

APPENDIX A

Survey Use Estimates, Confidence Limits, Trail Descriptions and Maps

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Douglas Trail, Summer Season 1997*

	Total Seasonal User Hours	Percent of Total Hours	95% Confidence Interval of Total Hours (± percent)	Miles of Trail
Total Use Hours	42,910	100.0	23.3	12.5 (total miles)
By Day of Week				
Weekend/Holidays	19,684	45.9	33.6	
Weekdays	23,226	54.1	32.1	
By Trail Type**				
Paved Trail	41,064	95.7	24.0	
Unpaved Trail	1,845	4.3	86.1	
By Trail Segment				
Rochester to Douglas	21,465	50.0	28.9	5.0
Douglas to Pine Island	21,445	50.0	23.9	7.5
By Trail Activity				
Biking	25,922	60.4	26.0	
Skating	2,559	6.0	42.5	
Walking	10,978	25.6	35.4	
Running	2,533	5.9	39.3	
Horseback Riding	832	1.9	88.6	
Other	87	0.2	162.9	

* Summer extends from the Saturday of Memorial Day weekend to Labor Day.

** The paved and unpaved treadways extend over the entire trail.

Description

The Douglas State Trail is a 12.5 mile, multiple use state trail developed on an abandoned railroad grade. This trail crosses outstanding rural scenery, traversing some of the richest agricultural land in Minnesota. One treadway is paved for bicyclists, hikers, in-line skaters and skiers; the other is a natural surface for horseback riders and snowmobilers. The trail begins in northwestern Rochester, travels through the small town of Douglas (for which the trail is named) and terminates in Pine Island. Present trail access includes three parking lots with rest facilities.

Douglas State Trail

Goodhue & Olmsted Counties

MAP

Trail

- Paved (Asphalt)
- - - - - Natural surface

Facilities

- Parking
- Picnic/Rest Area
- Campground

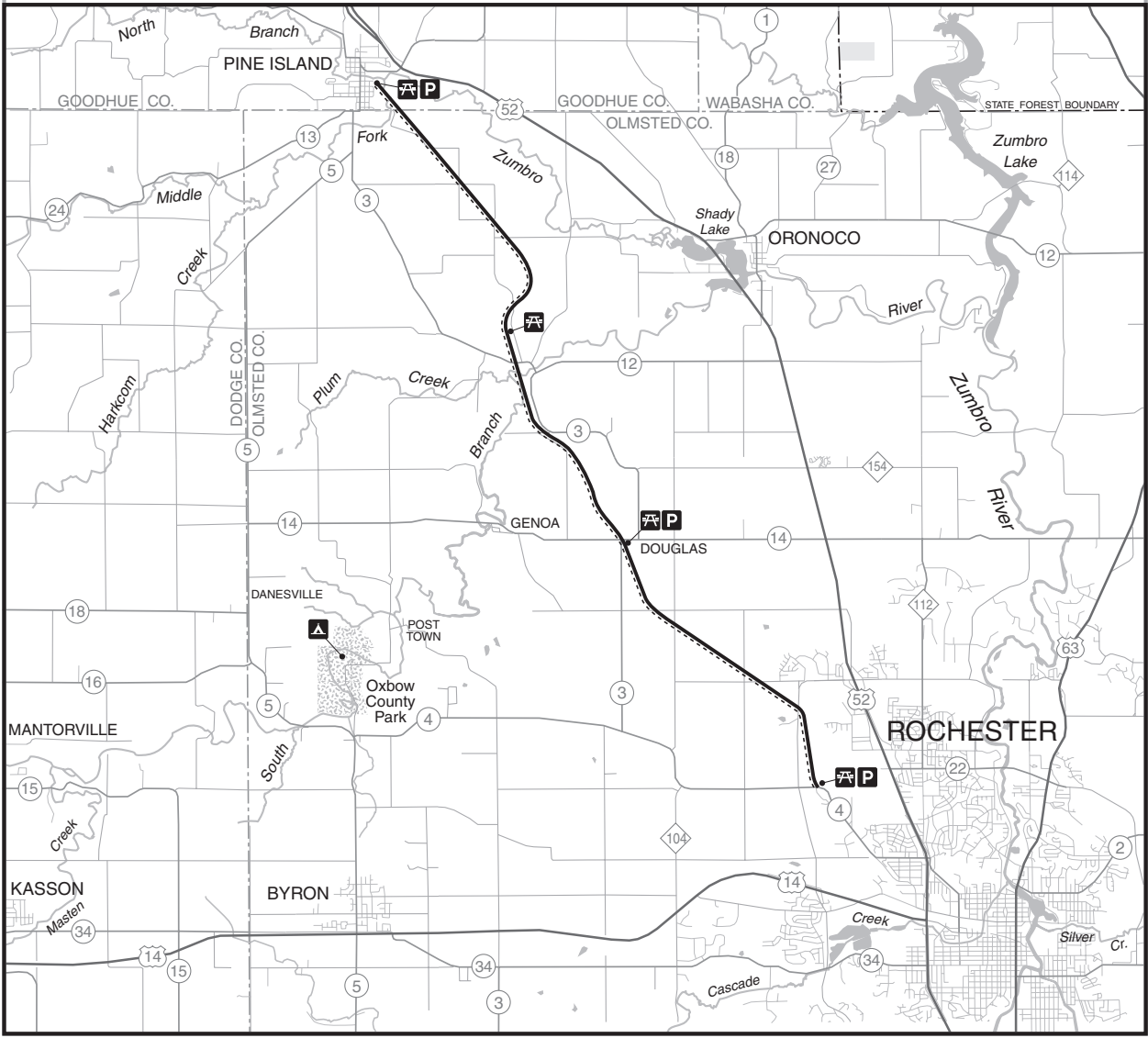
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Scale in Miles



Trail Distances in Miles

	4.5	8	12.5
Rochester		3	7.5
Douglas			5
County Highway 3			
Pine Island			

NORTH



Gateway Trail, Summer Season 1997*

	Total Seasonal User Hours	Percent of Total Hours	95% Confidence Interval of Total Hours (± percent)	Miles of Trail
Total Use Hours	181,952	100.0	14.7	18.5 (total miles)
By Day of Week				
Weekends/Holidays	81,426	44.8	17.2	
Weekdays	100,525	55.2	22.8	
By Trail Segment & Type				
Cayuga Street to I-694	88,937	48.9	15.3	8.8
I-694 to Pine Point Park** - total	93,015	51.1	24.8	9.7
I-694 to Pine Point Park - paved	89,595	49.2	25.1	
I-694 to Pine Point Park - unpaved	3,420	1.9	29.2	
By Trail Activity				
Biking	107,198	58.9	13.8	
Skating	34,571	19.0	36.0	
Walking	29,406	16.2	23.7	
Running	7,307	4.0	19.3	
Horseback Riding	1,869	1.0	35.0	
Other	1,601	0.9	94.7	

* Summer extends from the Saturday of Memorial Day weekend to Labor Day.

** The paved and unpaved treadways extend over this entire trail segment.

Description

The Gateway State Trail is an 18.5 mile long, multiple use trail starting in St. Paul. This paved trail cuts through a cross-section of urban areas, parks, lakes, wetlands and fields in Ramsey and Washington Counties. Many trail users are surprised to find these rural landscapes so close to the metro area, while others appreciate the access it provides to downtown St. Paul and the State Capitol complex. Located on a former Soo Line Railway grade, the trail is very level and is wheelchair accessible. It provides access to other trail opportunities in Phalen-Keller Regional Park, connections to Stillwater and other destinations in Washington County. For 9.7 miles of the Gateway, between I-694 and the eastern end at Pine Point Park, the paved trail adjoins a separate, unpaved trail for horseback riding or carriage driving. These 9.7 miles are groomed for cross country skiing in the winter on the paved trail. Motorized vehicles are not permitted anywhere on the trail.

Gateway State Trail

MAP EXPLANATION

Trail

- Paved (Asphalt)
- Horse Trail (Gravel)
- Other Trails (Asphalt)

Facilities

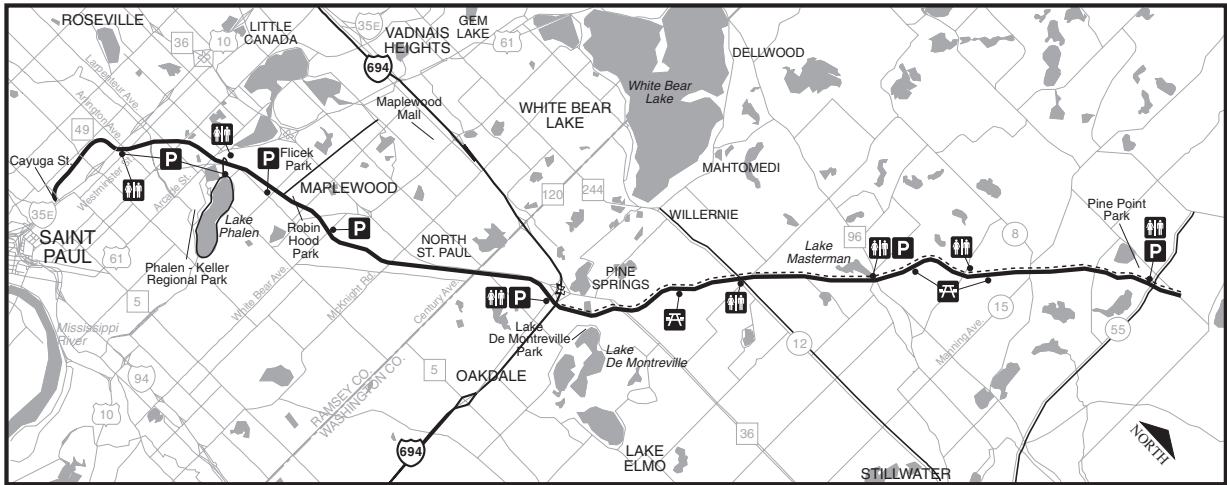
- Parking
- Picnic/Rest Area
- Toilet

0 2 4
Scale in Miles

Ramsey & Washington Counties



Cayuga St. (not in matrix)	0.4	1.6	3.5	4.6	5.7	7.2	8.3	10.1	12.4	14.0	15.1	16.9	
Arlington Ave	1.0	1.2	3.1	4.2	5.3	6.8	7.9	9.7	12.0	13.6	14.7	16.5	
Wheelock Pkwy bridge	0.2	2.1	3.2	4.3	5.8	6.9	8.7	11.0	12.6	13.7	15.5		
Arcade Ave (Hwy 61)	1.9	3.0	4.1	5.6	6.7	8.5	10.8	12.4	13.5	15.3			
Phalen Park (Keller Cr)	1.1	2.2	3.7	4.8	6.6	8.9	10.5	11.6	13.4				
White Bear Ave bridge	1.1	2.6	3.7	5.5	7.8	9.4	10.5	12.3					
White Bear Ave (Hwy 120)	1.5	2.6	4.4	6.7	8.3	9.4	11.2						
McKnight Rd bridge	1.1	2.9	5.2	6.8	7.9	9.7							
Century Ave (Hwy 120)	1.8	4.1	5.7	6.8	8.6								
I - 694 underpass		2.3	3.9	5.0	6.8								
Hwy 36 tunnel			1.6	2.7	4.5								
County Rd 12						1.1	2.9						
Hwy 96								1.1	2.9				
Lansing Ave (Co Rd 8)										1.1	2.9		
Manning Ave (Co 15)												1.8	
Pine Point Pk (Co 55)													1.8



Glacial Lakes State Trail, 1998 Summer Season*

	Total Seasonal User Hours	Percent of Total Hours	95% Confidence Interval of Total Hours (+/- percent)	Miles of Trail
Total Use Hours	33,858	100.0	15.0	18.0 (total miles)
By Day of Week				
Weekend/Holidays	14,795	43.7	20.3	
Weekdays	19,063	56.3	21.4	
By Trail Type**				
Paved Trail	33,765	99.7	15.1	
Unpaved Trail	94	0.3	200.0	
By Trail Segment				
Willmar to Spicer	12,251	36.2	24.8	6.5
Spicer to New London	18,576	54.9	16.9	5.5
New London to Hawick	3,032	9.0	84.6	6.0
By Trail Activity				
Biking	20,713	61.2	19.8	
Skating	5,217	15.4	30.9	
Walking	5,691	16.8	26.1	
Running	1,646	4.9	51.0	
Horseback Riding	423	1.3	86.7	
Other	169	0.5	175.3	

* Summer extends from the Saturday of Memorial Day weekend to Labor Day.

** The paved and unpaved treadways extend the full length of the trail.

Description

The Glacial Lakes State Trail is located on a former Burlington Northern Railroad grade, and is generally level and wheelchair accessible. The trail is paved with asphalt for 12 miles between Willmar and New London. This segment has a parallel grass treadway for horseback riding. From New London to Hawick is a 6 mile long trail surfaced with crushed granite for hiking, biking, and horseback riding. The remaining 22 miles, between Hawick and just past Richmond, is undeveloped and has the original railroad stones as a surface. Some railroad bridges have been removed.

Glacial Lakes State Trail

Kandiyohi & Stearns Counties

MAP

Trail

- Paved (Asphalt)
- - - - Horse trail
- Unpaved
- - - - Future Trail
- Other Trails

Facilities

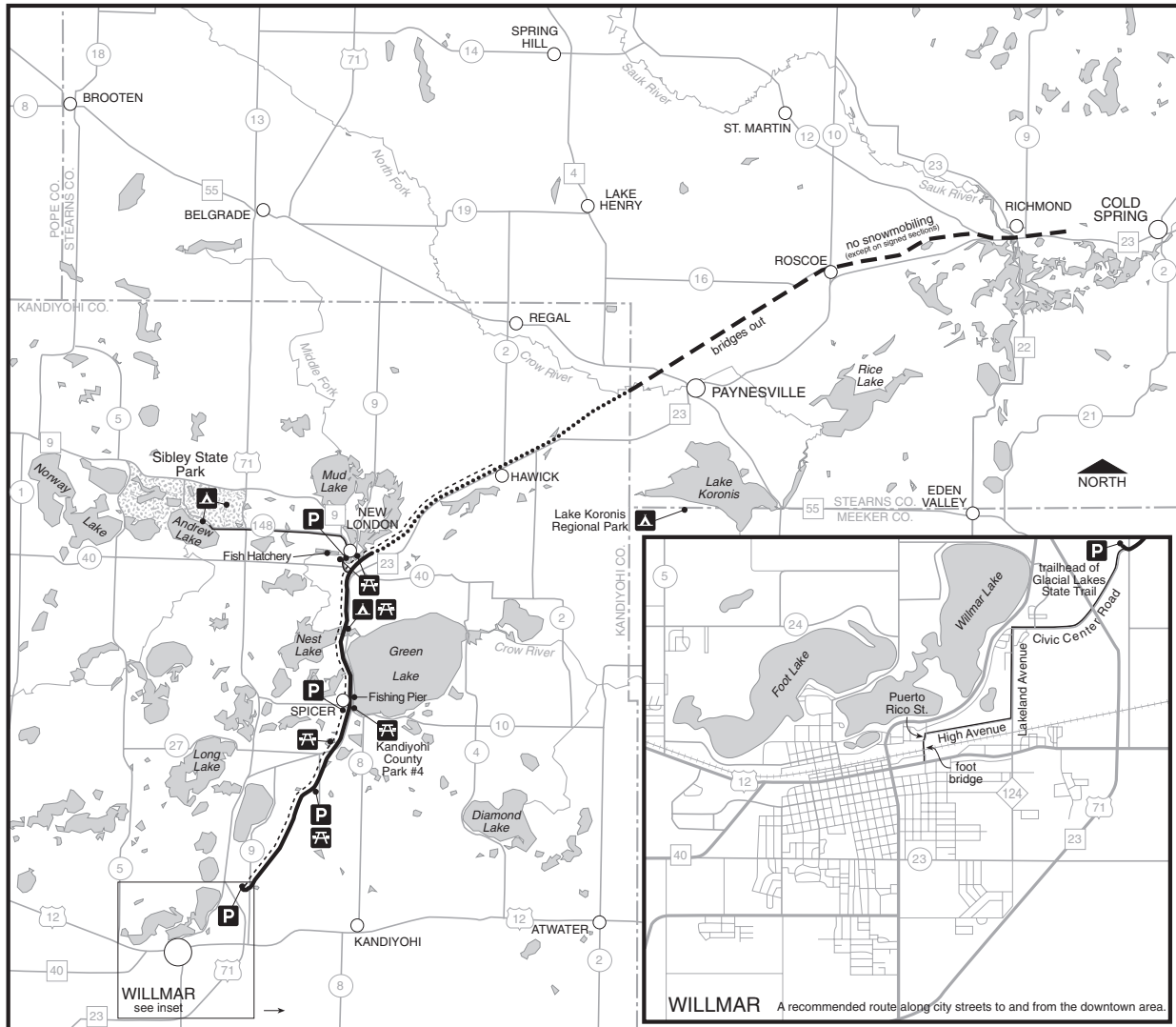
- P** Parking
- PA** Picnic/Rest Area
- A** Campground

0 3 6
Scale in Miles



Willmar	6.5	12	18	16	22.5	36
Spicer	5.5	11.5	9.5	16	30.5	
New London	6	4	10.5	24		
Hawick		10	4.5	18		
Sibley State Park			14.5	28		
Paynesville				13.5		
Richmond						

Trail Distances in Miles



Heartland State Trail, 1998 Summer Season*

	Total Seasonal User Hours	Percent of Total Hours	95% Confidence Interval of Total Hours (+/- percent)	Miles of Trail
Total Use Hours	125,381	100.0	18.3	27.0 (total miles)
By Day of Week				
Weekend/Holidays	60,821	48.5	23.0	
Weekdays	64,560	51.5	28.2	
By Trail Type**				
Paved Trail	125,228	99.9	18.3	
Unpaved Trail	153	0.1	120.6	
By Trail Segment				
Park Rapids to Nevis	59,284	47.3	28.2	11.0
Nevis to Akeley	26,192	20.9	34.0	6.0
Akeley to Walker	39,905	31.8	32.7	10.0
By Trail Activity				
Biking	98,420	78.5	19.9	
Skating	7,340	5.9	26.7	
Walking	18,173	14.5	21.2	
Running	1,112	0.9	77.9	
Horseback Riding	39	0.0	200.0	
Other	297	0.2	132.8	

* Summer extends from the Saturday of Memorial Day weekend to Labor Day.

** The paved and unpaved treadways extend the full length of the trail.

Description

The Heartland State Trail was one of the first rail-to-trail projects in the country. It is a 49 mile, multiple use trail between Park Rapids and Cass Lake. The trail is located entirely on a level abandoned railroad grade except for a four mile segment north of Walker, which is on sharply rolling terrain. The 27 mile segment between Park Rapids and Walker has a paved surface. This segment also has a second grassy treadway for horseback riding and mountain biking. The remaining 22 mile segment to Cass Lake is primarily compacted gravel and railroad ballast with occasional sandy areas and can be used for hiking, horseback riding and mountain biking. The entire trail is groomed in the winter for snowmobiling, however studded tracks are prohibited on the pavement. The Heartland State Trail also provides connections to many miles of groomed snowmobile trails in the Hubbard county Grant-in-Aid trail system.

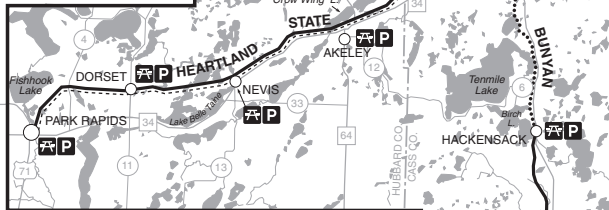
Paul Bunyan & Heartland State Trails

Beltrami, Cass, Hubbard & Crow Wing Counties

Heartland Trail Distances in Miles

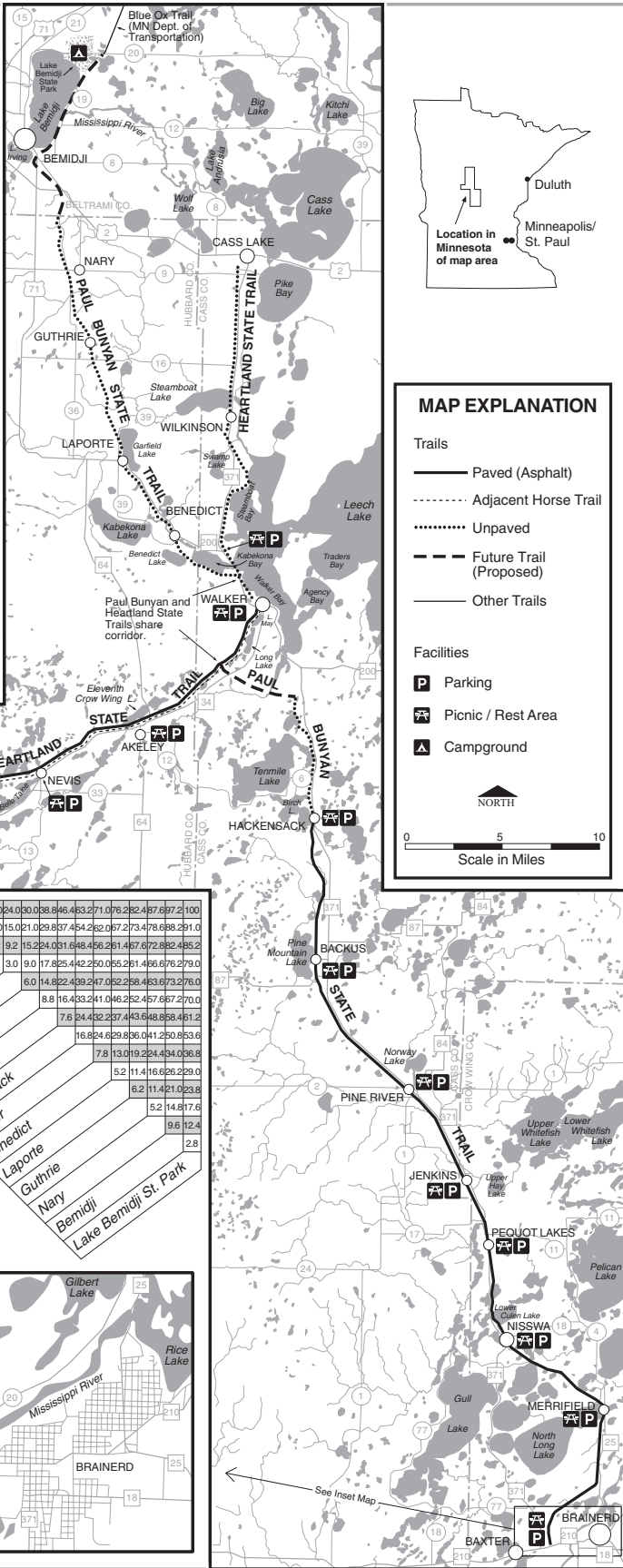
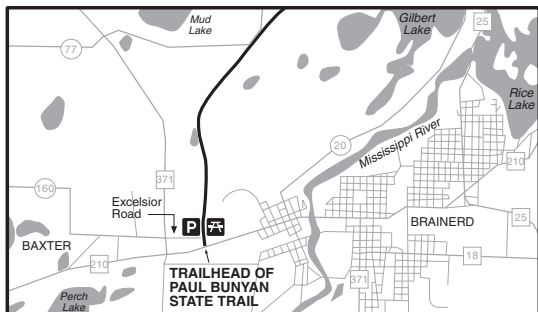
Park Rapids	6	11	17	27	39	48
Dorset	5	11	21	33	42	
Nevis	6	16	28	37		
Akeley	10	22	31			
Walker	12	21				
Wilkinson		9				
Cass Lake						

Cyclists can ride U. S. Highway 71 shoulder to Itasca State Park. It is approximately 20 miles from Park Rapids.



Paul Bunyan Trail Distances in Miles

Baxter	9.0	14.8	21.0	24.0	30.0	38.8	46.4	53.2	71.0	76.2	82.4	87.2	100.0
Morrifield	5.8	12.0	15.0	21.0	29.8	37.4	45.2	52.0	67.2	73.4	78.2	84.0	91.0
Nisswa	8.2	9.2	15.2	24.0	31.6	48.2	56.0	61.4	67.2	72.0	76.2	81.0	
Pequot Lakes	3.0	9.0	17.8	25.4	32.0	38.8	45.2	51.4	56.2	61.0	65.2	70.0	
Jenkins	6.0	14.8	22.4	29.2	37.0	44.8	52.4	59.8	66.2	72.0	77.2	82.0	
Pine River	8.8	16.4	23.2	31.0	38.8	46.4	54.0	61.6	68.2	74.0	79.2	84.0	
Backus	7.6	24.4	32.2	37.4	43.6	49.8	56.0	62.2	68.4	74.6	80.8	87.0	
Hackensack	16.8	24.8	32.8	38.0	44.2	50.4	56.6	62.8	69.0	75.2	81.4	87.6	
Walker	7.8	13.0	19.2	24.4	30.6	36.8	43.0	49.2	55.4	61.6	67.8	74.0	
Benedict	5.2	11.4	16.6	22.8	29.0	35.2	41.4	47.6	53.8	60.0	66.2	72.4	
Laporte	6.2	11.4	21.6	27.8	34.0	40.2	46.4	52.6	58.8	65.0	71.2	77.4	
Guthrie	5.2	14.8	17.6										
Nary	9.6	12.4											
Bemidji	2.8												
Lake Bemidji St. Park													



MAP EXPLANATION

Trails

- Paved (Asphalt)
- - - Adjacent Horse Trail
- Unpaved
- - - Future Trail (Proposed)
- Other Trails

Facilities

- P Parking
- PA Picnic / Rest Area
- A Campground

NORTH

0 5 10
Scale in Miles

Luce Line State Trail, 1998 Summer Season*

	Total Seasonal User Hours	Percent of Total Hours	95% Confidence Interval of Total Hours (+/- percent)	Miles of Trail
Total Use Hours	65,120	100.0	18.1	29.0 (total miles)
By Day of Week				
Weekend/Holidays	34,103	52.4	28.6	
Weekdays	31,017	47.6	21.4	
By Trail Type**				
Crushed-limestone Trail	63,706	97.8	18.1	
Unpaved Trail	1,414	2.2	65.0	
By Trail Segment				
Plymouth to Cty 92	51,637	79.3	22.1	13.0
Cty 92 to Winsted	13,484	20.7	22.3	16.0
By Trail Activity				
Biking	38,078	58.5	21.9	
Walking	18,524	28.4	19.3	
Running	5,758	8.8	26.9	
Horseback Riding	1,077	1.7	71.9	
Other	1,684	2.6	61.0	

* Summer extends from the Saturday of Memorial Day weekend to Labor Day.

** The crushed-limestone and unpaved treadways extend the full length of the trail.

Description

The Luce Line State Trail is a 63 mile long, former railroad grade which is developed for biking, hiking, horseback riding, mountain biking, snowmobiling, and skiing. The limestone-surfaced trail runs from Plymouth 29 miles west to Winsted, with a parallel treadway for horseback riding. From Winsted to Cosmos (34 miles) the trail has a natural surface with 3 missing bridges. Snowmobiles are allowed on the trail west of Stubbs Bay Road.

Luce Line State Trail

Hennepin, Carver, McLeod and Meeker Counties



Trail Distances in Miles

Vicksburg Lane Trailhead	6	7	19	29	37	44	63
Wakefield - Conry Rest Area	1	13	23	31	38	55	55
Stubb's Bay Road Trail Access	12	22	30	37	54		
Watertown	10	18	25	42			
Winsted	8	15	33				
Silver Lake	7	24					
Hutchinson			17				
Thompson Lake (near Cosmos)							

MAP

Trails

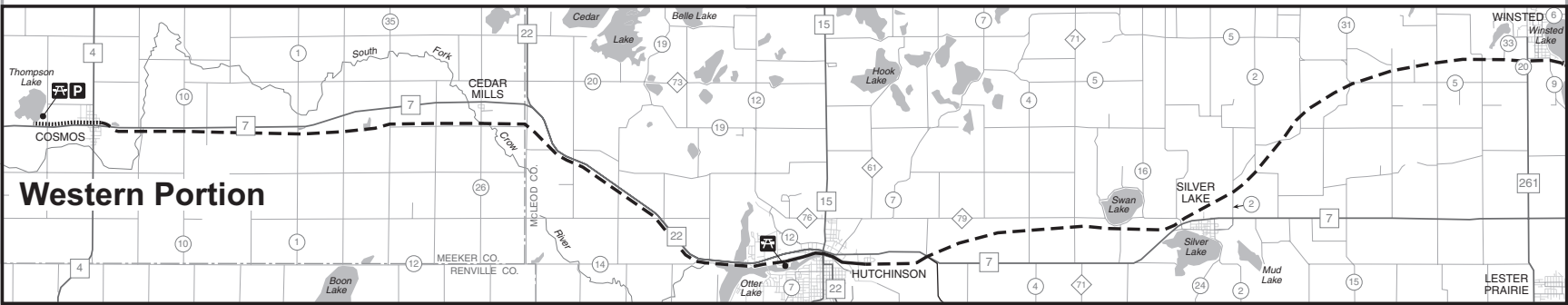
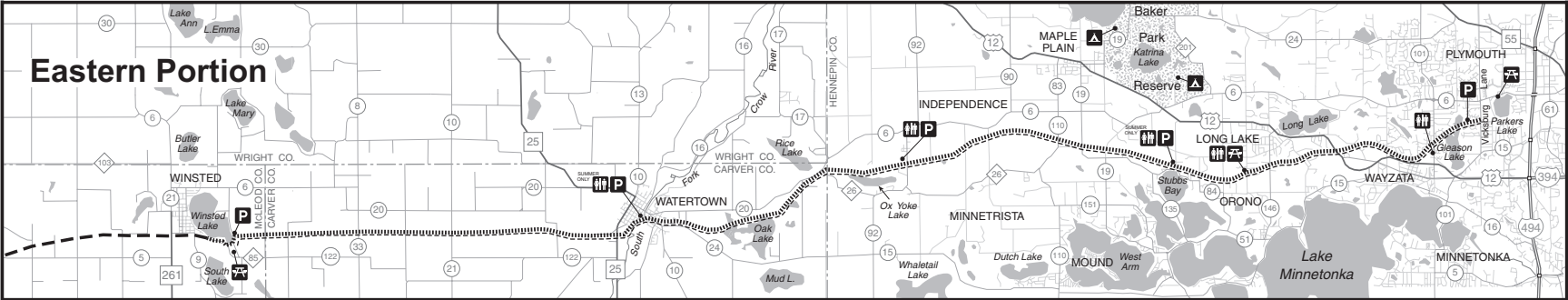
- Crushed Limestone
- Adjacent Horse Trail
- Undeveloped
- Paved (Asphalt)

Facilities

- Parking
- Picnic / Rest Area
- Campground
- Toilet

Scale in Miles

NORTH



Paul Bunyan Trail, Summer Season 1996*

	Total Seasonal User Hours	Percent of Total Hours	95% Confidence Interval of Total Hours (± percent)	Miles of Trail
Total Use Hours	155,268	100.0	14.9	46.4 (total miles)
By Day of Week				
Weekends/Holidays	79,668	51.3	22.4	
Weekdays	75,600	48.7	19.3	
By Trail Segment				
Baxter to Merrifield	40,153	25.9	24.3	9.0
Merrifield to Pequot Lakes	62,111	40.0	26.6	12.0
Pequot Lakes to Pine River	25,803	16.6	40.5	9.0
Pine River to Backus	13,747	8.9	32.8	8.8
Backus to Hackensack	13,453	8.7	42.7	7.6
By Trail Activity				
Biking	112,090	72.2	15.0	
Skating	23,236	15.0	23.9	
Walking	17,177	11.1	20.8	
Running	2,316	1.5	34.7	
Other	448	0.3	71.0	

* Summer extends from the Saturday of Memorial Day weekend to Labor Day.

Description

When completed, the Paul Bunyan State Trail will be a 100 mile long, multiple use trail between Brainerd /Baxter and Bemidji. Primarily located on a former Burlington Northern Railroad grade, the trail is generally level and is wheelchair accessible. Currently, 46.4 miles of the trail are paved, from Baxter to Hackensack and 5.3 miles from Lake Bemidji State Park to Co. Rd. 2D and the Mississippi River trestle. The remaining 53.6 mile section is undeveloped with variable surface material ranging from the original railroad ballast to sand.

Main summer uses of developed portions of the Paul Bunyan State Trail include hiking, bicycling, and in-line skating. Snowmobiling is the primary winter use along both the paved and undeveloped sections of the trail.

Paul Bunyan & Heartland State Trails

Beltrami, Cass, Hubbard & Crow Wing Counties

Heartland Trail Distances in Miles

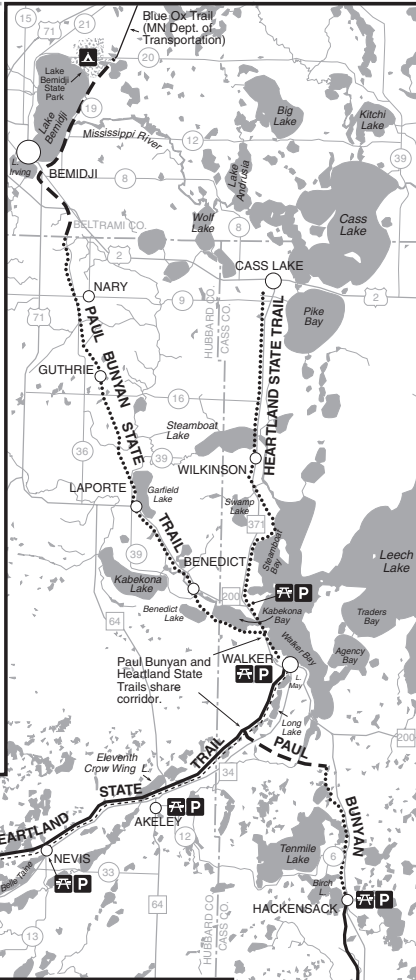
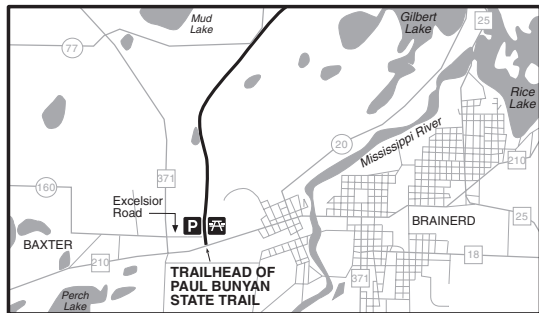
Park Rapids	6	11	17	27	39	48
Dorset	5	11	21	33	42	
Nevis	6	16	28	37		
Akeley	10	22	31			
Walker	12	21				
Wilkinson		9				
Cass Lake						

Cyclists can ride U. S. Highway 71 shoulder to Itasca State Park. It is approximately 20 miles from Park Rapids.



Paul Bunyan Trail Distances in Miles

Baxter	9.0	14.8	21.0	24.0	30.0	38.8	46.4	53.2	71.1	107.6	282.4	487.6	877.2	1100.0
Merrifield	5.8	12.0	15.0	21.0	29.8	37.4	54.2	62.0	67.2	73.4	78.6	88.2	91.0	
Nisswa	6.2	9.2	15.2	24.0	31.8	48.4	56.2	61.4	67.2	88.2	95.2			
Pequot Lakes	3.0	9.0	17.8	25.4	42.2	50.5	55.2	61.4	86.6	76.2	79.0			
Jenkins	6.0	14.8	22.4	39.2	47.0	52.2	58.4	83.6	73.2	76.0				
Pine River	8.8	16.4	33.2	41.0	46.2	52.4	57.6	67.0						
Backus	7.6	24.4	32.2	37.4	43.6	46.8	56.2	61.2						
Hackensack	16.8	24.6	29.8	36.0	41.2	50.4	125.0	85.3						
Walker	7.8	13.0	19.2	24.4	34.0	36.8								
Benedict	5.2	11.4	16.6	26.2	29.0									
Laporte	6.2	11.4	21.0	23.8										
Guthrie	5.2	14.8	17.6											
Nary	9.6	12.4												
Bemidji	2.8													
Lake Bemidji St. Park														

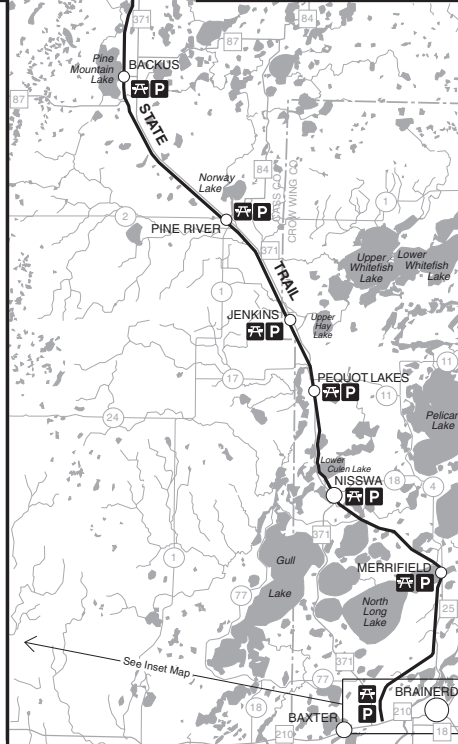
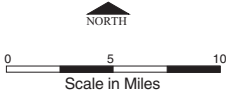


MAP EXPLANATION

- Trails
- Paved (Asphalt)
 - - - - - Adjacent Horse Trail
 - Unpaved
 - - - - - Future Trail (Proposed)
 - Other Trails

Facilities

- P** Parking
- PA** Picnic / Rest Area
- A** Campground



Segment of Paul Bunyan State Trail Near Bemidji State Park, 1998 Summer
Season*

	Total Seasonal User Hours	Percent of Total Hours	95% Confidence Interval of Total Hours (+/- percent)	Miles of Trail
Total Use Hours	17,488	100.0	28.6	5.3 (total miles)
By Day of Week				
Weekend/Holidays	7,779	44.5	28.0	
Weekdays	9,709	55.5	46.3	
By Trail Segment and Type (the survey was done in one segment, all of which is paved)				
By Trail Activity				
Biking	8,217	47.0	30.8	
Skating	4,187	23.9	53.0	
Walking	3,933	22.5	25.0	
Running	852	4.9	63.6	
Other	299	1.7	89.2	

* Summer extends from the Saturday of Memorial Day weekend to Labor Day.

See page 67 for description and page 68 for map.

Root River Trail, Summer Season 1997*

	Total Seasonal Hours	Percent of Total Hours	95% Confidence Interval of Total Hours (± percent)	Miles of Trail
Total Use Hours	178,761	100.0	15.1	40.8 (total miles)
By Day of Week				
Weekends/Holidays	110,153	61.6	22.0	
Weekdays	68,608	38.4	17.4	
By Trail Segment				
Fountain to Preston	37,978	21.2	29.2	12.0
Isinours to Whalan	83,958	47.0	26.9	9.3
Whalan to Peterson	31,921	17.9	23.9	8.9
Peterson to Rushford	18,578	10.4	32.0	4.8
Rushford to Money Creek Woods	6,327	3.5	44.8	5.8
By Trail Activity				
Biking	161,876	90.6	15.8	
Skating	4,712	2.6	27.2	
Walking	10,846	6.1	21.3	
Running	311	0.2	80.4	
Other	1,019	0.6	105.9	

* Summer extends from the Saturday of Memorial Day weekend to Labor Day.

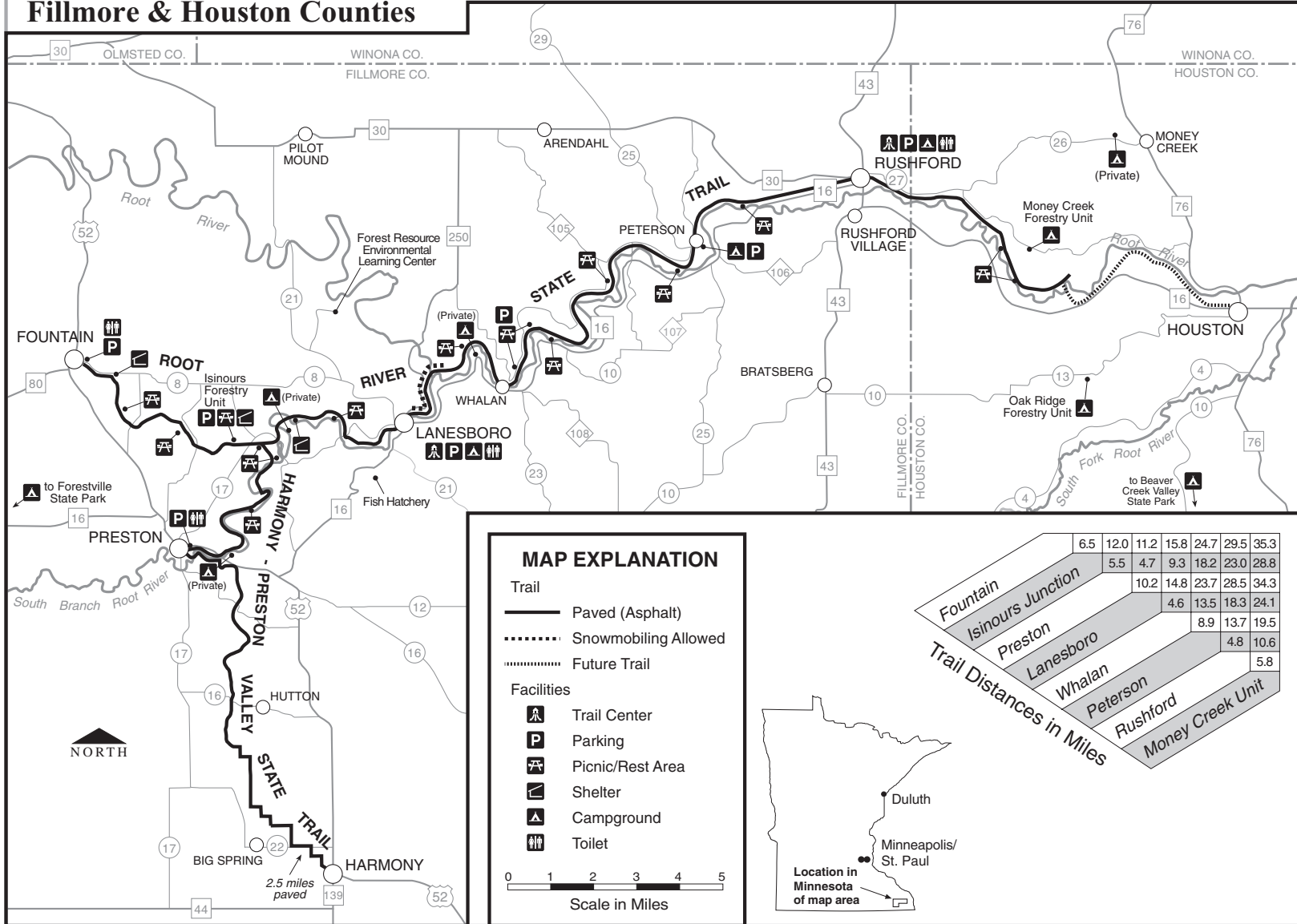
Description

The Root River State Trail is a 36 mile long, multiple use trail from Fountain to 5.3 miles east of Rushford at the DNR Forestry site at Money Creek Woods. Developed on an abandoned railroad grade, the entire trail is paved. The trail is generally level and wheelchair accessible as it descends from Fountain into the Root River Valley. Bicycling, in-line skating, and hiking are the main summer uses of the trail. Cross country skiing is popular in the winter.

One of two segments that comprise the Blufflands Trail System, the Harmony-Preston Valley State Trail is an 18 mile long, multiple use trail connecting the communities of Harmony and Preston with the existing Root River State Trail. The trail was completely paved with asphalt in the fall of 1997. Main summer uses of the trail are hiking, biking, and in-line skating. The trail is groomed for cross country skiing in the winter.

Root River State Trail & Harmony-Preston Valley State Trail

Fillmore & Houston Counties



Sakatah Singing Hills State Trail, 1998 Summer Season*

	Total Seasonal <u>User Hours</u>	Percent of <u>Total Hours</u>	95% Confidence Interval of Total Hours (+/- percent)	Miles of Trail
Total Use Hours	95,634	100.0	11.7	38.0 (total miles)
By Day of Week				
Weekend/Holidays	48,398	50.6	15.9	
Weekdays	47,236	49.4	17.1	
By Trail Type**				
Paved Trail	94,578	98.9	11.7	38.0
Unpaved Trail	1,056	1.1	88.8	4.0
By Trail Segment				
Mankato to Madison Lake	20,574	21.5	25.2	9.3
Madison Lake to Waterville	20,696	21.6	22.1	11.9
Waterville to Morristown	21,427	22.4	23.9	7.3
Morristown to Faribault	32,937	34.4	21.7	9.5
By Trail Activity				
Biking	73,009	76.3	12.8	
Skating	6,271	6.6	25.4	
Walking	12,729	13.3	18.1	
Running	2,744	2.9	31.8	
Horseback Riding	70	0.1	200.0	
Other	810	0.8	73.6	

* Summer extends from the Saturday of Memorial Day weekend to Labor Day.

** The paved treadway extends the full length of the trail; the unpaved treadway covers a portion of the segment from Mankato to Madison Lake.

Description

The Sakatah Singing Hills State Trail is a 39 mile, multiple use trail from Mankato to Faribault which has been developed on an abandoned railroad grade. The trail lies in the transition zone between what was once the "Big Woods" and the vast prairies. Remnants of these plant communities can still be found scattered throughout what is now cultivated land. The trail has been developed for bicycling, hiking, in-line skating, horseback riding, skiing, and snowmobiling, however, studded tracks are prohibited. It begins at Lime Valley Road near Mankato and ends east of Interstate 35 at Faribault (trail users will need to use the signed route on city streets through Waterville). The Sakatah Singing Hills State Trail provides a paved treadway. A second treadway for horseback riding is completed from Lime Valley Road to Eagle Lake. A second horseback segment travels from Sakatah Lake State Park to Morristown. Sakatah Lake State Park is along

the trail and provides a separate bicycling campground, picnic grounds, swimming beach, boat access, and additional hiking trails.

