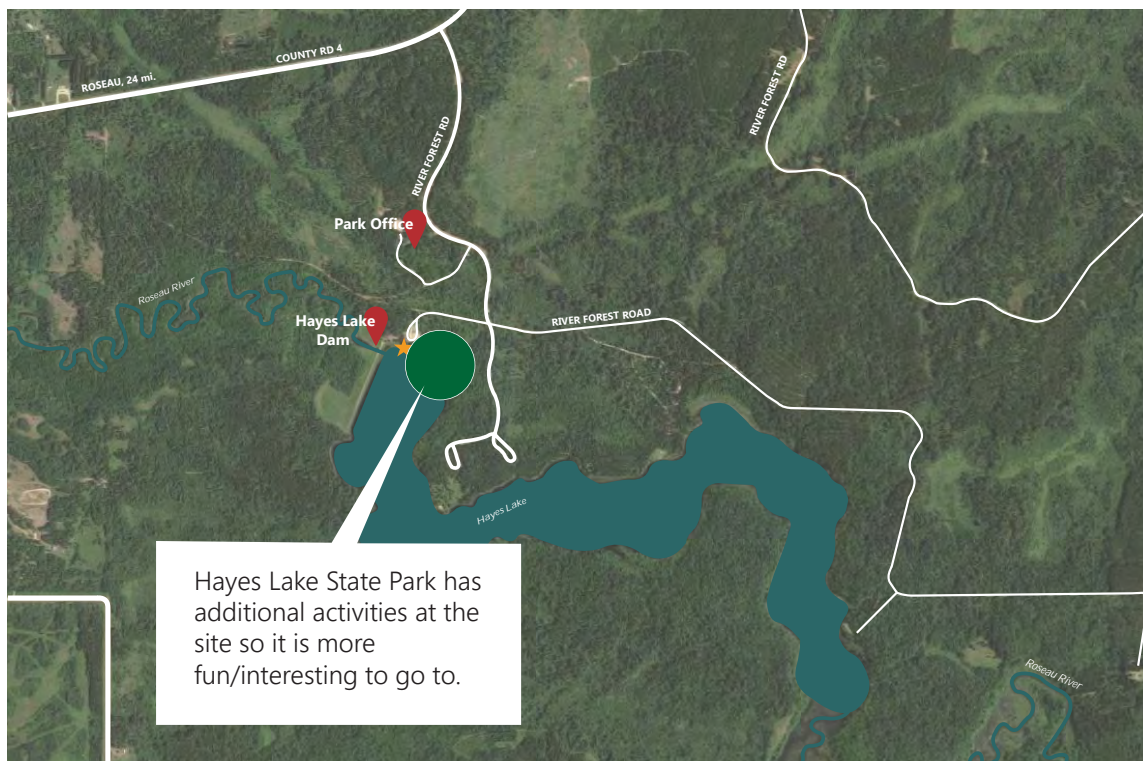


Following the presentation, stakeholder group members were given maps of the access areas and were asked the following questions:

- 1. What are your most favorite spots along the Roseau River Water Trail and surrounding area?**
- 2. What are your least favorite spots along the Roseau River Water Trail and surrounding area?**
- 3. List the names of your least favorite spots and the reason why they may not be appealing.**
- 4. List of your most favorite spots and the reasons why they may be appealing.**

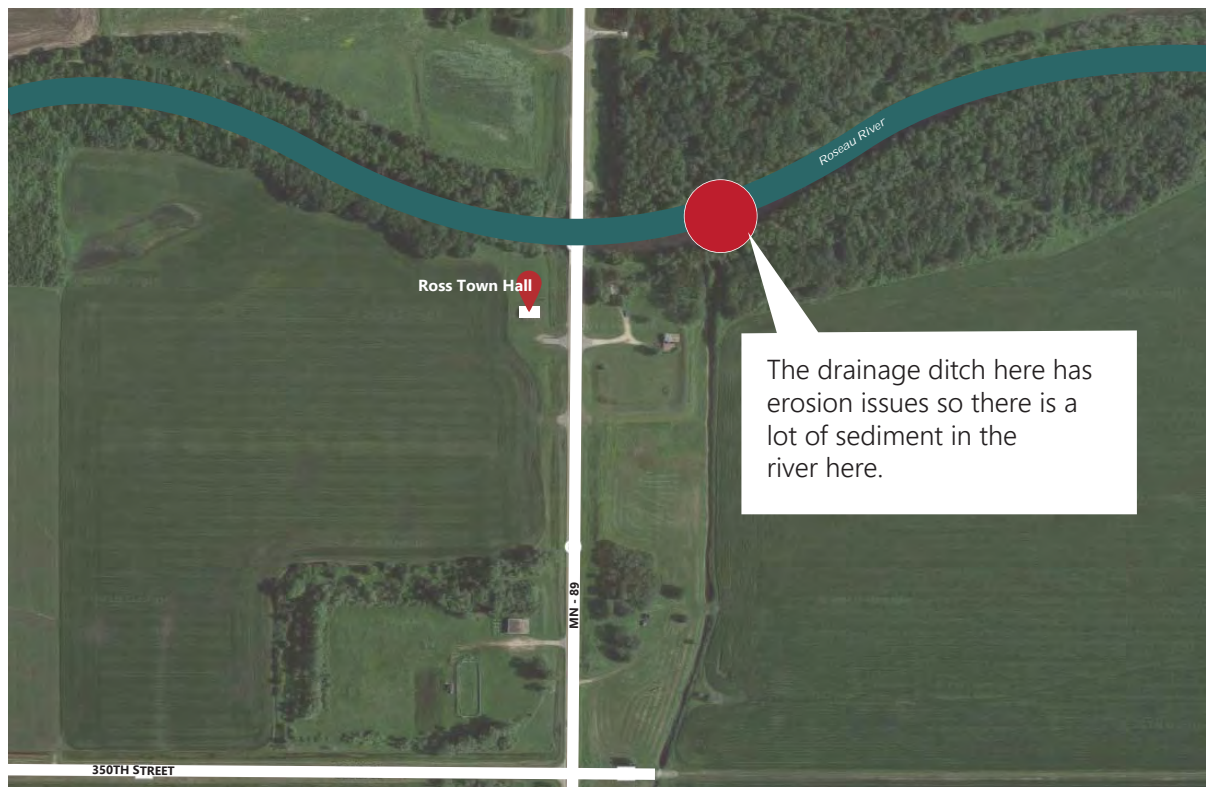
STAKEHOLDER FEEDBACK

Of the five potential access sites chosen, stakeholders indicated that Stoe's Bridge, Hayes Lake State Park, and Roseau City Park are their favorite sites for the following reasons:





Of the five potential access sites chosen, stakeholders indicated that the Ross Town Hall site was their least favorite site for the following reason:



Additionally, of the five potential access sites chosen, stakeholders indicated that although the Malung Community Center was neither their favorite or least favorite of the sites, it was a site where they saw a lot of potential.



In addition to the information learned at the stakeholder meeting, a tour of the potential sites was given by Tracy Halstensgard, administrator of the Roseau River Watershed District. During that tour it was decided that the stretch of the river running between 3rd Street and Central Street presented another opportunity for an additional access point because of its proximity to the **Roseau City Center (A)**, **Splash Pad (B)**, **Mother's Memory Park (C)**, and **Veterans Memorial Park (D)**. There are existing events held at both Veterans Memorial Park and the City Center throughout the summer that could encourage greater engagement of Roseau residents with the river.





LAUNCH PARTY: COMMUNITY NEEDS

JUNE 26, 2018, ROSEAU CITY PARK

The second meeting was held in tandem with the Roseau River Watershed District's Launch Party, an event hosted to dedicate the new kayak launch and to introduce the community to the River Trail project. At the Launch Party there were educational and informational booths, and we had a table with maps depicting proposed access points as well as existing opportunities and possible added amenities for each site, based on what we had heard from stakeholders at our June 14th meeting.

Our goals at this event were to gain input from the community about the proposed access points, existing opportunities, needed amenities, and aims of this project. Additionally, we were seeking their insight about the river, their personal engagement with it, and what it means to them. This event also provided the opportunity to address concerns or respond to questions about the project.

We collected information through surveys, feedback drawn on maps, and one-on-one conversations. The following pages include the access maps and information provided at the Launch Party.

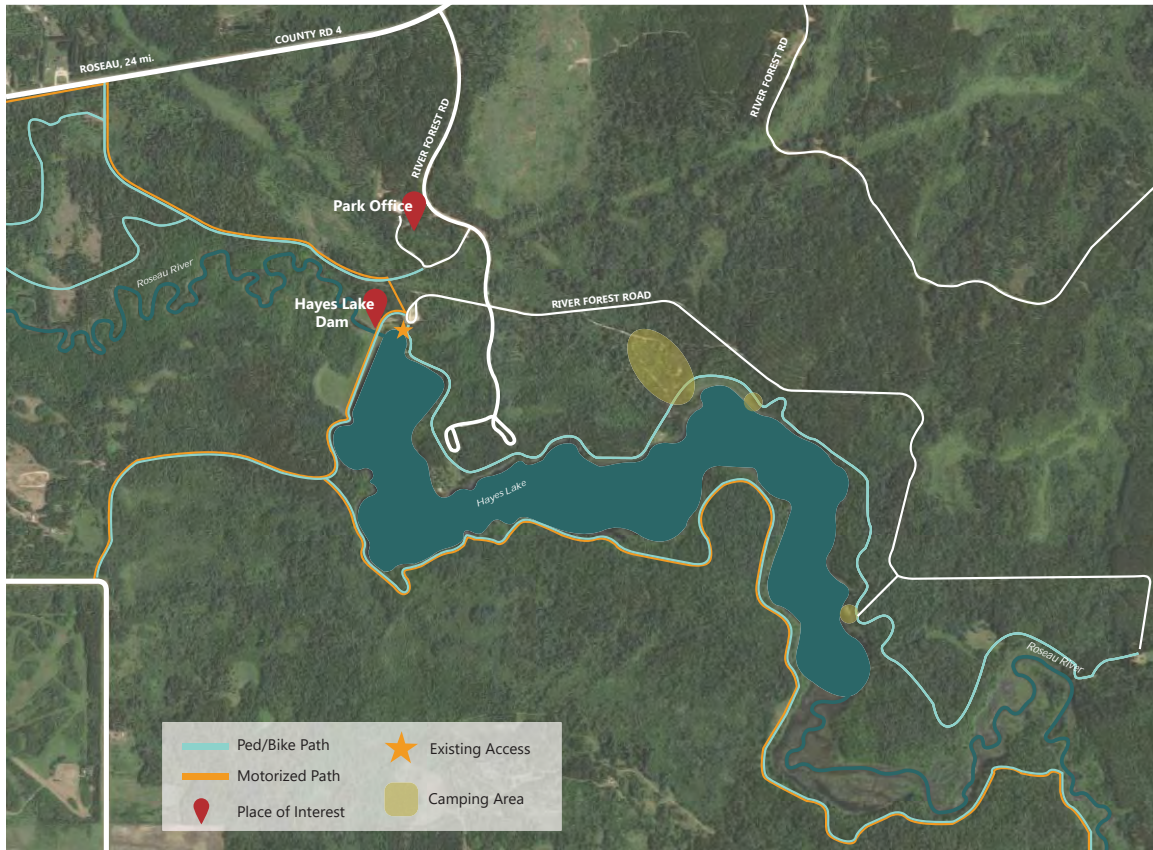
**Come and see what the Roseau River and
City Park have to offer at the
“Launch Party”**

River Trail Kickoff/Kayak Launch Dedication
Tuesday, June 26th, 2018 - from 4-7:00 pm
Roseau City Park Boat Launch & Fishing Dock area

Kayak Launch Dedication @ 5:00pm



HAYES LAKE STATE PARK



The Roseau River Water Trail explored where the Roseau River exists Hayes Lake as a potential access point along the river trail.

Located a half hour drive southeast of Roseau, Hayes Lake State Park features a boat launch, swimming beach, and fishing on Hayes Lake as well as areas for camping and access to a variety of trails.

Additional amenities that may be added to this site are:

- path or ramp down to river
- Kayak/canoe lockup
- places for seating
- variety of signage



MALUNG TOWN HALL



The Malung Town Hall is a short 10 minute drive south of the city of Roseau, located off County Road 2.

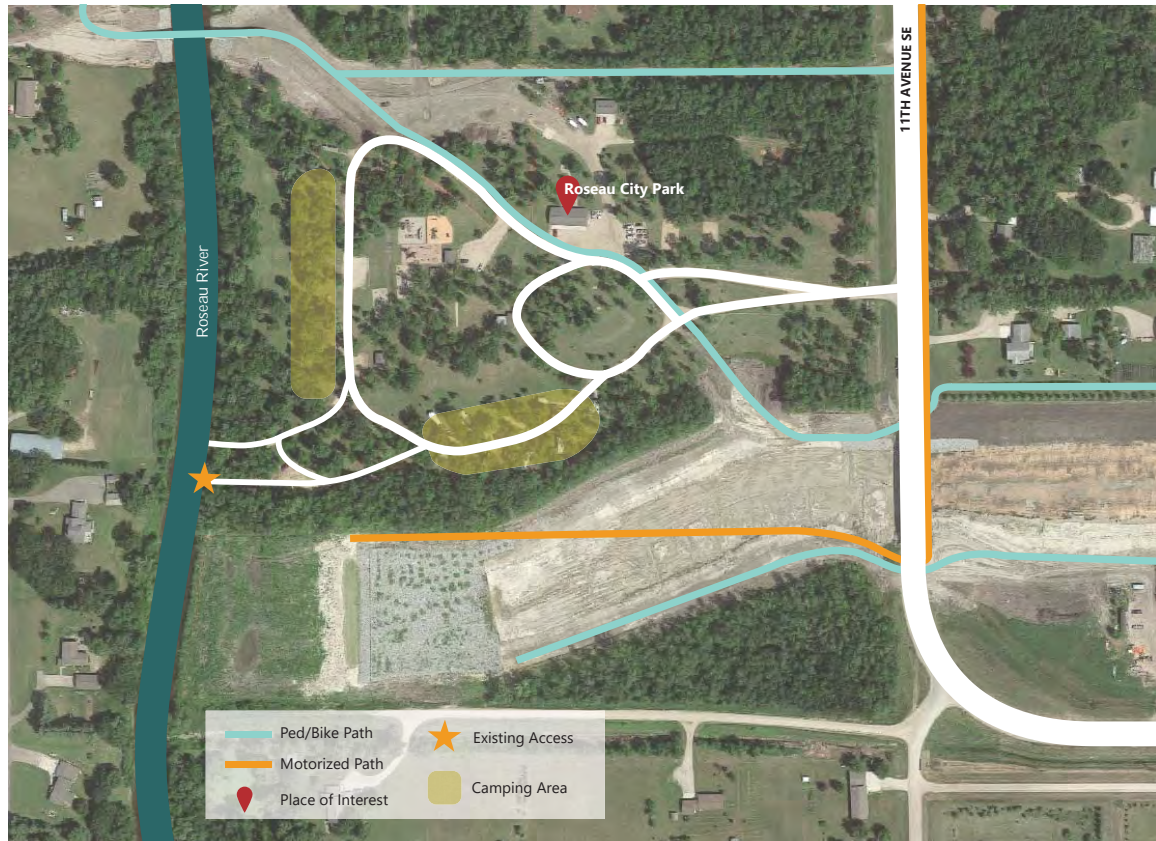
The Community Center south of the river houses a variety of event throughout the year. The area features a playground, ice rink, sledding hill, mown trails, and an out of use campground with restroom facilities.

The Roseau River Trail Plan will explore this site as an access point for paddlers along the river. Additional amenities that may be added at this site are:

- path or ramp down to river
- places for seating
- variety of signage



ROSEAU CITY PARK



This access point is located in Roseau City Park, which can be entered from 11th Avenue SE.

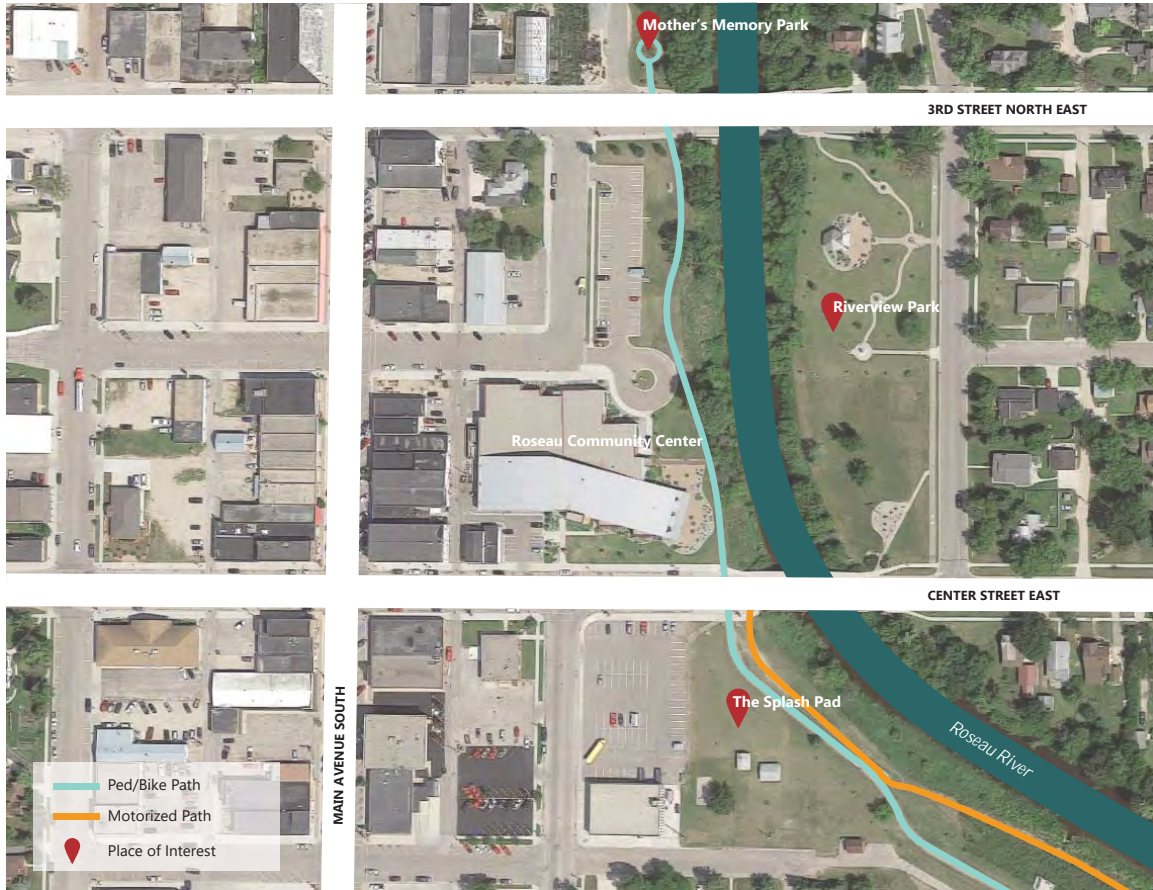
The park has many existing features for people on the river to enjoy including a campground, playground, picnic shelters, fishing pier, boat launch, and trail access. This access point is also only a short bike or drive away from many area businesses.

Additional amenities that may be added to this site are:

- places for seating
- paved paths
- kayak/canoe storage
- variety of signage



ROSEAU CITY CENTER



The Roseau River Water Trail Plan explores the section of river between Center Street and 3rd Street as an access point for paddlers along the river.

Located in the heart of Roseau, the area is adjacent to Roseau City Center, Riverview Gazebo Park, Mother's Memory Park, and the Splash Pad. Additionally, from this area people can enjoy the trails and nearby businesses. Additional amenities that may be added at this site are:

- path or ramp down to river
- kayak/canoe storage
- places for seating
- variety of signage



STOE'S BRIDGE



The Stoe's Bridge access is a short 15 minute drive northeast of the city of Roseau, located of the intersection of County Road 123 and the Roseau River.

The area features a mown lawn with primitive fire pits and a restroom as well as an existing access for motorized boats.

The Roseau River Water Trail Plan will explore this site as an access point for paddlers along the river. Additional amenities that may be added at this site are:

- places for seating
- variety of signage



ROSS TOWN HALL



The Ross Town Hall is a short 15 minute drive northeast of the city of Roseau, located off the intersection of MN 89 and the Roseau River.

The area features plenty of space for people to gather and for vehicle parking. Additional amenities that may be added are:

- path or ramp down to river
- restroom facilities
- places for seating
- variety of signage



SURVEY RESULTS

The crowd at the Launch Party was visually diverse in age, gender, and race/ethnicity. There were a lot of young families with children as well as people of retirement age. Survey were passed out to people milling about as well as those who approached the table. In total, 54 surveys were filled out. Surveys included the following questions.



1. HOW OFTEN DO YOU ENGAGE WITH THE ROSEAU RIVER?

The options for this question included the following: **All the time!**, **Sometimes.**, **I don't but I would like to!**, and **Not at all.**

Of the people surveyed **10** responded **All the time!**, **30** responded **Sometimes.**, **10** responded **I don't but I would like to!**, **2** responded **Not at all.**, and **3** left this part blank.

There was also a time component that asked those surveyed to circle one of the following: **Yearly**, **Monthly**, **Weekly**, or **Daily**.

Of the people surveyed **5** responded **Yearly**, **15** responded **Monthly**, **10** responded **Weekly**, **1** responded **Daily**, **3** wrote in the answer **Seasonally**, and **26** left this part blank.

2. HOW WOULD YOU/DO YOU LIKE TO ENGAGE WITH THE ROSEAU RIVER

The options for this question included the following: **Fishing**, **Boating**, **Canoe/Kayaking**, **Swimming**, **Bird/Wildlife Watching**, and **Other** with a space to fill in.

Of the people surveyed **34** responded **Fishing**, **16** responded **Boating**, **42** responded **Canoe/Kayaking**, **14** responded **Swimming**, and **12** responded **Bird/Wildlife Watching**. **2** people filled in the **Other** section with **Camping**, **1** person said **Viewing**, and **1** person wrote in **Rope Swinging**. Everyone surveyed filled out this question.

There were two follow up parts to this question that allowed for people who don't engage with the river to tell us why that was and then suggest what could help them overcome that.

A. WHAT PREVENTS YOU FROM USING THE ROSEAU RIVER?

This was a short answer question and responses included the following:

- | | |
|----------------------------------|--------------------------------|
| - lack of time (12) | - distance to travel (1) |
| - lack of equipment (12) | - seasonal water levels (1) |
| - poor access (7) | - weather (2) |
| - limited knowledge (5) | - the river is scary (1) |
| - hazards/debris along river (1) | - not good fishing in town (1) |

4 people who responded to this question said **Nothing** kept them from engaging with the river and **16** people left this question blank.

B. WHAT AMENITIES WOULD HELP TO OVERCOME THAT?

This was a short answer question and responses included the following:

- | | |
|-----------------------------------|--|
| - better access (16) | - maintenance of access points and river (2) |
| - public equipment available (12) | - places to camp (1) |
| - information/education (4) | - bank repair (1) |
| - more access points (3) | |
| - family friendly events (3) | |

24 people left this question blank.



3. WHERE DO YOU ACCESS THE ROSEAU RIVER?

The options for this question included the following: Hayes Lake State Park, Malung Community Center, Roseau City Park, Roseau City Center, Ross Town Hall, Stoe's Bridge, Trangsrud Landing, and Other with a space to fill in.

Of the people surveyed **23** responded Hayes Lake State Park, **1** responded Malung Community Center, **40** responded Roseau City Park, **4** responded Roseau City Center, and **18** responded Stoe's Bridge. **2** people filled in the Other section with Caribou Landing, **3** people said Home, **1** person said Wannaska, **1** person said the Government Dam, **1** person said the Concordia Dam and **1** person wrote in Hay Creek.

1 person left this question blank.

4. WHAT DOES THE ROSEAU RIVER MEAN TO YOU?

This was a short answer question and responses included the following:

- fun with family and friends (6)
- a place for relaxing (6)
- an important part of the community (5)
- a great way/place to spend time (4)
- important resource (3)
- beautiful to look at (3)
- nice (3)
- a place for seasonal recreation (3)
- a place to fish (3)
- a way to be outdoors in nature (2)
- nostalgia of being a kid (2)
- fear (1)
- flooding (1)
- not a lot (1)

18 people left this question blank.

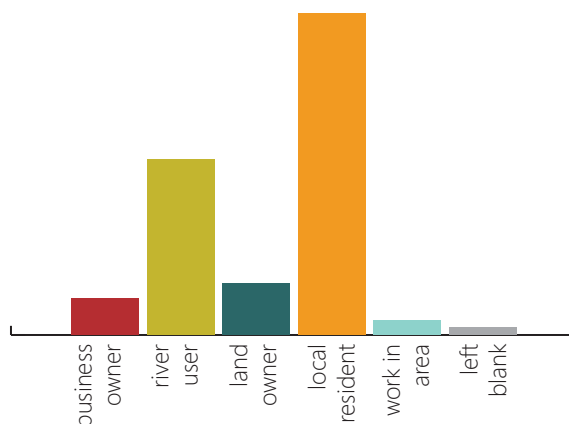


WHO ARE YOU?

Of the people surveyed **5** were identified as **local business owners**, **24** as **river users**, **7** as **landowner along river**, and **44** as **local residents**.

2 people wrote in **work in area**.

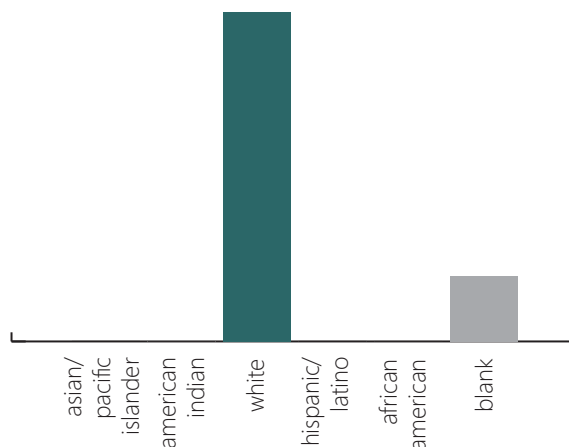
1 person left this blank.



HOW DO YOU IDENTIFY?

Of the people surveyed **45** identify as **White** and **9** people left this blank.

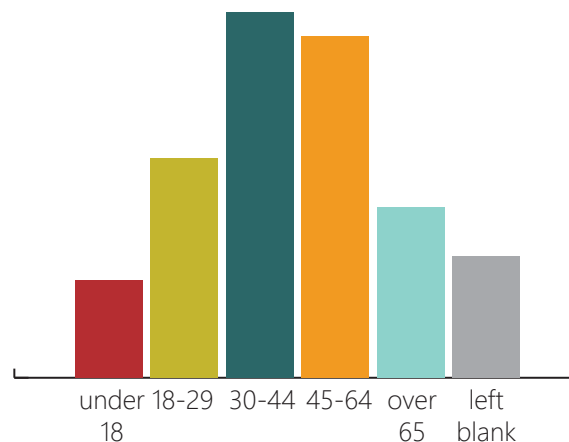
Because a diverse crowd was visually observed it is probable that some of those who left this question blank are People of Color. This could be explained by the fact that people may not identify the categories provided and it could be remedied by adding a space for people to write in answers.



HOW OLD ARE YOU?

Of the people surveyed **4** were **under 18**, **9** were **18 to 29**, **15** were **30 to 44**, **14** were **45 to 64**, and **7** were **over 65**.

5 people left this blank.







STAKEHOLDER MEETING II: DESIGN FEEDBACK

JULY 17, 2018, ROSEAU RIVER WATERSHED DISTRICT OFFICE

The second stakeholder meeting was held at the Roseau River Watershed District office during the week of the Roseau County Fair. The purpose of this meeting was to get feedback on the developing design ideas for the Roseau River Water Trail. A concept packet was presented that included design principles, design ideas for the six selected sites, and feedback received.

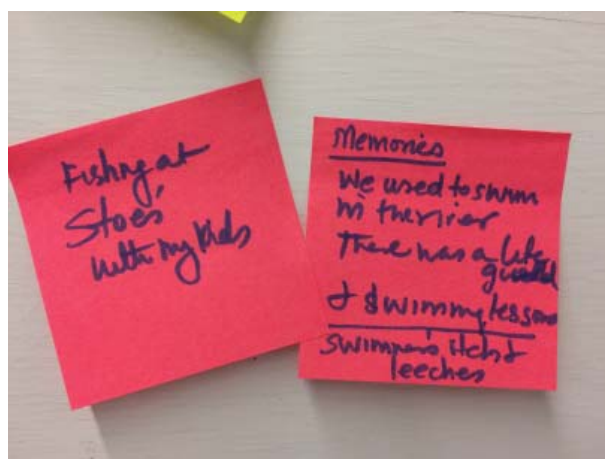
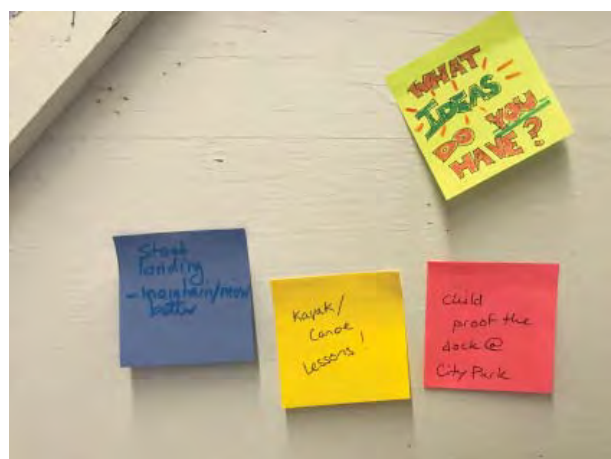


Observations made at the Roseau County Fair Parade of the participant groups on the afternoon of July 17th also informed the design principles and design ideas and recommendations. Some additional individual conversations such as with representatives from the Roseau Chamber of Commerce offered additional insights about collaborations and plans for activities along the Roseau River. We also spoke with Sarah Rosenkrans at En Lilen Svensk (A Little Swedish Shoppe) and gained names of different local artist that could be contacted further into the project.



JULY 18, 2018: ROSEAU COUNTY FAIR

The design ideas were also displayed at the Roseau River Watershed District booth at the Roseau County Fair on July 18th, and conversations and feedback received from the county fair participants and other partners with a county fair presence, such as the Department of Natural Resources (DNR), informed the next stage of the design process.



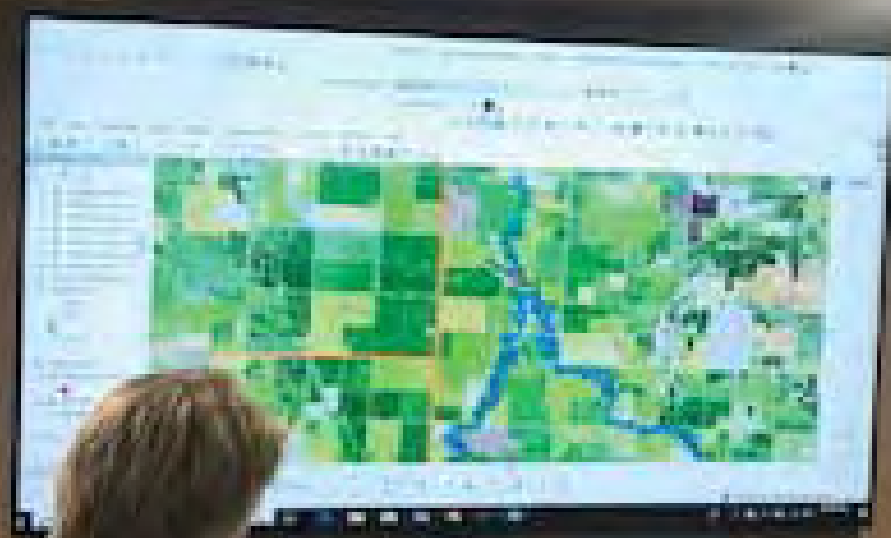




SECTION 4

DESIGN AND RECOMMENDATIONS

This section documents the design brief, design principles and recommendations, design features, and the masterplan for each access site along the Roseau River Water Trail.



DESIGN BRIEF

OUR ROLE IN THE PROJECT

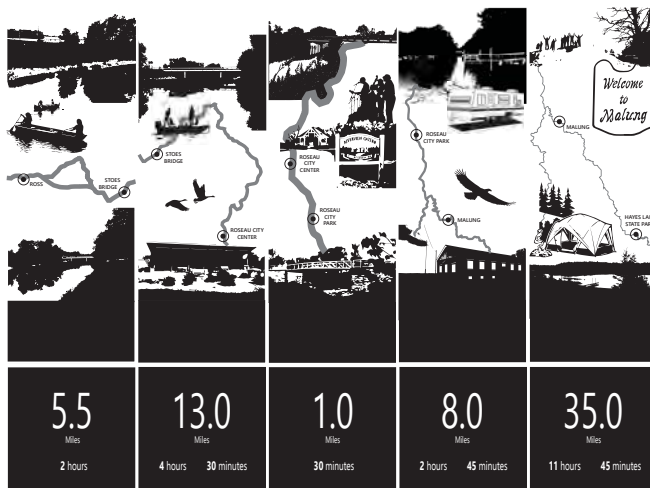
In the spring of 2018, the Roseau River Water Trail project was submitted by the Roseau River Watershed District (RRWD) to the Northwest Regional Sustainable Development Partnerships for funding. After funding was received, the Design for Community Resilience design team started work through the Center for Sustainable Building Research (CSBR). A stakeholder group was invited by the RRWD to offer feedback and insights to the process.



The three goals of the design process were as follows:

1. Research the Roseau River context and sites and propose design ideas for consideration.
2. Engage the community for input and feedback on the design.
3. Develop a masterplan that documents the research, the design ideas for implementation, and future applications for the RRWT designation.

Six sites were selected along the Roseau River that are significant in terms of access and use of the Roseau River. / Those sites are: Hayes Lake State Park, Malung Town Hall, City Park, City Center, Stoe's Bridge and Ross Town Hall. Design principles and recommendations were developed based on the research, site analysis, and community and stakeholder feedback that was received both remotely and on site.



Based on the principles and recommendations conceptual designs were developed for all six of the chosen sites. Designs for three locations on the trail close to or in the City of Roseau were further developed. Those sites were: Roseau City Park, Roseau City Center, and the Malung Town Hall.



DESIGN PRINCIPLES



PROMOTE RECREATION AND DEVELOP ACTIVE LIVES

The Roseau River Water Trail design aims to provide areas for people to actively engage with the Roseau River, building on existing outdoor recreation opportunities in the surrounding area in order to promote an active lifestyle through recreation.



RESPECT WILDLIFE AND NURTURE HABITAT

The Roseau River Water Trail hopes to inspire those who engage with the Roseau River to be stewards of their environment and to respect the wildlife around them and nurture its habitat.



UNDERSTAND THE PAST AND LEARN FOR THE FUTURE

The Roseau River Water Trail design aims to tell the historical and cultural story of the Roseau River and the surrounding area through time, for people to understand how the past has shaped the present, and to learn from it for the future.



INTEGRATE ART AND FOSTER CREATIVITY

The Roseau River Water Trail aims to integrate art, foster creativity, and support local artists through the development and implementation of art wherever appropriate.



SUPPORT LOCAL BUSINESS AND BUILD LOCAL ECONOMY

The Roseau River Water Trail aims to support the local economy and partner with local businesses when appropriate.

DESIGN ELEMENTS

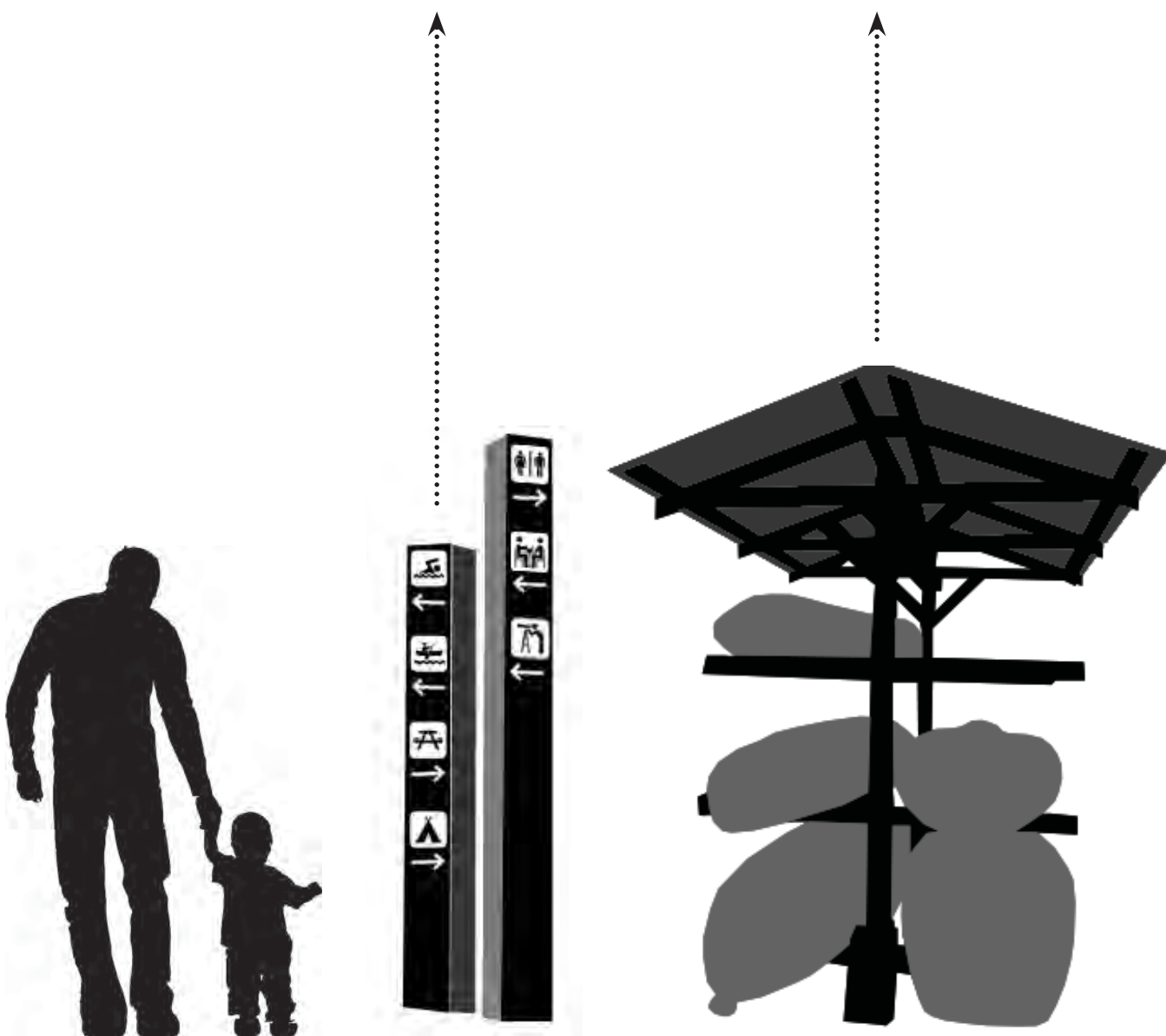
SIGNS AND STRUCTURES

WAYFINDING SIGN

Used to direct people to opportunities or amenities such as birding, picnic, or camping areas that can be found at a greater distance from the current location. Placed in proximity to both river access points and nearby foot traffic.

STORAGE RACK

Used to temporarily store canoes, kayaks and paddle boards while owners explore and enjoy other amenities. Placed in proximity to river access points.



AMENITY SIGN

Used to indicate the direction of a specific amenity such as a boat launch, restroom, or bike trail. Placed in close proximity to a given amenity along a trail or route with relatively slow-moving traffic.

MAP SIGN

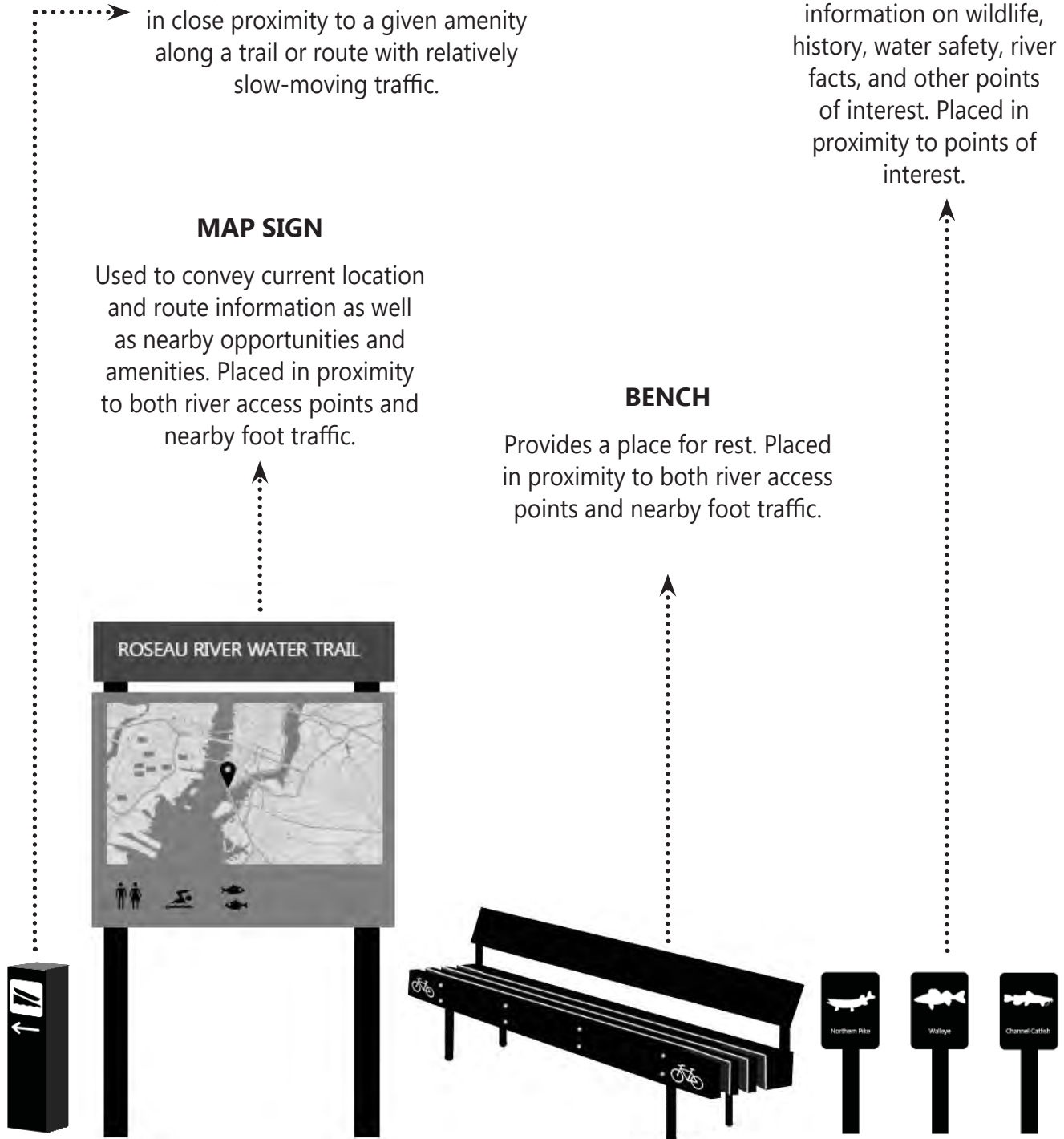
Used to convey current location and route information as well as nearby opportunities and amenities. Placed in proximity to both river access points and nearby foot traffic.

EDUCATIONAL SIGN

Used to provide people with educational information on wildlife, history, water safety, river facts, and other points of interest. Placed in proximity to points of interest.

BENCH

Provides a place for rest. Placed in proximity to both river access points and nearby foot traffic.



MATERIAL PALETTE



SELF-BINDING AGGREGATE

Self-binding aggregate has a natural look while still providing a firm surface finish. It is a hard-wearing material that is ideal for footpaths.



POURED CONCRETE

Concrete is a relatively low-cost and extremely durable material that can be used for a variety of needs. As a walkway, concrete will lend a more formal and established feel.



CRUSHED GRANITE AGGREGATE

Crushed granite is a material that is featured at the Roseau City Park access point. Not only is it an attractive material it is also highly practical and extremely affordable. Integrating it into other access areas ties them together visually. Crushed granite can be used as a mulch alternative and helps to keep soil at an ideal temperature and moisture.



DRY-STACK STONE RETAINING WALL

Stone is another material that will fit into natural surroundings. The dry-stacking method is ideal for retaining walls of three feet or less.



TIMBER DECKING

Timber decking can be a long-lasting, low-maintenance material.



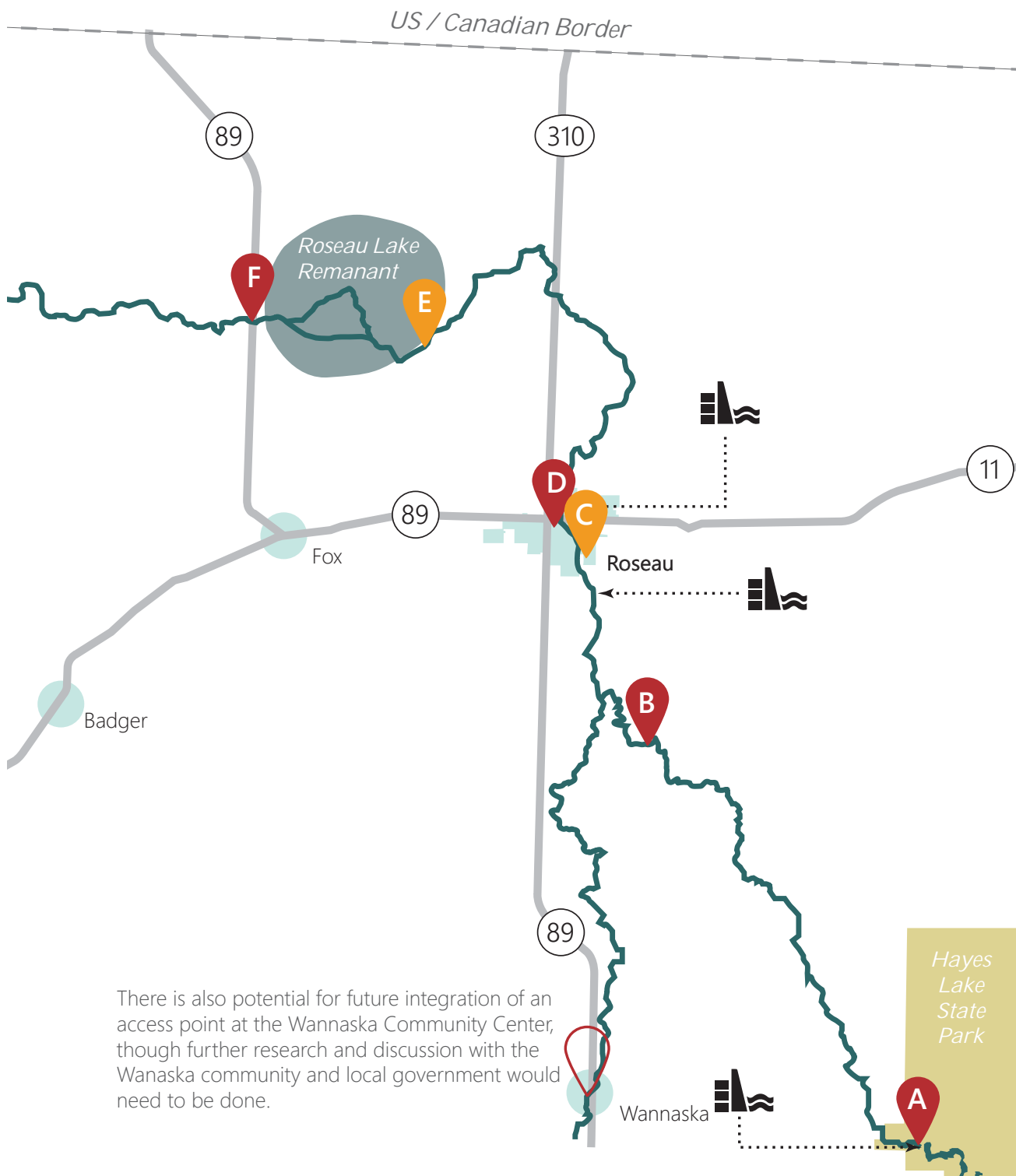
RAIN GARDEN PLANTS

A rain garden is a garden of native shrubs, perennials, and flowers planted in a small depression. It is designed to temporarily hold and soak in water runoff that flows from roofs, driveways, patios or lawns. Rain gardens can improve water quality by filtering out pollutants, provide localized storm water and flood control, and attract beneficial birds, butterflies and insects.

ROSEAU RIVER WATER TRAIL

ACCESS MAP





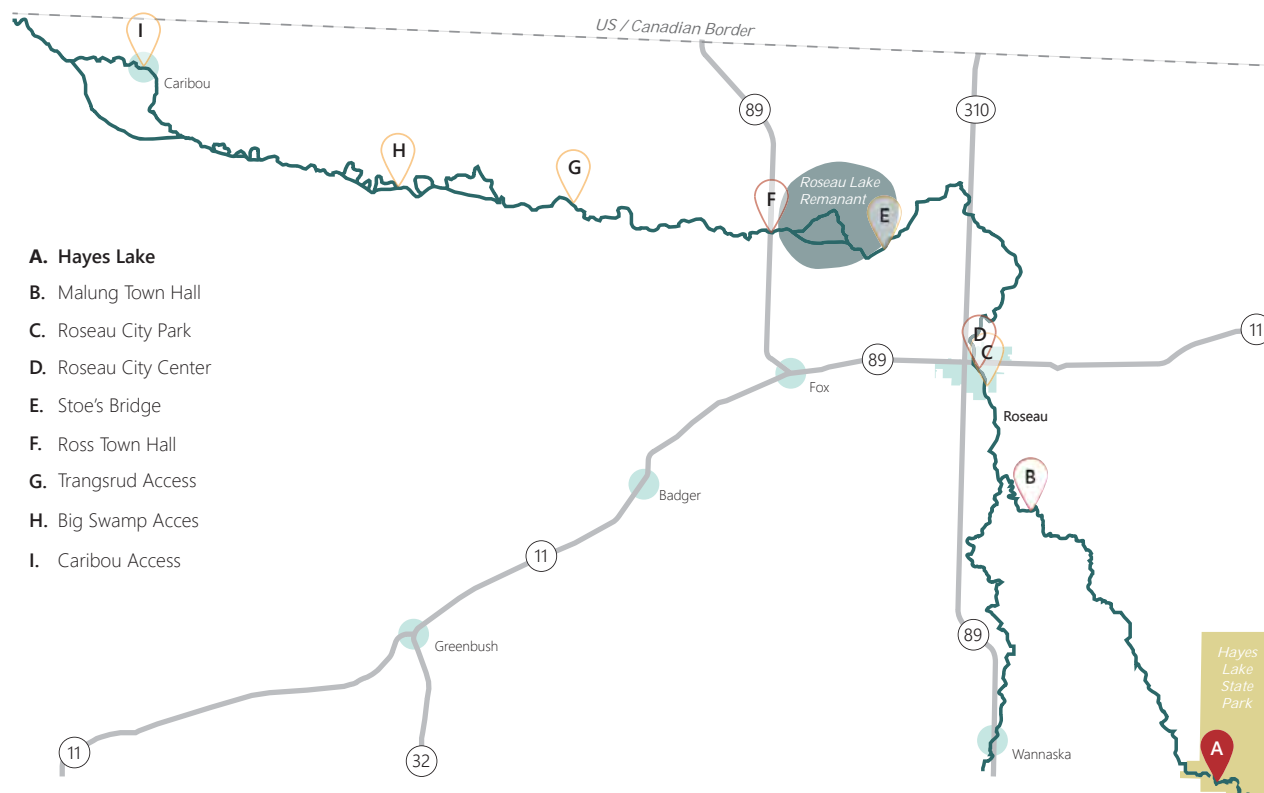


HAYES LAKE STATE PARK

SITE INFORMATION

LOCATION

Entrance to Hayes Lake State Park is 15 miles south of the town of Roseau on State Highway 89, then 9 miles east on Roseau County Road 4.



ABOUT

The landscape surrounding the park makes an abrupt transition from farmland to wilderness. The central foci of the park are the lake and the north fork of the Roseau River. This somewhat remote park gives visitors a chance to see a variety of Minnesota wildlife. Loons, moose, and beaver can often be seen; fishers, otters, lynx, black bear, and wolves also live in the area. There is an existing motorized boat access and fishing pier on the lake. Thirteen miles of hiking trails, and six miles of snowmobile trails are also available.

The MN DNR lists the following features at Hayes Lake Park:

- Scenic Views: Grefthen Bay Overlook
- Hayes Dam Area
- New Bog Boardwalk
- History Trail
- Great Wildlife Observation
- Timberwolves



HAYES LAKE STATE PARK

DESIGN



..... proposed pathways



perspective



1 canoe/kayak launch



2 wayfinding sign



3 canoe/kayak rack



4 map sign



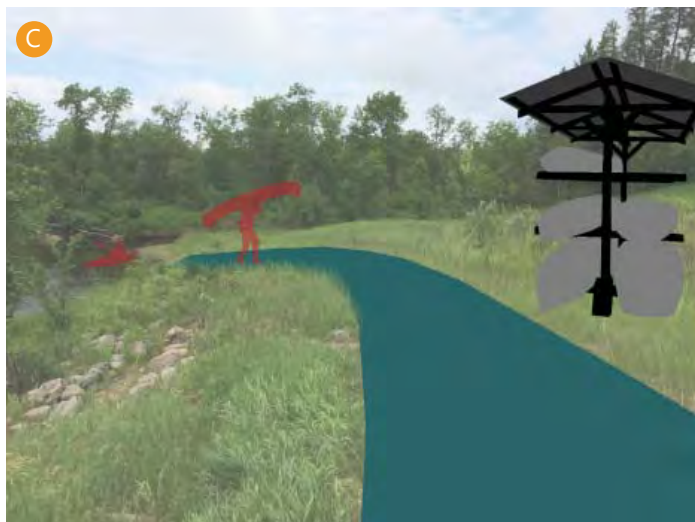
The kayak/canoe launch proposed at this site would be located on the river downstream from the dam.

The map sign and wayfinding sign are proposed to be located along existing footpath that runs across the top of the dam.



A staircase down to the river access could be built along the wall of the dam.

A separate ADA accessible switchback path could be built down to the river access.



A storage rack could be located near the river access point for ease of use.





MALUNG TOWN HALL

SITE INFORMATION

LOCATION

The Malung Town Hall is 5 miles south of the town of Roseau on State Highway 89, then 2.5 miles east on Roseau County Road 2.



ABOUT

The Roseau River is accessible near the Malung Community Center (MCC), a community hub. MCC is a non-profit organization with a mission to enhance the interaction and cultural awareness of residents and surrounding areas through scheduled activities and events, and provide a place for kids to play, neighbors to visit, and families to meet.

B MALUNG TOWN HALL

DESIGN



..... proposed pathways

↗ ↘ perspective



1 canoe/kayak rack



2 map sign



3 wayfinding sign



4 canoe/kayak launch



5 amenity sign



A map sign and amenity sign have been located near the beginning of the self-binding aggregate footpath that runs down to the river access point.

A storage rack has also been located in the space adjacent to path and parking area for ease of use.



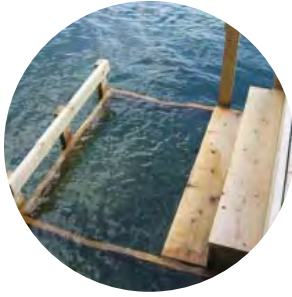
A wayfinding sign has been located near the river access, one foot above normal high water line, in a place that is clearly visible for people on the river.



amenity signs are located where it is necessary to indicate a specific amenity. The one shown here is located on south bank of the river northeast of the Malung Community Center and indicates to people using the existing foot trail that there is an available restroom.

B MALUNG TOWN HALL

DESIGN DETAILS



Kayak/canoe
cradle for easy
entrance and exit of
watercraft.

Kayak/canoe slide
with steps for easy
put in.

Platform with timber
decking allowing
for fluctuation of
water level and plant
growth below.





Self-binding
aggregate footpath

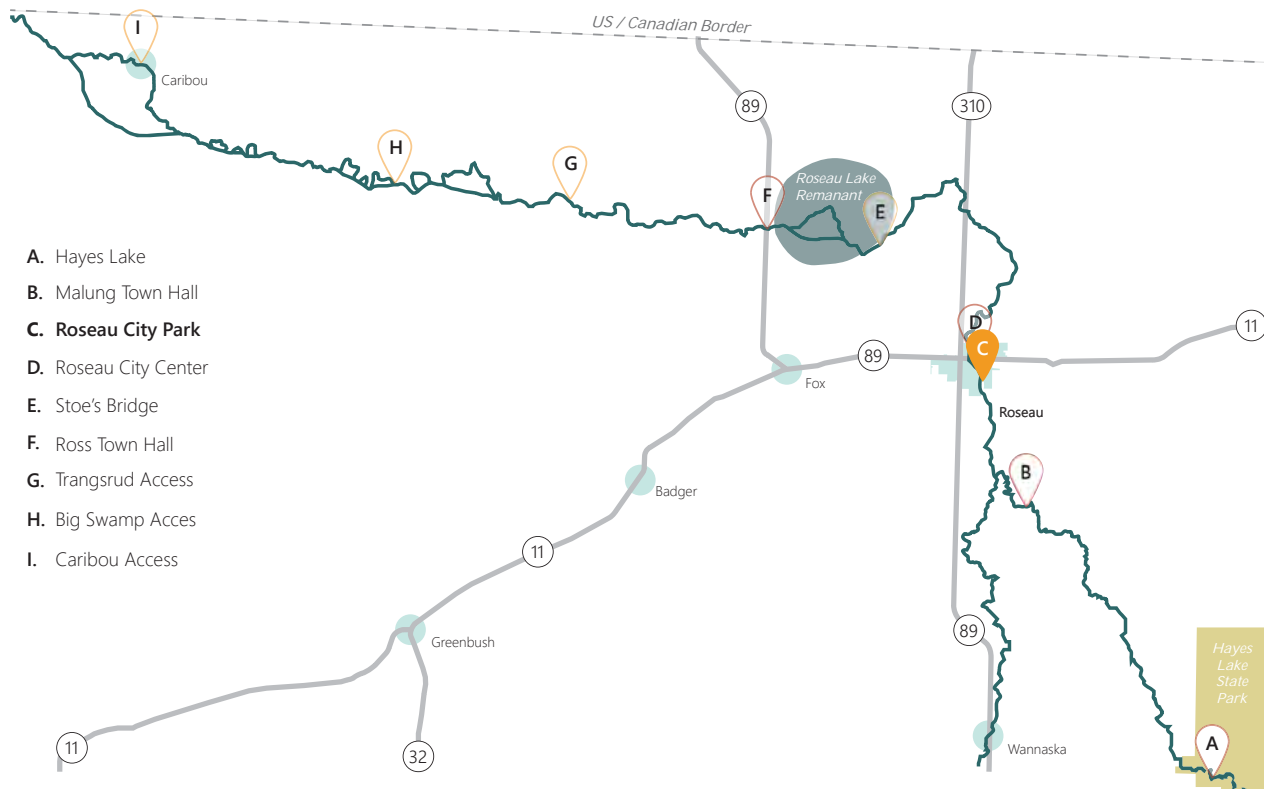


ROSEAU CITY PARK

SITE INFORMATION

LOCATION

Roseau City Park is a 40+ acre wooded park located in southeast Roseau on 11th Avenue SE along the Roseau River.



ABOUT

City Park is the largest of Roseau's parks, encompassing over 40 acres of recreational lands on the southeast side of Roseau along the Roseau River. City Park is located on 11th Avenue SE. The following features are available at City Park:

- Playgrounds
- RV camping sites
- Primitive camp sites
- Indoor shelter with bathrooms and showers
- Covered picnic shelters
- Paver patio with cooking grill and fire ring
- BBQ pits and fire rings
- Sand volleyball courts
- Shuffleboard court
- Horseshoe pits
- Disc golf course
- Fishing pier
- Boat launch to Roseau River
- Multipurpose trails (paved and unpaved)
- Dump station



ROSEAU CITY PARK

DESIGN



..... proposed pathways

↗ ↘ perspective



1 bench



2 wayfinding sign



3 map sign



4 canoe/kayak rack



5 amenity sign



A poured concrete path coming off of the existing stone steps is proposed to connect the kayak/canoe launch and fishing pier.

A wayfinding sign placed among existing crushed granite mulch one foot above the normal high water line and easily visible from the river is recommended.



A wooden bench could be located along the poured concrete path for viewing of the river.



A map sign is proposed to be located along the boat trailer loop where it would be between the launch area and the rest of the park amenities.



ROSEAU CITY PARK

DESIGN DETAILS



Poured concrete path along river edge connecting boat launch to the fishing pier.

In order to create space for path, cutting into the small hill adjacent to the path is required. A short stone retaining wall can then be constructed to hold back remaining earth. Editing of trees on hill and along path is also recommended.



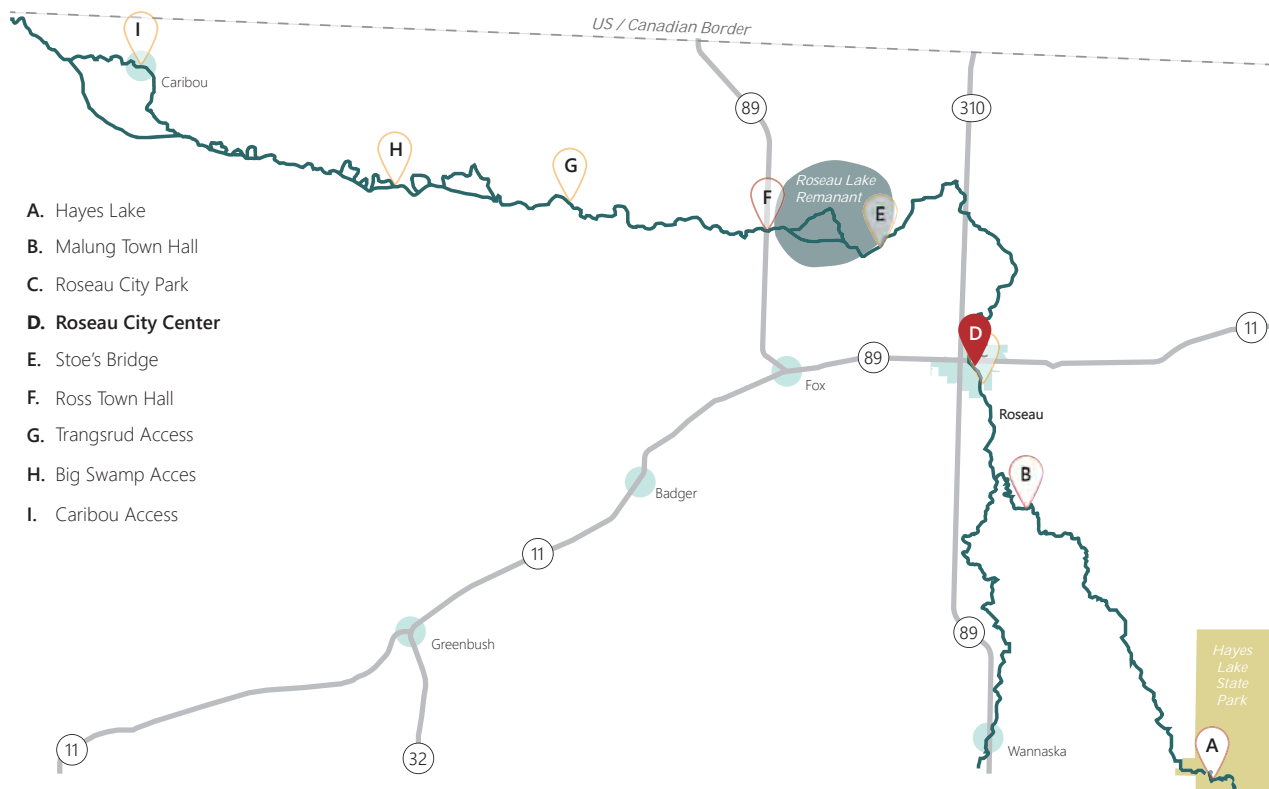


ROSEAU CITY CENTER

SITE INFORMATION

LOCATION

The Roseau City Center is located in northeast Roseau on Center Street East along the Roseau River.

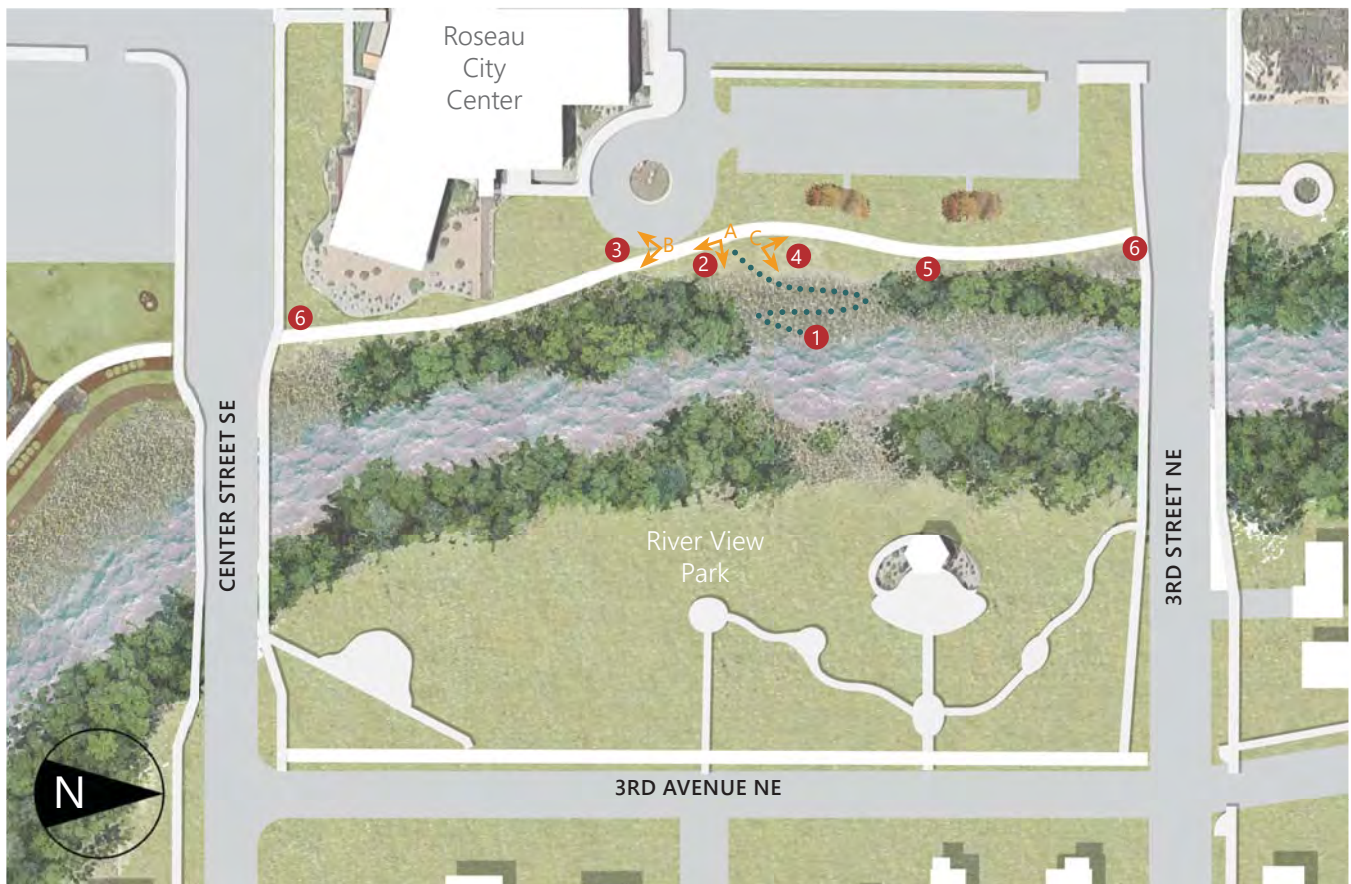


ABOUT

The new City Center includes the police department, library, historical museum, community center, city hall, and a satellite instructional area for Northland Community College. It replaced civic facilities destroyed by the 2002 flood of the Roseau River.

D ROSEAU CITY CENTER

DESIGN



..... proposed pathways

↗ ↘ perspective



1 canoe/kayak launch



2 map sign



3 wayfinding sign



4 bench



5 canoe/kayak rack



6 amenity sign



A poured concrete path coming off the existing asphalt path that would lead down to the river access is proposed. A bench could be located adjacent to path for viewing of the river. An amenity sign indicating that there is a kayak/canoe launch is visible for people moving along the existing path. A storage rack could also be located at the top of the bank adjacent to parking lot for ease of use.



A map sign located next to existing path and at beginning of river access path is recommended.



A wayfinding sign located next to existing path could indicate to people on the path or coming off the water trail the direction of amenities available to them in the greater area.

DESIGN DETAILS



A variety of rain garden plant material can be used here with crushed gravel aggregate as a mulch that will tie in with the aggregate used at the City Park launch

Wooden bench for viewing of river.

Wooden bench for viewing of river.



The City Center parking lot has two concrete cut outs for water drainage that flow directly towards the river and are causing areas of erosion. Constructing a rain garden to intercept the flow of that water and allow it to more slowly infiltrate into the ground will reduce this issue. This will also reduce the amount of pollutants entering the Roseau River.



Platform with timber decking allowing for fluctuation of water level and plant growth below

kayak/canoe launch similar to one at Roseau City Park



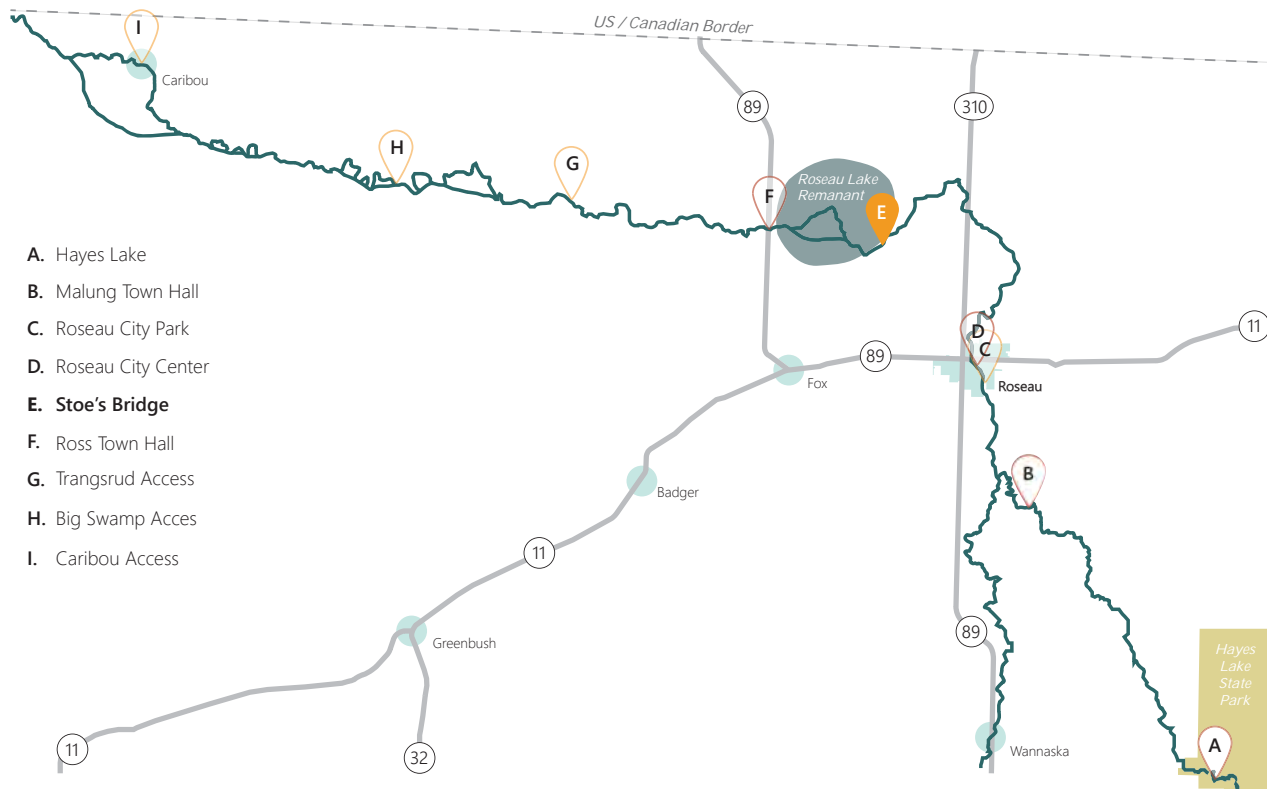


STOE'S BRIDGE

SITE INFORMATION

LOCATION

Stoe's Bridge is located 3.5 miles west of the city of Roseau on State Highway 89, and 4 miles to the north on County Road 123.



ABOUT

Stoe's Bridge is a popular fishing destination for people in the area and has an existing boat launch, restroom, and mown lawn for people to use. Primitive campfire rings can sometimes be found here.

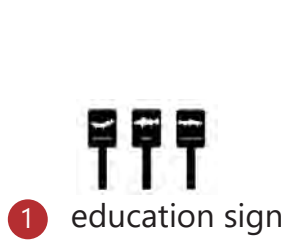
E STOE'S BRIDGE

DESIGN



..... proposed pathways

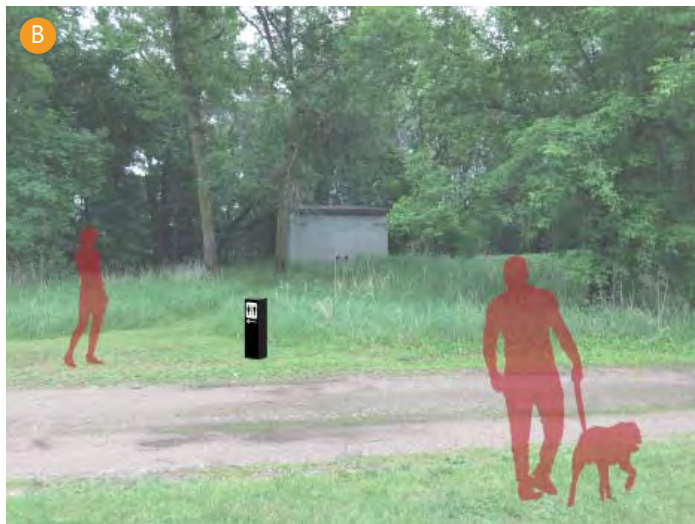
↗ ↘ perspective





The educational sign shown here could display information about types of fish commonly found in the Roseau River.

Educational signs can also be located anywhere at other access sites. Further discussion and decisionmaking is required as to the content and location of this kind of sign. Chosen information can be displayed both physically or with a digital link such as a QR code.



This amenity sign located off boat trailer loop indicates the location of a restroom.



A wayfinding sign is proposed to be located adjacent to the existing boat ramp in easy viewing range of people on the river.

Bench(es) have also been placed along edge of river for viewing or bank fishing.



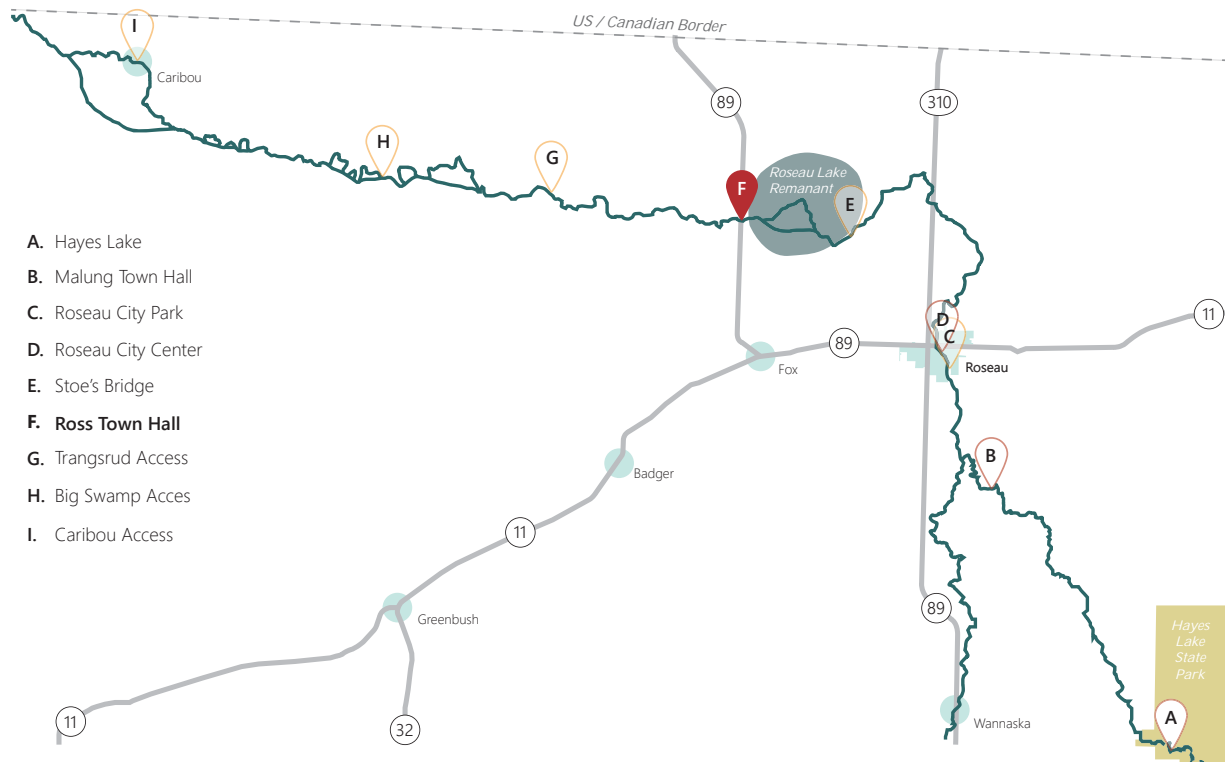


ROSS TOWN HALL

SITE INFORMATION

LOCATION

Ross Town Hall is located 6.5 miles west of the city of Roseau on State Highway 89, then 5.3 miles north on Highway 89 where it crosses the Roseau River.



ABOUT

Dieter Township is located in Roseau County and contains the unincorporated communities of Pinecreek and Ross. The Roseau River flows through the community.

F ROSS TOWN HALL

DESIGN



..... proposed pathways



perspective



1 canoe/kayak launch



2 wayfinding sign



3 map sign



4 restroom



A path down to the river is show here. However, there has been discussion of a boat ramp for this location. Further research and discussion would be required if that option is to be pursued in the future.

A wayfinding sign is proposed to be located near the path, one foot above the normal high water line, and in easy viewing distance of the people on the river.



A map sign is proposed to be located at the top of path the path.

DESIGN RECOMMENDATIONS

PROMOTE RECREATION AND DEVELOP ACTIVE LIVES

The Roseau River Water Trail design aims to provide areas for people to actively engage with the Roseau River as well as build on existing outdoor recreation opportunities in the surrounding area in order to promote an active lifestyle through recreation.



1. Encourage connections to the Roseau River, the RRWT, and other recreational opportunities using design in an integrated way.

Intentional design in the elements, signage, and events will play a significant role in building a recognizable identity for the RRWT with features that are consistent across different sites and therefore create a sense of the whole trail.

A virtual presence such as a website will also strengthen the design and brand identity of the RRWT online for visitors and local residents. This will be described more in a later recommendation

2. Address safety concerns through design.

Use designed signage to indicate any safety concerns. The 2015 Public Water Access and Water Trail Signing Guidance from the DNR Division of Parks and Trails offers some guidance on consistent signage including for special points such as rapids, portage, dams and other sites as well as hazard and danger call outs.

3. Address cross-sector land ownership concerns through design.

Landownership varies from public to private in areas of the RRWT, and it is not obvious to the average visitor whether the land is public or private. Careful consideration of this issue should be made by the stakeholder group to plan a designed option that would provide signs that private land owners could use to indicate access limits. This could also be reinforced through educational activities that make trail users aware of the varied landownership.

RESPECT WILDLIFE AND NURTURE HABITAT

The Roseau River Water Trail hopes to inspire those who engage with the Roseau River to be stewards of their environment and to respect the wildlife around them and nurture its habitat.



1. Teach about the diverse wildlife of the area through design.

Use design on the RRWT to create signage and on the website to indicate the numerous varieties of flora and fauna that are present all along the trail. There are many resources about the specific species in the northwest region developed by agencies such as the DNR that could be used to teach visitors both in programmed events as well as on the website. In addition, there could be collaborations between partners and stakeholders to identify specific species locally along sections the RRWT and use that material to teach visitors and to integrate in the signage.

2. Used design to educate about interacting with and nurturing wildlife and habitat.

The RRWT offers an opportunity to teach about human-wildlife interactions and the impacts of human activity on wildlife and habitat. For example, the water's edge along the RRWT offers the opportunity to teach about shoreline habitat, riverside lawn and landscaping that may be unfriendly to fish and wildlife, use of native grasses and wildflowers and natural buffer strips between the waters edge and the lawn on the property. How to handle woody debris and aquatic vegetation on the shore can also be taught through programming, brochures and the website.

DESIGN RECOMMENDATIONS

UNDERSTAND THE PAST AND LEARN FOR THE FUTURE

The Roseau River Water Trail design aims to tell the historical and cultural story of the Roseau River and the surrounding area through time, for people to understand how the past has shaped the present and learn from it for the future.



1. Use design to teach about the rich and complex history of the region.

The Roseau River and the region have been the site of many historic geological and social events. The geological created the Roseau River and the permanently shaped the landscape around it. The area's social history left its mark on the region and some of the Roseau River Trail sites: the presence of the Dakota tribes, the arrival of the Ojibwe from the northeast, the conflicts between the Dakota and the Ojibwe, the arrival of fur traders and settlers, and the interactions between the different groups.

There area has also seen a long history, since the 1800s, of altering the hydrology and creating ditches and diversions, and creating infrastructure to manage the river. More recently the flooding in Roseau, a source of painful memories for many local residents occurred by some RRWT sites. Highlights of this history could be integrated into the programming, signage, and website.

2. Use design to educate about contemporary institutions, amenities, and networks.

Some sites along the RRWT are near significant existing sites: Roseau downtown areas, institutions such as the Roseau County Library and the Roseau County Historical Society, local businesses such as a store selling outdoor equipment, amenities such as the Splash Pad, and emerging recreational networks. Consider offering classes connected with recreation, wildlife, art, and entrepreneurship that would connect with the RRWT.

INTEGRATE ART AND FOSTER CREATIVITY

The Roseau River Water Trail aims to integrate art, foster creativity, and support local artists through the development and use of art wherever appropriate



1. Use design to connect to the specific work of many artists in the region.

Roseau and its surrounding northwestern region boasts a thriving local arts scene that includes many art forms. Consider creating design elements that are common across the six sites on the RRWT with each site showcasing the work of a particular artist, integrated with the design element and medium. In this way the more generic design elements can be made particular to each site through the expression of artists from the region. The selection of the artists can itself be a public event where artists are selected from those who apply and a public exhibition of all entries is offered.

2. Integrate the arts in many of the events and activities related to the Roseau River and Roseau River Water Trail.

There are likely to be many opportunities to integrate art into other events and activities. For example, there is a developing plan to create a family activity around a “duck race,” where individuals float toy ducks down the river. This event offers an opportunity to integrate art and artists in the planning and production of the ducks, keeping in mind the RRWT branding and expressions of local/regional art. Many of these activities could have an ongoing and permanent presence on the RRWT website.

3. Use a simple, modern character for the design elements across the RRWT to allow for the integration of regional, individual art at specific sites

Special attention is recommended to establish visually clean and simple design elements that become the backdrop for the rich, contextual, artistic expression of regional artists and art forms. The simple, familiar designs across the six sites will lead to commonality and recognition, and particular artistic expression can be achieved through use of color and varied mediums.

DESIGN RECOMMENDATIONS

SUPPORT LOCAL BUSINESS AND BUILD THE LOCAL ECONOMY

The Roseau River Water Trail aims to support the local economy and partner with local business when appropriate.



1. Connect sites with signs to local businesses wherever appropriate.

Making the connection between the RRWT and local economic ventures both private and non-profit, is likely to be mutually beneficial. On sites that are close to the city such as the City Center or the City Park there are opportunities for signage that can direct visitors to local businesses or the local golf course. On a site like Malung Town Hall signs could point to the Malung Community School which offers arts classes and other activities.

2. Partner with local businesses to design of events related to the Roseau River and Roseau River Water Trail.

Each event related to the RRWT offers an opportunity to partner across sectors including with local businesses and thus increase visibility of the project and participation by local residents and visitors. The Boat Launch Party which was held in June 2018 and cosponsored by a foundation, a local governmental agency, and local businesses, was a good example of such a partnership.

CREATE A CONNECTED, VIRTUAL PRESENCE

The Roseau River Water Trail aims to create a virtual location in parallel to its physical presence on the Roseau River landscape and invite local resident and visitors to visit online.



1. Create a virtual location where information about the Roseau River and the Roseau River Water Trail resides online and is kept current.

With increased use of the internet and social media, a parallel online presence for the RRWT is almost essential. The Roseau River Watershed District has been developing its presence on Facebook, and the development of the RRWT website would further make progress in this direction. While the proposed design elements and the content on physical displays will be important to the implementation of this masterplan, the online presence opens other possibilities. In particular it is possible to evolve the online content much more rapidly and responsively than that of a physical display.

2. Connect physical sites to the virtual location using technology such as quick response (QR) codes.

Quick response codes allow for people to use phones to directly connect to a specific location online and access more detail information. They can be used in a number of ways, such as providing additional information to supplement what is shared about a particular site or topic related to the site. They can also be added to print advertising, flyers, posters, invitations, and TV ads, and linked to social media platforms such as Facebook, Twitter, and YouTube.

BUILD PARTNERSHIPS FOR THE LONG-TERM WITH A FOCUS ON PUBLIC ENGAGEMENT AND PARTICIPATION.

The Roseau River Water Trail aims to work in partnership across sectors, engaging the local community members and different entities in the development of the RRWT.



1. Create inclusive, cross-sector collaborative partnerships that foster collaboration and innovation.

The design principles and recommended above can be best implemented with the engaged, enthusiastic participation of the community and authentic collaboration from the various partners. It is suggested that community members interested in implementing the design be invited to participate in the process of implementing various different aspects of the master plan.

2. Focus on public participation and feedback as a strategy for continuous development of the RRWT.

Encouraging public participation and feedback is an ongoing process and could continue to evolve over time in the context of the RRWT. The previous work done in terms of community input, including the recent survey conducted as part of this project, can be developed further into an ongoing strategy for feedback that includes use of social media. This will help in developing the RRWT in ways more aligned with public's needs while also informing the public about RRWT's development.



The background of the page is a photograph of a natural landscape. It shows a river or stream on the left side, with brownish water. The right side of the image is dominated by a dense patch of tall, green grass. In the upper right corner, there are some green leafy plants and thin, bare branches. The overall lighting is soft, suggesting an overcast day or a shaded area.

SECTION 5

REFERENCES

REFERENCES

SECTION 1: PROJECT INTRODUCTION

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