Results of 2007-08 Paul Bunyan and Heartland State Trail Studies

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HIGHLIGHTS

Introduction

In 2007 and 2008, studies were conducted on the Paul Bunyan and Heartland State Trail during the summer, which extends from the Saturday of Memorial Day weekend to Labor Day. Both trails are non-motorized. The Paul Bunyan study covers the 64 miles of trail from Baxter to the Heartland Trail (maps in Appendix A). The Heartland study covers the 47 miles of trail from Park Rapids to Cass Lake. Both studies are updates of work done in the 1990s.

This report is intended to highlight the findings in the studies. A full set of tables of findings can be found in Appendix A. The trail survey instrument is in Appendix B.

Methodology

The trail studies have two components: counting users by trail activity, and collection user characteristics and opinion through a mail survey (survey instrument is in Appendix B). For the first component, a field person travels the trail and counts users during nominal one-hour sampling blocks. For the other component, the field person recruits users for a mail survey by getting the users name and address; a mail survey is then sent to a few days later. Both the survey and counting dates, times and places follow a statistical sampling plan. Sample counts are statistically projected to full summer use quantities.

Administration of trail studies

Item	Paul Bunyan 2007	Heartland 2007-08
Trail use counting periods	199	222
Survey contacts	351	347
Valid addresses	350	343
Surveys returned	308	299
Return rate	88%	87%

Who are the trail users?

A demographic profile of trail users can be formed by comparing the users from Minnesota to the general Minnesota population. Minnesotans make up 85% of Paul Bunyan use, and 73% of Heartland use.

Minnesota trail users in the 41 to 65 age range are over-represented on the trail; they are one-third of the general population and just over half of trail use. The oldest age class (over 65) is largely representative of the population. All other age classes are under-represented.

Trail users are comprised of largely equal portions of females and males, same as the general population.

Few trail users (less than 2%) are non-white and/or Hispanic, while the population has 14% in this race and ethnicity category.

Age distribution of trail users from Minnesota

Age Class	Minnesota Population, 2007* (percent)	Paul Bunyan (percent)	Heartland (percent)
12 or under	17%	9%	11%
13 to 18	8%	4%	4%
19 to 40	30%	18%	20%
41 to 65	33%	55%	52%
over 65	11%	13%	13%
Total	100%	100%	100%

* Population estimates from U.S. Census Bureau.

Trail users (25 years old or older) are well educated. Nearly two-thirds have at least a bachelor's degree, which is about twice as high as the general population.

Lastly, trail users have higher annual household incomes (median near $75,000) than the general population (median near $58,000).

Trail use

The trails receive some 75,000 to 80,000 hours of use during the summer (see table on next page). The use is split about 40% to 60% for weekends/holidays and weekdays, respectively. Biking is by far the top activity; it is followed by walking/hiking.

The majority of use on both trails (54% for each) comes from tourists, who have traveled at least 100 miles from home. Local users (within 10 miles of home) comprise about one-third of trail use.

Most trail use (55% to 56%) is by adults aged 41 to 65. Teens and children (under 19) make up 12% to 14% of use. Those over 65 years account for 11% to 14% of use, similar to that accounted for by teens and children.

Summer trail use by day of week and activitiy

	------- *Paul Bunyan* -------		------- *Heartland* -------	
	Trail user-hours	Percent of user-hours	Trail user-hours	Percent of user-hours
Overall	81,711	100%	74,419	100%
Day of week				
Weekends/holidays	34,661	42%	29,718	40%
Weekdays	47,050	58%	44,701	60%
Activity				
Bike	53,545	66%	48,048	65%
Skate	4,777	6%	2,800	4%
Walk/hike	18,634	23%	17,802	24%
Run/jog	4,017	5%	2,234	3%
Other	738	1%	3,536	5%

Trail use trends

Trends are assessed over the same trail and trail segments. This is a standard approach. It is the same trend method retailers apply when they report "same-store" sales change.

Trail studies are done over different lengths of time. To adjust for this—so changes can be compared between trails—each trend is put on a ten-year basis by assuming a constant linear change in user-hours per year.

Trail use monitoring has expanded to more and more trails in the Twin Cities since the late 1990s. That is why more trail are included in the

Recent use trends for non-motorized trails

(Note: the "standarized 10-year trend" assumes the same linear change in user-hours per year)

A. Summer use trends on state trails	Standardized 10-year trend: Percent change
Paul Bunyan, 1996 to 2007	-48%
Heartland, 1998 to 2007	-54%
Root River & Harmony-Preston Valley, 1997 to 2008	-34%
Gateway, 1997 to 2003	-31%
B. Annual use trends on Twin Cities metropolitan regional trails	
Nine trails from 1998 to 2007	-12%
Eleven trails from 1999 to 2007	-30%
Thirteen trails from 2000 to 2007	-24%
Fifteen trails from 2001 to 2007	-27%

trend analysis in the years following 1998.

The trend results indicate a drop in trail use on both state and Twin Cities regional trails. None of the trends is positive, and most show a decrease of in the general range of 25% to 50%.

For the state trails, the decline in use on weekends/holidays exceeded that on weekdays. For activities, in-line skating exhibited the largest decrease in use, followed by biking. Walking/jogging showed the smallest decrease, and actually increased 4% on the Paul Bunyan.

Tourist use on state trails declined more than that of locals (tourist are over 100 miles from home; locals live within 10 miles of the trail).

For ages, children and teens (under 19) had the steepest decline in use on state trails, while adults over 40 had the smallest decline. (This analysis was done on a per-capita basis to adjust for changing numbers of people in age classes between study years.)

Some of the preceding use trends are linked. Locals, who exhibited the smallest decline in use, dominate walking/jogging, routine exercise activities mainly done by adults on weekdays. Tourist dominate biking, and are more likely than locals to use the trail on weekends/holidays.

Experience while using the trail

When asked what they like most about the trail, four items rise to the top for each trail: the trail is quite/peaceful, scenic, a good place for exercise, and has no motorized vehicles.

Trail users experience few problems with other users. Some 90% checked "no problem" from a list of that response and 14 potential problems. When they did have a problem, the leading ones are trail users blocking traffic and passing without warning, common trail-courtesy occurrences.

Another potential problem is crowding, but nearly all trail users (96% to 99%) indicated that it was not an issue during their outing.

The first studies on the Paul Bunyan and Heartland in the 1990s were done when the trails were new. The overall experience ratings were superlative, some of the highest MN DNR has ever recorded for any activity or facility over the last 20 years. By 2007, ratings had dropped, with nearly all the drop due to a shift from "excellent" to "good."

In their own right, the ratings in 2007 are high. Virtually all ratings are "good" to "excellent" and "excellent" exceeds "good" by a wide margin.

The drop in overall experience rating is probably due to same factor identified in the 1990s when examining ratings across nine trails. In the trail studies, users are asked to score their satisfaction with 20 trail facility and service items. The 20 items are made up of five safety/ enforcement items, five information items, five facility items (e.g., benches), three maintenance items, and two general characteristic items (e.g., trail design).

Trail user ratings of overall trail experience

Paul Bunyan

Rating	1996 (percent)	2007 (percent)	Change 1996 to 2007
Excellent	82%	62%	-20%
Good	14%	37%	23%
Fair, poor, or very poor	4%	0%	-3%
Total	100%	100%	

Heartland

Rating of overal	1998 (percent)	2007 (percent)	Change 1998 to 2007
Excellent	82%	69%	-12%
Good	16%	29%	12%
Fair, poor, or very poor	2%	2%	0%
Total	100%	100%	

In the 1990s studies, one, and only one, group of items (trail maintenance) was consistently associated with lower overall trail ratings. In agreement with this finding, when the change in overall ratings from the 1990s to 2007 is compared with the 20 facility and service items, the trail maintenance group has the strongest association. Trail maintenance items are comprised of trail surface quality, maintenance of the trail, and management of vegetation in the trail corridor.

Trip characteristics

Trail users spend money on their trip and that spending generates jobs and income in the local economy of the trail. In 2007, summer trail users spent just over $1 million on each trail. Most of that spending (90% or more) comes from trail users who reside outside the local economy of the trail, and the spending

represents “new” dollars to the local economy.

As noted previously, biking is the largest trail activity by far; biking accounts for two-thirds of trail use. A typical biking trip covers just under 30 trail miles, lasts close to three hours, has a party size near three, and most of the parties (about 80%) are composed exclusively of adults. Adults with children comprise just under 20% of biking parties.

Biking trip characteristics

Characteristic	Paul Bunyan	Heartland
Miles traveled on trail (average)	28.7	28.1
Hours spent on trail (average)	2.7	3.1
People in party (average)	2.8	2.9
Party composition (% of parties)		
1 adult (over 18)	28%	29%
2 adults	37%	35%
3 or more adults	16%	16%
Adult(s) with children (under 18)	18%	19%
Children only	1%	1%
Total percent	100%	100%

Appendix A:

Tables of all survey results

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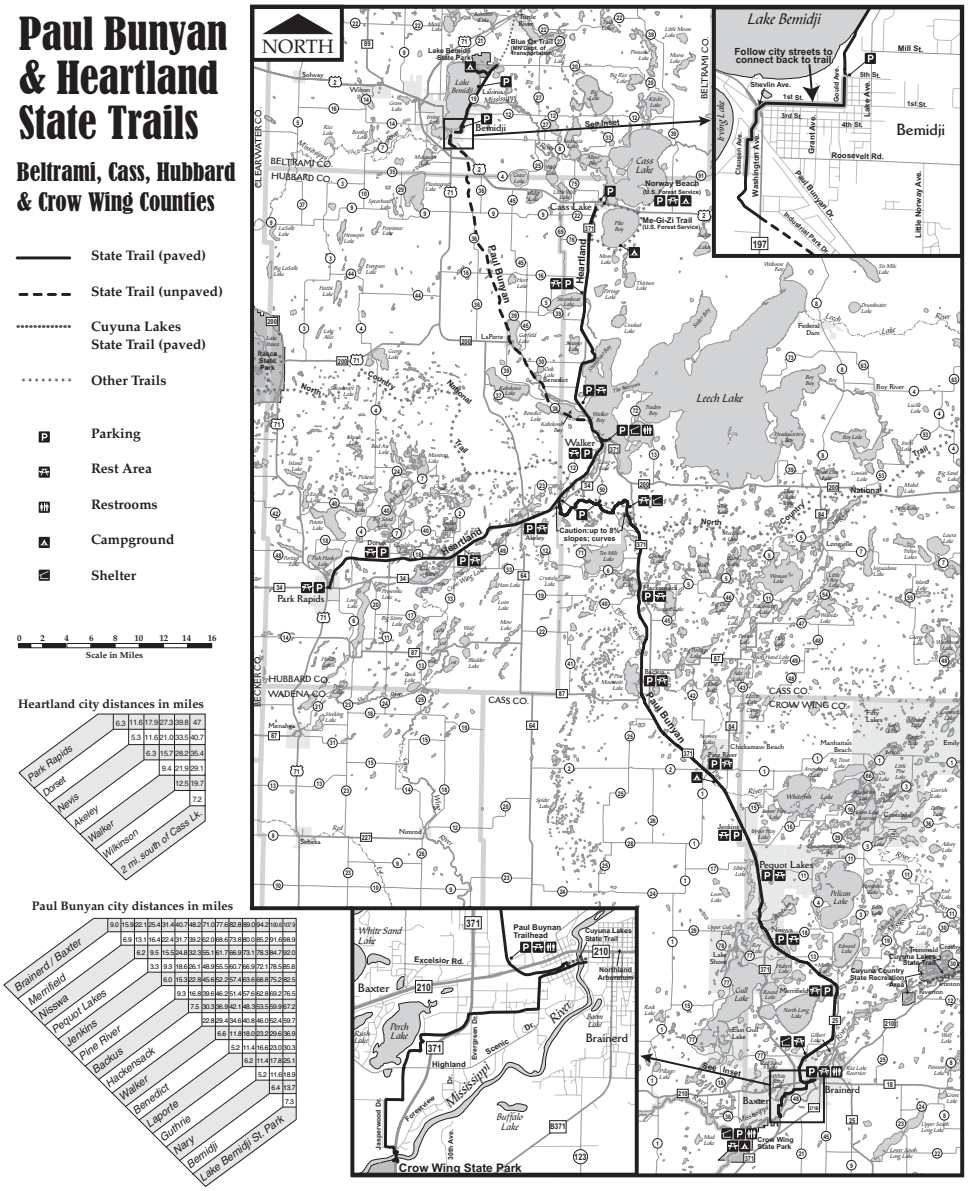
Trail map and administration of trail studies

Item	Paul Bunyan 2007	Heartland 2007	Heartland 2008	Heartland Total
Trail use counting periods	199	146	76	222
Survey contacts	351	212	135	347
Valid addresses	350	212	131	343
Surveys returned	308	185	114	299
Return rate	88%	87%	87%	87%



Summer trail use by day of week and activitiy, 2007

A. Paul Bunyan Trail (Baxter to Heartland Trail)

	Trail user-hours	Percent of user-hours	Days of use	User-hours per day
Overall	81,711	100%	101	809
Day of week				
Weekends/holidays	34,661	42%	34	1,019
Weekdays	47,050	58%	67	702
Activity				
Bike	53,545	66%		
Skate	4,777	6%		
Walk/hike	18,634	23%		
Run/jog	4,017	5%		
Other	738	1%		

B. Heartland Trail (Park Rapids to Cass Lake)

	Trail user-hours	Percent of user-hours	Days of use	User-hours per day
Overall	74,419	100%	101	737
Day of week				
Weekends/holidays	29,718	40%	34	874
Weekdays	44,701	60%	67	667
Activity				
Bike	48,048	65%		
Skate	2,800	4%		
Walk/hike	17,802	24%		
Run/jog	2,234	3%		
Other	3,536	5%		

Summer trail use by trail segment, 2007

A. Paul Bunyan Trail (Baxter to Heartland Trail)

	Trail user-hours	Percent of user-hours	Miles of trail	User-hours per trail mile
Overall	81,711	100%	64.2	1,273
Trail segment				
Baxter to Merrifield	15,812	19%	9.0	1,757
Merrifield to Pequot Lakes	34,687	42%	13.1	2,648
Pequot Lakes to Pine River	10,573	13%	9.3	1,137
Pine River to Backus	3,656	4%	9.3	393
Backus to Hackensack	5,111	6%	7.5	682
Hackensack to Trail shelter	9,531	12%	7.2	1,324
Trail shelter to Heartland Trail	2,341	3%	8.8	266

B. Heartland Trail (Park Rapids to Cass Lake)

	Trail user-hours	Percent of user-hours	Miles of trail	User-hours per trail mile
Overall	74,419	100%	47.0	1,583
Trail segment				
Park Rapids to Dorset	21,324	29%	6.3	3,385
Dorset to Nevis	18,931	25%	5.3	3,572
Nevis to Akeley	9,791	13%	6.3	1,554
Akeley to Walker	10,832	15%	9.4	1,152
Walker to Cass CR #142	10,671	14%	8.6	1,241
Cass CR #142 to Cass Lake	2,869	4%	11.1	258

Summer trail use by travel distance from permanent home, 2007

A. Paul Bunyan Trail (Baxter to Heartland Trail)

Travel distance	Overall use (percent	*Trail activity* Bike (percent)	Walk/hike Jog (percent)	Other (percent)
10 miles or less	33%	20%	66%	33%
10.1 to 100 miles	14%	16%	4%	21%
over 100 miles	54%	64%	30%	47%
Total percent	100%	100%	100%	100%
Median travel miles	*120*	*140*	*6*	*30*

B. Heartland Trail (Park Rapids to Cass Lake)

Travel distance	Overall use (percent	*Trail activity* Bike (percent)	Walk/hike Jog (percent)	Other (percent)
10 miles or less	29%	14%	69%	62%
10.1 to 100 miles	18%	21%	9%	18%
over 100 miles	54%	66%	22%	20%
Total percent	100%	100%	100%	100%
Median travel miles	*125*	*168*	*1*	*6*

Summer trail use by origin of trail users, 2007

Origin	Paul Bunyan* (percent)	Heartland** (percent)
Local counties		
Cass	9%	9%
Crow Wing	26%	1%
Hubbard	0%	24%
Subtotal local counties	*35%*	*33%*
Seven-county Twin Cities	33%	17%
Rest of Minnesota	17%	23%
Subtotal Minnesota	*85%*	*73%*
Out of state	15%	27%
Total percent	100%	100%

* Baxter to Heartland Trail

** Park Rapids to Cass Lake

Summer trail use by age of trail users, 2007

A. All trail users

Age class	Paul Bunyan* (percent)	Heartland** (percent)
12 or younger	8%	10%
13 to 18	4%	4%
19 to 40	18%	20%
41 to 65	56%	55%
over 65	14%	11%
Total percent	100%	100%
Median age	*49.3*	*45.5*

* Baxter to Heartland Trail

** Park Rapids to Cass Lake

A. Per-capita trail use by Minnesotas (use hours from Minnesotans per 1000 Minnesotans)

Age class	Paul Bunyan*	Heartland**
Oveall (all ages)	13.4	10.5
12 or younger	7.1	7.4
13 to 18	5.7	5.2
19 to 40	8.5	7.7
41 to 65	22.2	16.3
over 65	16.2	9.9

* Baxter to Heartland Trail

** Park Rapids to Cass Lake

Recent use trends for non-motorized trails

A. Summer use trends on state trails*

Trail, study years, and comparable segment	**First study** Total summer user hours	**Second study** Total summer user hours	Percent change	Standardized 10-year trend:** Percent change
Paul Bunyan, 1996 to 2007, Baxter to Hackensack	148,760	69,838	-53%	-48%
Heartland, 1998 to 2007, Park Rapids to Walker	118,337	60,878	-49%	-54%
Root River & Harmony-Preston Valley (RR & HPV), 1997 to 2008, Fountain to Preston and Isinours to Money Creek Woods	178,762	111,580	-38%	-34%
Gateway, 1997 to 2003, Cayuga Street to Pine Point Park	181,952	148,062	-19%	-31%

* Summer extends from the Saturday of Memorial Day weekend to Labor Day. Because summers vary in length, and because this affects comparability between studies, summer length is set by the second study.

** Assumes the same linear change in user-hours per year.

B. Annual use trends on Twin Cities metropolitan regional trails

Metro regional trails (annual occasions in 000's)	First year	Year 2007	Percent change	Standardized 10-year trend:** Percent change
Nine trails from 1998 to 2007	3,941	3,516	-11%	-12%
Eleven trails from 1999 to 2007	5,256	3,980	-24%	-30%
Thirteen trails from 2000 to 2007	5,052	4,209	-17%	-24%
Fifteen trails from 2001 to 2007	5,437	4,547	-16%	-27%

** Assumes the same linear change in user-hours per year.

Summer use trends by day of week and activity

A. Paul Bunyan Trail (Baxter to Hackensack)

	1996 Total summer user hours	**2007** Total summer user hours	Percent change
Overall	148,760	69,838	-53%
By Day of Week			
Weekends/Holidays	72,770	29,468	-60%
Weekdays	75,990	40,371	-47%
By Trail Activity			
Bike	106,890	44,609	-58%
Skate	22,293	4,597	-79%
Walk/hike	16,924	16,526	-2%
Run/jog	2,255	3,368	49%
Walk/hike + Run/jog	*19,179*	*19,894*	*4%*
Other	398	738	85%

B. Heartland Trail (Park Rapids to Walker)

	1998 Total summer user hours	**2007** Total summer user hours	Percent change
Overall	118,337	60,878	-49%
By Day of Week			
Weekends/Holidays	59,084	23,385	-60%
Weekdays	59,254	37,493	-37%
By Trail Activity			
Bike	92,979	41,339	-56%
Skate	6,928	2,287	-67%
Walk/hike	17,071	12,498	-27%
Run/jog	1,038	1,898	83%
Walk/hike + Run/jog	*18,109*	*14,395*	*-21%*
Other	320	2,857	792%

Summer use trends by trail segment

A. Paul Bunyan Trail (Baxter to Hackensack)

	1996 Total summer user hours	**2007** Total summer user hours	Percent change
Overall	148,760	69,838	-53%
Segment			
Baxter to Merrifield	37,841	15,812	-58%
Merrifield to Pequot Lakes	58,820	34,687	-41%
Pequot Lakes to Pine River	25,505	10,573	-59%
Pine River to Backus	13,687	3,656	-73%
Backus to Hackensack	12,907	5,111	-60%

B. Heartland Trail (Park Rapids to Walker)

	1998 Total summer user hours	**2007** Total summer user hours	Percent change
Overall	118,337	60,878	-49%
Segment			
Park Rapids to Nevis	55,997	40,255	-28%
Nevis to Akeley	24,747	9,791	-60%
Akeley to Walker	37,594	10,832	-71%

Summer use trends by travel distance from permanent home

A. Paul Bunyan Trail (Baxter to Hackensack)

	1996 Total summer user hours	**2007** Total summer user hours	Percent change
Overall	148,760	69,838	-53%
Travel distance			
10 miles or less	44,941	24,337	-46%
10.1 to 100 miles	21,899	8,575	-61%
over 100 miles	81,920	36,927	-55%

B. Heartland Trail (Park Rapids to Walker)

	1998 Total summer user hours	**2007** Total summer user hours	Percent change
Overall	118,337	60,878	-49%
Travel distance			
10 miles or less	26,335	18,838	-28%
10.1 to 100 miles	36,695	10,394	-72%
over 100 miles	55,307	31,647	-43%

Summer use trends by age class

A. Paul Bunyan Trail (Baxter to Hackensack)

	1996 Total summer user hours	**2007** Total summer user hours	Percent change
Overall	148,760	69,838	-53%
Age class			
12 or younger	17,463	6,598	-62%
13 to 18	13,583	2,672	-80%
over 18	117,713	60,569	-49%
Median age	*(no data)*	*48.3*	

B. Heartland Trail (Park Rapids to Walker)

	1998 Total summer user hours	**2007** Total summer user hours	Percent change
Overall	118,337	60,878	-49%
Age class			
12 or younger	21,679	6,349	-71%
13 to 18	12,168	1,987	-84%
19 to 40	28,605	12,721	-56%
41 to 65	45,960	32,304	-30%
over 65	9,926	7,517	-24%
Median age	*38.7*	*46.1*	

Trends in per-capita summer trail use by Minnesotas

(use hours from Minnesotans per 1000 Minnesotans)

A. Paul Bunyan Trail (Baxter to Hackensack)

		1996 User-hours per capita	**2007** User-hours per capita	Percent change
Overall		27.6	11.4	-59%
Age class				
	12 or younger	17.0	6.9	-60%
	13 to 18	28.4	5.1	-82%
	over 18	30.2	13.2	-56%

B. Heartland Trail (Park Rapids to Walker)

		1998 User-hours per capita	**2007** User-hours per capita	Percent change
Overall		18.5	8.9	-52%
Age class				
	12 or younger	18.1	6.0	-67%
	13 to 18	21.1	3.6	-83%
	19 to 40	13.7	6.6	-52%
	41 to 65	25.6	13.2	-48%
	over 65	13.5	10.2	-24%

How did you first hear about the trail?

Response	Paul Bunyan (percent)	Heartland (percent)
I live or work nearby	53%	45%
From family or friends – by work of mouth	19%	26%
Tourism, chamber of commerce, or convention & visitors bureau information	9%	5%
Internet website	5%	7%
DNR brochure, map or DNR Information Center	2%	5%
From newspapers, magazines, radio, or TV	2%	1%
Other	10%	11%
Total	100%	100%

What did you like most about the trail?
(respondents could check multiple responses)

Response	Paul Bunyan (percent)	Heartland (percent)
Quiet, peaceful	80%	91%
Scenery, wildlife, wildflowers, birds, trees	85%	86%
It's a good place for exercise, to work out, to keep in shape	83%	83%
No cars or motorized vehicles	70%	75%
Easy, flat trail,	62%	73%
Well-maintained, clean	66%	65%
Like the trail surface	62%	65%
Little development, not commercial	56%	70%
Using the trail reduces tension, stress	61%	60%
It's fun	56%	63%
Like the length	54%	59%

Trends in Paul Bunyan Trail user ratings of overall trail experience

A. All users

Rating of overall experience	1996 (percent)	2007 (percent)	Change in percent: 1996 to 2007
Excellent	82%	62%	-20%
Good	14%	37%	23%
Fair	2%	0%	-2%
Poor	1%	0%	-1%
Very Poor	0%	0%	0%
Total	100%	100%	

B. By travel distance from permanent home ("excellent" ratings only)

	"Excellent" ratings		
Distance	1996 (percent)	2007 (percent)	Change in percent: 1996 to 2007
10 miles or less	80%	55%	-25%
10.1 to 100 miles	95%	61%	-34%
over 100 miles	83%	72%	-11%

C. By trail activity ("excellent" ratings only)

	"Excellent" ratings		
Activity	1996 (percent)	2007 (percent)	Change in percent: 1996 to 2007
Bike	84%	69%	-14%
Skate	60%	51%	-9%
Walk/hike or run/job	99%	57%	-42%

Trends in Heartland Trail user ratings of overall trail experience

A. All users

Rating of overall experience	1998 (percent)	2007 (percent)	Change in percent: 1998 to 2007
Excellent	82%	69%	-12%
Good	16%	29%	12%
Fair	1%	1%	0%
Poor	0%	0%	0%
Very Poor	1%	1%	0%
Total	100%	100%	

B. By travel distance from permanent home ("excellent" ratings only)

	"Excellent" ratings		
Distance	1996 (percent)	2007 (percent)	Change in percent: 1996 to 2007
10 miles or less	78%	66%	-13%
10.1 to 100 miles	79%	66%	-12%
over 100 miles	86%	75%	-12%

C. By trail activity ("excellent" ratings only)

	"Excellent" ratings		
Activity	1996 (percent)	2007 (percent)	Change in percent: 1996 to 2007
Bike	85%	71%	-14%
Skate	65%	47%	-18%
Walk/hike or run/job	76%	70%	-6%

Heartland satisfaction ratings for trail facilities and services, 2007, and trends from 1998

Group / Facility or service	2007 mean satisfaction (value from 1 to 5)	1998 to 2007 change in mean satisfaction (value)	Very satisfied (=5) (percent)	Satisfied (=4) (percent)	Neutral (=3) (percent)	Dissatisfied (=2) (percent)	Very Dissatisfied (=1) (percent)	Not applicable (percent)	Total (percent)
General characteristics									
Trail location	4.8	0.0	79%	21%	0%	0%	0%	0%	100%
Trail design	4.7	-0.1	69%	30%	1%	0%	0%	0%	100%
Maintenance									
Trail surface quality	4.4	-0.4	48%	45%	3%	4%	0%	0%	100%
Maintenance of the trail	4.0	-0.5	34%	45%	7%	11%	1%	0%	100%
Management of vegetation in the trail corridor	3.9	-0.3	28%	47%	10%	10%	2%	4%	100%
Safety and enforcement									
Safety of road crossings	4.3	-0.2	47%	41%	7%	2%	2%	0%	100%
Security of parking areas	4.2	-0.1	34%	35%	14%	1%	0%	16%	100%
Bridges	4.2	-0.2	33%	31%	10%	4%	0%	21%	100%
Personal safety concerns	4.2	-0.1	35%	43%	11%	1%	3%	7%	100%
Enforcement of trail rules	3.8	0.0	20%	28%	33%	2%	0%	17%	100%
Information									
Information about getting to the trail	4.0	0.0	27%	30%	16%	4%	1%	23%	100%
Trail rules, traffic signs, and etiquette signs	4.0	-0.1	27%	43%	18%	4%	0%	7%	100%
Information about what to expect about the trail	3.9	0.0	24%	25%	22%	5%	0%	24%	100%
Information about trail connections	3.9	0.2	23%	33%	21%	6%	0%	16%	100%
Information about what you can see from the trail	3.7	0.0	20%	25%	26%	6%	2%	22%	100%
Facilities									
Availability of benches	4.1	0.6	34%	37%	14%	4%	1%	11%	100%
Availability of picnic areas or shelters	3.8	0.1	19%	26%	26%	4%	0%	26%	100%
Availability of telephones	3.1	-0.1	8%	7%	32%	8%	4%	40%	100%
Availability of toilet facilities	3.1	-0.3	12%	17%	23%	20%	7%	21%	100%
Availability of drinking water	3.1	0.0	9%	12%	31%	18%	4%	25%	100%

Would you recommend this trail to a friend?

Response	Paul Bunyan (percent)	Heartland (percent)
Yes	100%	100%
No	0%	0%
Total	100%	100%

Which trail surface do you like best for your type of trail use on the day of the survey?

Response	Paul Bunyan (percent)	Heartland (percent)
Asphalt paving	94%	97%
Concrete	2%	2%
Natural surface – grass or dirt	3%	0%
Compacted crushed limestone	2%	1%

Priorities for trail improvements:
Percent of trail users who are "dissatisfied" or "very dissatisfied" with the facility or service

Facility or service	Paul Bunyan (percent)	Heartland (percent)
Facilities		
Availability of toilet facilities	15%	27%
Availability of drinking water	19%	22%
Availability of telephones	10%	12%
Availability of benches	1%	5%
Availability of picnic areas or shelters	2%	4%
Maintenance		
Maintenance of the trail	10%	12%
Management of vegetation in the trail corridor	10%	11%
Trail surface quality	5%	4%
Information		
Information about what you can see from the trail	7%	7%
Trail rules, traffic signs, and etiquette signs	8%	5%
Information about trail connections	5%	6%
Information about what to expect about the trail	4%	5%
Information about getting to the trail	2%	4%
Safety and Enforcement		
Safety of road crossings	5%	4%
Personal safety concerns	3%	4%
Security of parking areas	4%	1%
Bridges	0%	4%
Enforcement of trail rules	3%	2%
General Characteristics		
Trail design	0%	0%
Trail location	0%	0%

Was the trail too crowded for your enjoyment?

Response	Paul Bunyan (percent)	Heartland (percent)
No	95.9%	99.5%
Yes, but I used the trail anyway	2.7%	0.5%
Yes, so I changed plans, used another part of the trail	1.5%	0.0%
Yes, so I didn't use the trail for as long as originally planned	0.0%	0.0%
Yes, so in the future I'll only use the trail at less busy times	0.0%	0.0%
Yes, too crowded, unlikely that I'd return to this trail	0.0%	0.0%

Did you have any problems or conflicts with other users?
(respondents could check multiple responses)

Response	Paul Bunyan (percent)	Heartland (percent)
● No problems with other trail users	90%	91%
Problems/conflicts with other users		
● Other trail users blocking traffic, not keeping right	5%	2%
● Other trail users passing without warning	5%	1%
● Problems with other people's pets	3%	0%
● nfriendly, discourteous behavior by others	1%	1%
● Other trail users created feelings of insecurity, or concerns about personal safety	1%	1%
● Other trail users going too fast	1%	1%
● Irresponsible or unsafe behavior by others	2%	0%
● on permitted trail uses (i.e., all-terrain vehicles, cars, motorcycles)	1%	0%
● Discharge of firearms by other trail users	1%	0%
● Graffiti	0%	0%
● Conflicts with trail users not using the treadway designated for their use	0%	0%
● andalism	0%	0%
● Other trail users going too slow	0%	0%
● Problems with large groups or special events on the trail	0%	0%

Trip Characteristics, 2007

Characteristic	Paul Bunyan	Heartland
All Activities		
Miles traveled on trail (average)	16.5	17.1
Hours spent on trail (average)	1.9	2.4
People in party (average)	2.3	2.5
Party composition (% of parties)		
1 adult (over 18)	35%	35%
2 adults	37%	37%
3 or more adults	10%	10%
Adult(s) with children (under 18)	15%	16%
Children only	3%	2%
Total percent	100%	100%
Biking		
Miles traveled on trail (average)	28.7	28.1
Hours spent on trail (average)	2.7	3.1
People in party (average)	2.8	2.9
Party composition (% of parties)		
1 adult (over 18)	28%	29%
2 adults	37%	35%
3 or more adults	16%	16%
Adult(s) with children (under 18)	18%	19%
Children only	1%	1%
Total percent	100%	100%

Where did you stay when you used the trail?

Place	Paul Bunyan (percent)	Heartland (percent)
● My permanent home, less than 30 miles from the trail	47%	41%
● My permanent home, more than 30 miles away from the trail	3%	5%
● My seasonal home	22%	16%
● Resort, motel, or bed and breakfast inn	13%	18%
● With friends or family	12%	12%
● Campground, RV park, or park	2%	7%
Total	100%	100%

Trip spending associated with trail use, 2007
(total spending for the summer period)

	Spending by local* users	Spending by tourist* users	Total Spending
Paul Bunyan	$128,978	$1,113,557	$1,242,534
Heartland	$34,316	$1,003,119	$1,037,436

* 'Local' is a trail user who traveled less than 30 miles to the trail from their permanent home; 'tourist' is a trail user who spend the night prior to trail use away from their permanent home (e.g., at a resort or seasonal home), or traveled over 30 miles from home.

Profile of tourist spending associated with trail use, 2007

Expenditure Category	Paul Bunyan (percent)	Heartland (percent)
Overnight lodging/camping	26%	31%
Restaurant food/beverage, snacks	29%	26%
Groceries	11%	9%
Gasoline	14%	18%
Entertainment, tickets, festivals	1%	1%
Shopping, souvenirs	15%	12%
Equipment rental/repair	3%	3%
Total	100%	100%
Dollars spent per person per day	*$48.31*	*$53.73*

How important was the trail in your choice of visiting this area on this trip?

(asked of tourists, who either spent the night prior to trail use away from home, or are over 30 miles from home)

Age Class	Paul Bunyan (percent)	Heartland (percent)
Very important – the main reason I made the trip	22%	36%
Somewhat important – the trail had some influence on choosing this destination	41%	30%
Not important at all	35%	30%
Don't know	2%	5%
Total	100%	100%

Age distribution of trail users from Minnesota

Age Class	Minnesota Population, 2007* (percent)	Paul Bunyan (percent)	Heartland (percent)
12 or under	17%	9%	11%
13 to 18	8%	4%	4%
19 to 40	30%	18%	20%
41 to 65	33%	55%	52%
over 65	11%	13%	13%
Total	100%	100%	100%

* Population estimates from U.S. Census Bureau.

Gender of trail users from Minnesota
(based on gender of survey respondent)

Age Class	Minnesota Population, 2007* (percent)	Paul Bunyan (percent)	Heartland (percent)
Female	50%	54%	51%
Male	50%	46%	49%
Total	100%	100%	100%

* Population estimates from U.S. Census Bureau.

Race and ethnic distribution of trail users from Minnesota, 2007

	MN population, 2006* (percent)	Paul Bunyan (percent)	Heartland (percent)
Race			
White	89.3%	99.7%	98.3%
Non-white	10.7%	0.3%	1.7%
Total	100.0%	100.0%	100.0%
Ethnicity			
Hispanic/Latino	3.8%	0.0%	0.7%
Non-Hispanic/Latino	96.2%	100.0%	99.3%
Total	100.0%	100.0%	100.0%
Race & Ethnicity			
White, Non-Hispanic/Latino	85.9%	99.7%	98.1%
Non-white and/or Hispanic/Latino	14.1%	0.3%	1.9%
Total	100.0%	100.0%	100.0%

* Source: U.S. Census Bureau.

Educational attainment of trail users (age 25+) from Minnesota, 2007

Educational attainment group	MN population, 2006* (percent)	Paul Bunyan (percent)	Heartland (percent)
High school graduate or higher	93%	100%	99%
Bachelor's degree or higher	34%	63%	65%

*Source: U.S. Census Bureau, Current Population Survey, 2006 Annual Social and Economic Supplement.

Household income of trail users from Minnesota

Age Class	Minnesota, 2006-07* (percent)	Paul Bunyan (percent)	Heartland (percent)
Under $20,000	no detail	7%	8%
$20,000 to $29,999		6%	5%
$30,000 to $39,999		6%	9%
$40,000 to $49,999		9%	7%
$50,000 to $59,999		9%	5%
$60,000 to $74,999		16%	18%
$75,000 to $99,999		19%	20%
Over $100,000		29%	27%
Total	100%	100%	100%
Median	*$57,932*	*Near $75,000*	*Near $75,000*

* Income estimates from U.S. Census Bureau.

Appendix B:

Trail user survey instrument (6 pages)

Note: Survey instruments are the same except for the specific places users gain access to the trail (question 5)

2007 Paul Bunyan State Trail Summer Survey

PLEASE ANSWER THE FOLLOWING QUESTIONS FOR THE TRAIL VISIT WHEN YOU AGREED TO BE PART OF THIS SURVEY:

1. Please rate your overall experience on the trail on the day of your visit. *(Please check one)*

a)_____Excellent b)_____Good c)_____Fair d)_____Poor e)_____Very poor

2. What was your main trail activity on the day of your trail visit? *(Please check one)*

a)_____Bicycling
b)_____Mountain bicycling
c)_____In-line skating/roller skiing
d)_____Dog walking
e)_____Walking, hiking, or pushing stroller
f)_____Jogging/running
g)_____Wheelchair use
h)_____Horseback riding
i)_____Other *(Please specify_____)*

3. How did you get to the trail? *(Please check one)*

a)_____By car
b)_____On foot
c)_____On a bicycle
d)_____On in-line skates
e)_____With a large group in bus or van
f)_____ Horseback riding
g)_____ Other *(Please specify_____)*

4. What is the one-way driving distance from your permanent home to the trail?

_____Miles *(approximately)*
_____Don't know

5. Where did you get on the trail? *(Please check one)*

a)_____The Arboretum in Baxter
b)_____Merrifield
c)_____Nisswa
d)_____Pequot Lakes
e)_____Pine River
f)_____Backus
g)_____Hackensack
h)_____Walker
i)_____Other *(Please specify_____)*

6. Did you travel on the trail round-trip or one-way? *(Please check one)*

_____Round trip, returned to my starting point on the trail
_____One way on the trail

7. About how many miles did you travel on the trail, in total?

_____Miles
_____Not sure

8. What day of the week were you on the trail? *(Please check one)*

a)_____Sunday
b)_____Monday
c)_____Tuesday
d)_____Wednesday
e)_____Thursday
f)_____Friday
g)_____Saturday

9. What time of day did you begin using the trail? (*Please write time and circle a.m. or p.m.)*

_____ a.m. / p.m.

10. About how many hours were you on the trail?

_____Hours

_____Not sure

11. Was the trail too crowded for your enjoyment? *(Please check one)*

a)_____No
b)_____Yes, but I used the trail anyway
c)_____Yes, so I changed plans, used another part of the trail
d)_____Yes, so I didn't use the trail for as long as originally planned
e)_____Yes, so in the future I'll only use the trail at less busy times
f)_____Yes, too crowded, unlikely that I'd return to this trail

12. Why did you choose to come to this trail? *(Please check **all** that apply)*

a)_____Never been here before, wanted to check it out
b)_____Come to this trail regularly
c)_____Easy to get to, convenient location
d)_____Safe place to ride/walk/skate
e)_____Vacationing in this area
f)_____Was recommended to me by family
g)_____Other *(Please explain_____)*

13. Did you have any problems or conflicts with other trail users? *(Please check **all** that apply)*

a)_____No problems with other trail users – *please skip to next question*
b)_____Other trail users blocking traffic, not keeping right
c)_____Other trail users passing without warning
d)_____Other trail users going too fast
e)_____Other trail users going too slow
f)_____Unfriendly, discourteous behavior by others
g)_____Irresponsible or unsafe behavior by others
h)_____Problems with other people's pets
i)_____ Other trail users created feelings of insecurity, or concerns about personal safety
j)_____Non permitted trail uses (i.e., all-terrain vehicles, cars, motorcycles)
k)_____Graffiti
l)_____Vandalism
m)_____Problems with large groups or special events on the trail
n)_____Discharge of firearms by other trail users
o)_____Conflicts with trail users not using the treadway designated for their use
p)_____Other *(Please explain_____)*

14. **Please rate your satisfaction or dissatisfaction with the following trail facilities or services. Please circle VS if very satisfied, S if satisfied, N if neutral, D if dissatisfied, VD if very dissatisfied.** *If it doesn't apply at all to your use of the trail, circle NA (not applicable). If you have any specific comments on how and where we could make improvements, please jot it down.*

VS S N D VD NA Trail surface quality: _____
VS S N D VD NA Trail location:_____
VS S N D VD NA Trail design_____
VS S N D VD NA Safety of road crossings:_____
VS S N D VD NA Security of parking areas:_____
VS S N D VD NA Bridges:_____
VS S N D VD NA Availability of drinking water:_____
VS S N D VD NA Availability of toilet facilities:_____
VS S N D VD NA Availability of benches:_____
VS S N D VD NA Availability of telephones:_____
VS S N D VD NA Availability of picnic areas or shelters:_____
VS S N D VD NA Information about getting to the trail:_____
VS S N D VD NA Information about what to expect about the trail:_____
VS S N D VD NA Information about what you can see from the trail:_____
VS S N D VD NA Information about trail connections:_____
VS S N D VD NA Trail rules, traffic signs, and etiquette signs:_____
VS S N D VD NA Maintenance of the trail:_____
VS S N D VD NA Personal safety concerns:_____
VS S N D VD NA Enforcement of trail rules:_____
VS S N D VD NA Management of vegetation in the trail corridor:_____

15. **Are there any facilities or services missing that you expected or needed?** *If yes, please explain.*

_____
_____

16. **What did you like most about the trail?** *(Please check **all** that apply)*

a)_____Scenery, wildlife, wildflowers, birds, trees
b)_____Little development, not commercial
c)_____Quiet, peaceful
d)_____No cars or motorized vehicles
e)_____It's fun
f)_____Like the trail surface
g)_____Easy, flat trail,
h)_____Like the length
i)_____Well-maintained, clean
j)_____It's a good place for exercise, to work out, to keep in shape
k)____ Using the trail reduces tension, stress
l)_____Other *(Please explain*_____*)*

17. **Would you recommend this trail to a friend?** *(Please check one and explain briefly)*

_____Yes:_____
_____No:_____

18. **How many times did you use this trail in spring, summer or fall of 2006?** *(April 1 to November 31)*

_____Visits in spring, summer, or fall

19. How many times did you use this trail in winter 2006-07? *(December 1 to March 31)*

_____Visits in winter

20. Which trail surface do you like best for your type of trail use *on the day of the survey?*
(Please check one)

a)_____Natural surface – grass or dirt
b)_____Concrete
c)_____Asphalt paving
d)_____Compacted crushed limestone
e)_____Other *(please specify_____)*

21. Including you, how many people by age class were in your party on this visit to the trail?

a)_____Number of children under 12
b)_____Number of teens 13-18
c)_____Number of adults 19-40
d)_____Number of adults 41- 65
e)_____Number of adults over 65

22. Where did you stay when you used the trail? *(Please check one)*

a)_____My permanent home, less than 30 miles from the trail ***(If yes, proceed with question 23)***

23. *Local residents only:* How much did your party spend today? $_____

24. *Local residents only:* How many people are covered by these expenses?_____

Local residents only: Now, please skip to Question 28.

b)_____My permanent home, more than 30 miles away from the trail
c)_____My seasonal home
d)_____Resort, motel, or bed and breakfast inn
e)_____With friends or family
f)_____Campground, RV park, or park

25. How important was the trail in your choice of visiting this area on this trip? *(Please check one)*

a)_____Very important – the main reason I made the trip
b)_____Somewhat important – the trail had some influence on choosing this destination
c)_____Not important at all
d)_____Don't know

26. Approximately how much did you and your party spend on travel-related expenses on the day of your trail visit? *(Please fill in the approximate dollar amount for each category)*

a)_____Overnight lodging/camping
b)_____Restaurant food/beverage, snacks
c)_____Groceries
d)_____Gasoline
e)_____Entertainment, tickets, festivals
f)_____Shopping, souvenirs
g)_____Equipment rental/repair

27. How many people are covered by these expenditures?

_____People

28. About how much do you spend per year on summer trail gear? *(bikes, skates, shoes, sporting goods, etc.)*

$_____(approximately)

29. How did you first hear about the trail? *(Please check one)*

a)_____I live or work nearby
b)_____From family or friends – by work of mouth
c)_____From newspapers, magazines, radio, or TV
d)_____DNR brochure, map or DNR Information Center
e)_____Tourism, chamber of commerce, or convention & visitors bureau information
f)_____Internet website
g)_____Other *(Please specify*_____*)*

30. What is your home zip code or postal code? __ __ __ __ __

31. How old are you? _____Years

32. Which of the following best describes your race: *(Please check **all** that apply)*

a) _____African American/black
b) _____American Indian or Alaska Native
c) _____Asian
d) _____Caucasian/white
e) _____Pacific Islander

33. Do you consider yourself Hispanic/Latino/Spanish? *(Please check one)* _____Yes _____No

34. Are you _____Male or _____Female

35. What is the highest level of education you have completed? *(Please check one)*

a) _____Some high school
b) _____Graduated from high school or GED
c) _____Some vocational or technical school
d) _____Graduated from vocational or technical school
e) _____Some college
f) _____AA college degree
g) _____BA, BS college degree
h) _____Some postgraduate study
i) _____Postgraduate degree(s)

36. Including you, how many adults, teens, and children live in your household?

a) _____Adults (over 18) b) _____Teens (13 to 18 years) c) _____Children (12 or under)

37. Please indicate your <u>total</u> household income before taxes last year. *(Please check one)*

a) _____Under $20,000
b) _____$20,000 - $29,999
c) _____$30,000 - $39,999
d) _____$40,000 - $49,999
e) _____$50,000 - $59,999
f) _____$60,000 - $74,999
g) _____$75,000 - $99,999
h) _____Over $100,000

38. What else you would like to tell us, positive or negative, about this trail or other trails in Minnesota managed by the DNR?

THAT'S THE END OF THE QUESTIONS. THANK YOU VERY MUCH.

Survey # _____ (This survey number is only used to keep track of who has completed the survey and who has not. We will send replacement surveys to those who don't respond in three weeks. Your answers are strictly confidential and will never be associated with your name.)