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Comparing Bicyclists, Non-Bicyclists, and Bus Drivers in Glacier National Park

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INSTITUTE FOR TOURISM & RECREATION RESEARCH
UNIVERSITY OF MONTANA

Comparing Bicyclists, Non-Bicyclists, and Bus Drivers in Glacier National Park

Characteristics and Opinions of Bicycling the Going-to-the-Sun Road

Norma Nickerson, Ph.D., Brian Battaglia, Research Assistant; and Kara Grau, M.S.

3/18/2016

This report provides a comparison of four Glacier National Park user groups on their opinions, attitudes and knowledge of bicycling in Glacier National Park, and the impact to Montana of GNP visitors who bicycled at some point on their Montana trip.

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Characteristics and Opinions of Bicycling the Going-to-the-Sun Road

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Abstract

This report provides a comparison of four Glacier National Park (GNP) user groups on their opinions, attitudes and knowledge of bicycling in Glacier National Park. The four user groups were summer bicyclists, summer non-bicyclists, spring bicyclists, and bus drivers in the park. Results showed significant differences in the four groups on knowledge (bus drivers most knowledgeable), on opinions of bicycling the Going-to-the-Sun Road (summer bicyclists most positive), and future use of the road (summer and spring bicyclists most likely to agree to motorist restrictions on the road).

Executive summary

The purpose of this study was to compare characteristics of Glacier National Park visitors who bicycled during their trip in Montana to those who did not participate in any bicycling; to assess characteristics and bicycling attitudes of spring bicyclist on the Going-to-the-Sun Road (GTSR); and to understand the attitudes of GNP bus drivers toward bicycling on the GTSR.

Spring bicyclists were intercepted at Avalanche parking area for one day in May and one day in June with 211 bicyclists responding to the survey. Summer visitors, both bicyclists and non-bicyclists, were intercepted at Logan Pass in August and September. There were 74 bicyclists and 367 non-bicyclist respondents to the survey. Finally, 30 GNP bus drivers completed an on-line survey in June before the driving season began. Findings of the study included:

- Summer bicyclists and non-bicyclists were different in their length of stay in Montana (bicyclists 8.92 nights; non-bicyclists 6.84 nights) and significantly different in their spending patterns (bicyclists spent $1,096 in MT while non-bicyclists spent $1,385).
- Spring bicyclists were most likely to be from Montana (most from Flathead County). Summer bicyclists were most likely to be from the West while non-bicyclists were from the West and Midwest.
- Bus drivers were the most knowledgeable about bicycling regulations compared to the other three groups, but both summer groups (bicyclists and non-bicyclists) were least knowledgeable, indicating a need to educate nonresidents in MT about sharing the road with bicycles.
- Summer bicyclists were significantly different on four of the attitude questions than the other three groups. Summer bicyclists disagreed (75%) that "With bicycles on the GTSR, the thought of driving worries me," while 42% to 44% of the other groups agreed with the statement. "With motor vehicles on the GTSR, the thought of bicycling worries me," was disagreed with by summer bicyclists (50%), but all others agreed (summer non-bicyclist (66%), spring bicyclist (74%), and bus drivers (76%). "Sharing the GTSR between bicyclists and motor vehicles is unsafe," was disagreed with by 65% of summer bicyclists but all others were more likely to agree (46%-70%). "There are many problems and difficulties with bicycling the GTSR," was agreed with by only 9% of summer bicyclists, but 42%-60% of the other three groups agreed there are problems and difficulties.
- Responses to future scenarios of travel along the GTSR showed that only summer bicyclists had a majority who agreed to bicycling with motor vehicles on the road. All other groups disagreed (49% to 62% disagreement). When asked if they would bicycle the GTSR without motor vehicles, all groups had a majority who agreed, however the summer non-bicyclists had only 47% who agreed while 66% of bus drivers agreed, and 91% summer bicyclists and 93% of spring bicyclists agreed.

The data revealed differences in bicycling knowledge and differences in opinions of current and future bicycling on the GTSR. It is recommended that accurate counts of bicycling in the park be obtained and used by GNP management to take the next steps in planning for bicycling in the park. Many visitors would like to bicycle the GTSR, but opportunities to do so without motor vehicles on the road is needed.

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Introduction

Written on the Glacier National Park website under "things to do," one reads: "Biking, hiking, boating, guided tours, ranger talks...it's all here." Biking, the first activity on the list is possibly the least understood activity in the park. The number of people bicycling in Glacier is unknown. How and why regulations regarding bicycling on the Going-to-the-Sun Road (GTSR) were established is unknown. Who is bicycling along the GTSR is unknown. Bicyclists' experiences on the GTSR are unknown, and the interaction between bicyclists and vehicles on the GTSR is either hearsay or provided from a few outspoken individuals.

And yet, in a 2013 study by the Institute for Tourism and Recreation Research (ITRR) on touring bicyclists in the state of Montana, it was found that GNP was a draw for many of these long-haul bicycle travelers (see http://scholarworks.umt.edu/itrr_pubs/226/). That study became the impetus for further research on bicycling in Montana. The conversation about bicycling in Montana and Glacier National park needed more data.

Purpose

The purpose of this report was to analyze characteristics of Glacier National Park visitors who bicycled during their trip in Montana to those who did not participate in any bicycling; to assess characteristics and bicycling attitudes of spring bicyclist on the Going-to-the-Sun Road (GTSR); and to understand the attitudes of Glacier Park bus drivers towards bicycling on the GTSR. The four main objectives included:

1. To measure how Glacier National Park travelers (summer bicyclists and non-bicyclists) differ in their opinions of traveling along the GTSR and their spending and visitation in Montana.
2. To asses views of GTSR bicycling by bicyclist riding in the spring (with no motor vehicles).
3. To gauge shuttle bus drivers' attitudes toward bicycling on GTSR.
4. To assess differences in bicycling attitudes by bicyclists and non-bicyclists on the GTSR, and differences in their knowledge, perceived behaviors and likelihood of future bicycling in Glacier National Park.

A secondary objective for this study was to estimate the number of bicyclists in Glacier National Park.

Methods and Response

This study was conducted with four different populations in mind: 1) summer visitors to GNP who bicycled at some point on their trip; 2) summer visitors to GNP who did not bicycle on their trip; 3) spring cyclists who rode the GTSR with no motor vehicles, and; 4) bus drivers in GNP. These four distinct groups were chosen to provide as much of a robust study of bicycling in Glacier as possible. As shown in Figure 1, the study site was Glacier National Park with two intercept study sites and two bicycle count sites.

Figure 1: Study site map

Data collection methods and response rate for each group were as follows:

1. Both summer visitors who had not bicycled in Montana and those who bicycled at some point on their trip in the state were intercepted at Logan Pass and either completed the survey on-site or completed it after their trip, returning the questionnaire in a postage paid envelope. There were 441 surveys completed by summer visitors to GNP. A 95 percent response rate was obtained from those who were intercepted and completed the survey on site. A 30 percent response rate was obtained from the mail-back survey option.
2. Current bus drivers of the GNP shuttles, Red Busses, and Sun Tours were sent an email message from their immediate supervisor and asked to click on the survey link within the message. They were informed that their opinions and attitudes about bicycling on the GTSR were being assessed to assist in management decisions. It is unclear how many of the bus drivers actually received or looked at the survey, but 30 bus drivers did complete the survey.
3. Spring bicyclists were intercepted at Avalanche Creek parking area on Sunday May 10 and Saturday June 6, 2015. When cyclists were getting ready for their ride, researchers approached them and asked if they were willing to complete a questionnaire before riding or upon their return. Surveys were completed on-site by 211 spring bicyclists. Response rate was 84 percent.
4. To estimate the number of bicyclists in GNP, 20 one-hour counts of all vehicles entering through both the east and west entrances were obtained with the help of volunteers.

However, only 18 one-hour counts at the west entrance and 2 one-hour counts at the east entrance were conducted. During these counts, 3.35 percent of recreation visits (government and commercial vehicles were not included in the count) had visible bikes with them (133) or were on bikes (20 on bikes). Starting times ranged throughout the day from the earliest count beginning at 8:45am to the latest count ending at 5:45 pm. Volunteers conducted 13 of the 20 counts while ITRR researchers counted seven times. For an estimate that would be generalizable to all recreation visits, it is recommended that a random sample of count days and times be generated and followed throughout the summer season or a reliable road counter be used within the park on various roads.

Survey design and analysis

Questionnaires were designed to assess some common themes amongst the four groups as well as to assess particular information needs for each of the groups. The common themes included three knowledge questions, questions about current concerns with bicyclists and motorists on the GTSR, and the acceptability of certain scenarios of bicycles, pedestrians, busses, and cars on the GTSR. Each of the questionnaires can be found in Appendix A. Knowledge and attitude questions were derived from academic papers based on a literature review of the topic area (see references for literature used).

Simple statistical frequencies, means, and percentages were used for descriptive purposes while Analysis of Variance (ANOVA) was used to look at differences between groups.

Limitations

Convenience sampling at Logan Pass and Avalanche parking area was used rather than random sampling. Due to the on-site intercept methodology, non-response bias checks were not conducted. Additionally, the summer sample was derived from intercepts conducted in August and September since a forest fire erupted on the east side of the park two days before the July data collection was to begin, precluding intercepts that month. It is likely that the small sample of 74 summer bicyclist respondents is not fully representative of all summer bicyclists. The bus driver sample was limited to 30 respondents who were not identified as to the type of bus they drove (shuttle or tour).

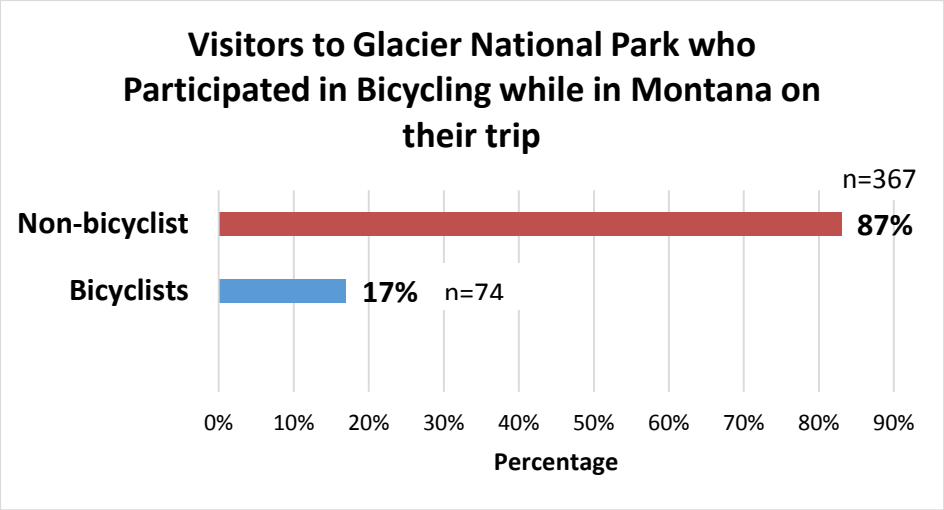
Results

Results are shown first by group type (summer bicyclists and non-bicyclists, spring bicyclists, bus drivers) followed by comparisons amongst the sample groups.

Summer Visitors

During the summer of 2015, 441 visitors of Glacier National Park participated in the bicycle tourism survey pertaining to the characteristics of bicycle tourism participation and economic contributions to the state of Montana. From the entire sample of 411 visitors, 74 (17%) participated in bicycling during their trip to Montana and 367 (83%) did not participate in bicycling during their trip in Montana (Figure 2).

Figure 2: Percent of bicyclists and non-bicyclists in study sample



Demographics and trip characteristics

Summer bicycling respondents' average group size was 2.43, they were predominantly male (73%), and spent an average of 8.92 nights away from home in Montana, although five percent of the bicyclists spent over 30 nights in Montana on their trip. Non-bicyclist summer respondents had slightly larger groups, on average, at 2.77 people per group, were only 46 percent male, and spent an average of 6.84 nights in Montana away from home, but less than one percent spent over 30 nights in Montana on this trip. Eleven percent of the bicycling respondents were from Montana while 29 percent of the non-cyclists were from Montana. Table 1 identifies the top places of residency of summer bicyclists and non-bicyclists; California, Washington and Montana were the top three.

Table 1: Residency of GNP summer visitors

Residency of summer visitors to Glacier Park National Park			
Bicyclists (n=74)		**Non-Bicyclist (n=376)**	
California	15%	**Washington**	11%
Montana	12%	**Montana**	9%
Washington	10%	**California**	7%
Alberta	8%	**Minnesota**	5%
Oregon	8%	**Wisconsin**	4%
Minnesota	4%	**Michigan**	4%
Utah	4%	**Massachusetts**	4%
Wisconsin	4%	**Pennsylvania**	4%
AZ, ID, NC, OH	3% ea.	**Colorado**	4%
		OR, NY, ALB, IN, OH, SD	3% ea.

Residences of North American respondents are visually displayed in Figure 3. In this map, it is clear that visitors to Glacier come from all over the United States and Canada. International visitors (not

shown in Figure 3) were from Korea, the Netherlands, New Zealand and Slovakia. It should be noted that these summer visitors only represent visitors in August and September which likely explains the higher percent of visitation from Montana residents, especially in the September sample.

The location of where visitors to GNP entered the state and routes are displayed in Figures 4 and 5. Visitors who bicycled at some point on their Montana trip mostly traveled along the highline (Highway 2) and along I90 (Figure 4). The small sample size (74) does not show much variability in routes for these bicyclists. The main entry points to Montana by the bicyclist sample were all the entrances immediately north or west of Glacier. Missoula and West Yellowstone were also typical entry points for these types of visitors.

Non-bicyclists on this trip in Montana mostly traveled I90 to Missoula then north on Highway 93 to Glacier National Park. However, it is clear from the map (Figure 5), that segments of these visitors traveled many of the less known highways throughout Montana to reach Glacier. The main entry points for the non-bicyclists included Glacier International Airport, I90 from Idaho and Wyoming, and I94 from North Dakota.

Figure 3: Place of residency for summer visitors to GNP map

Figure 4: Glacier National Park bicyclists' starting point in Montana and routes taken on trip

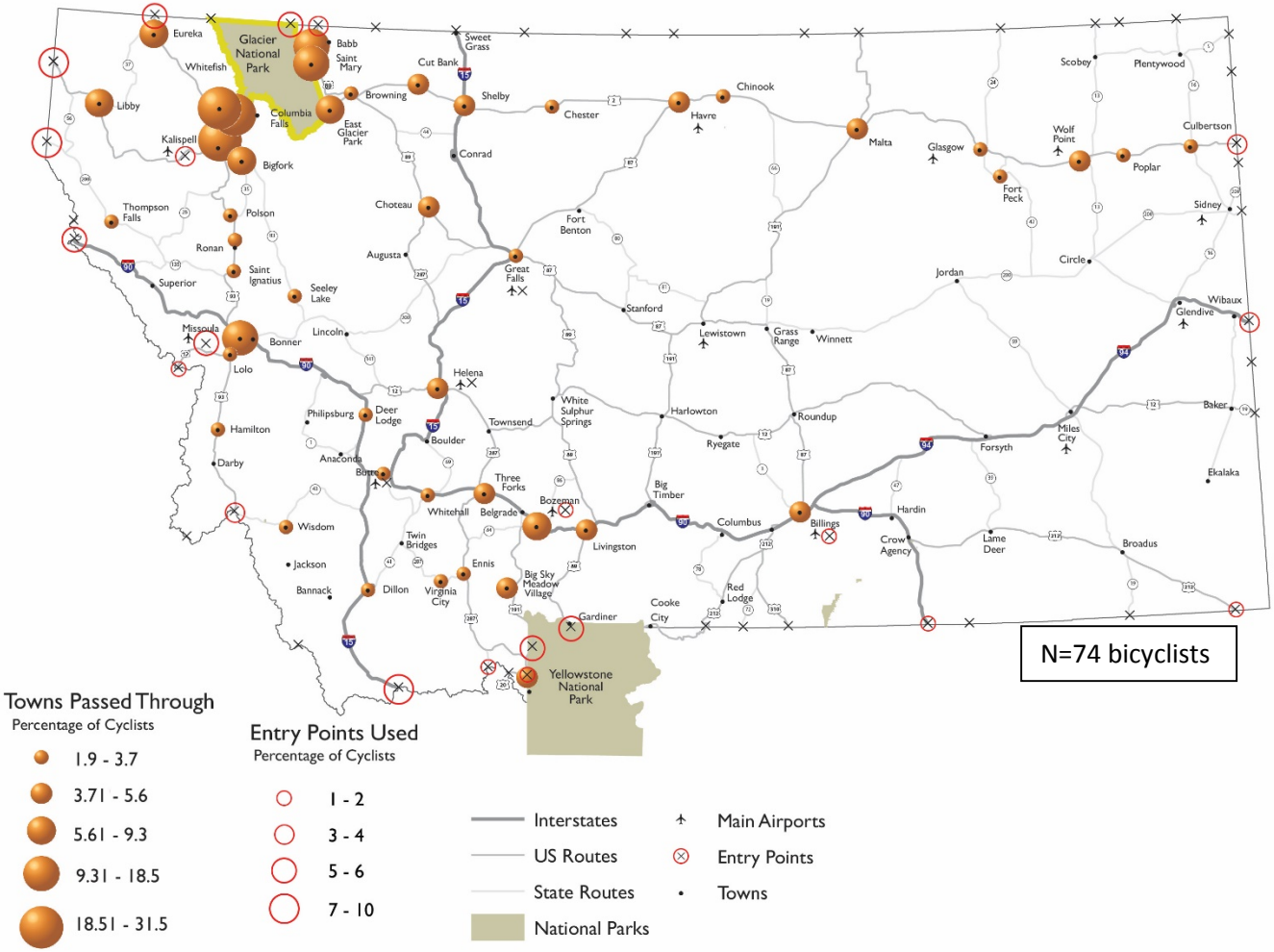
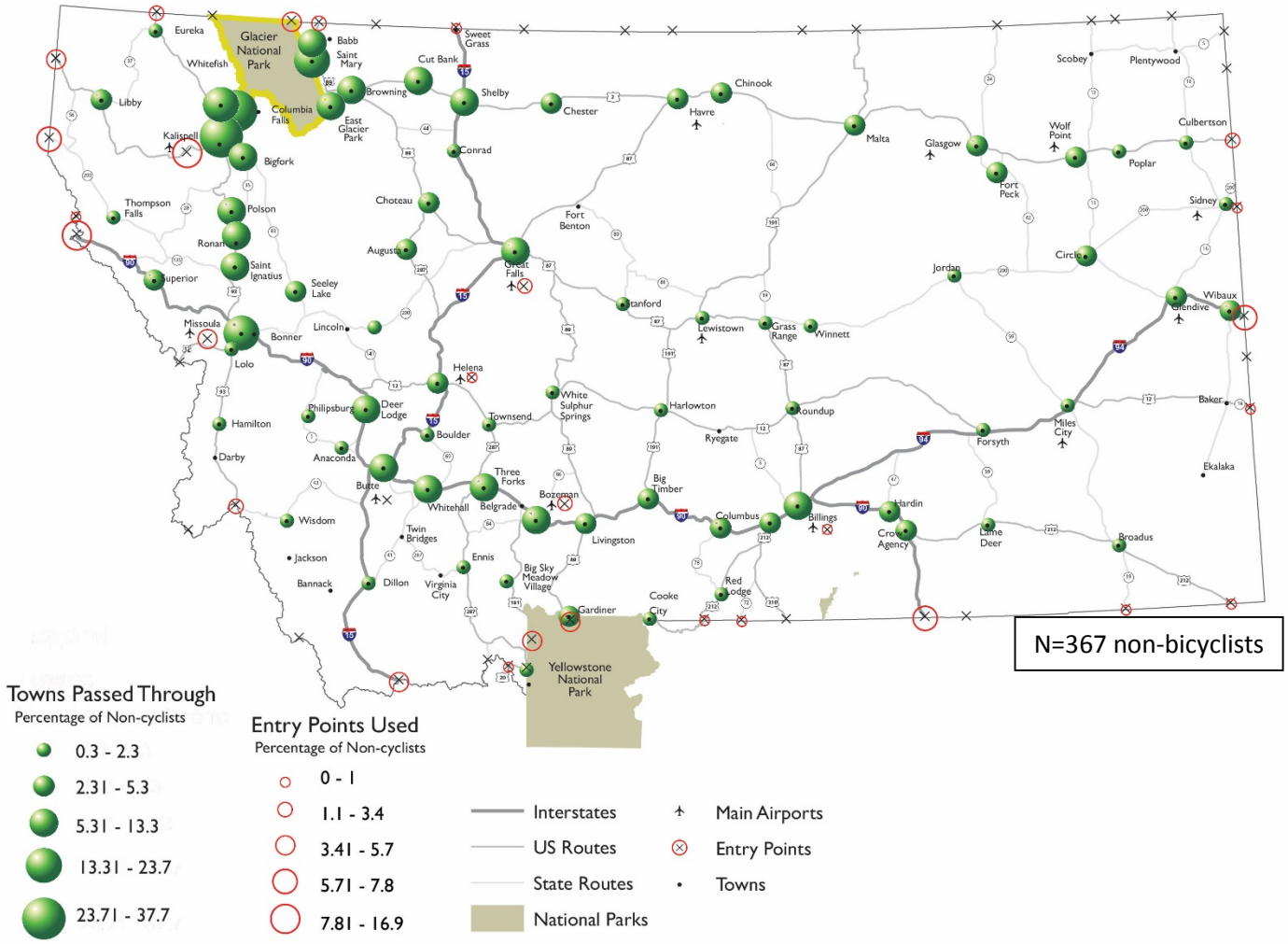


Figure 5: Glacier National Park non-bicyclists' starting point in Montana and routes taken on trip



Bicyclist on this trip in Montana

Visitors who indicated bicycling while on their trip in Montana were asked about the characteristics of their chosen bicycle mode. Eighty-four percent of all bicyclists in GNP indicated that they brought a bicycle with them on their trip in Montana. Of the total sample of GNP cyclists, 22 percent reported that they physically rode their bicycle into the state of Montana. Renting a bicycle showed the next highest percentage (14%) for type of bicycle mode amongst GNP bicycle tourists followed by taking an organized tour (11%) (Table 2). Percentages do not add up to 100 because the bicycle modes are not mutually exclusive.

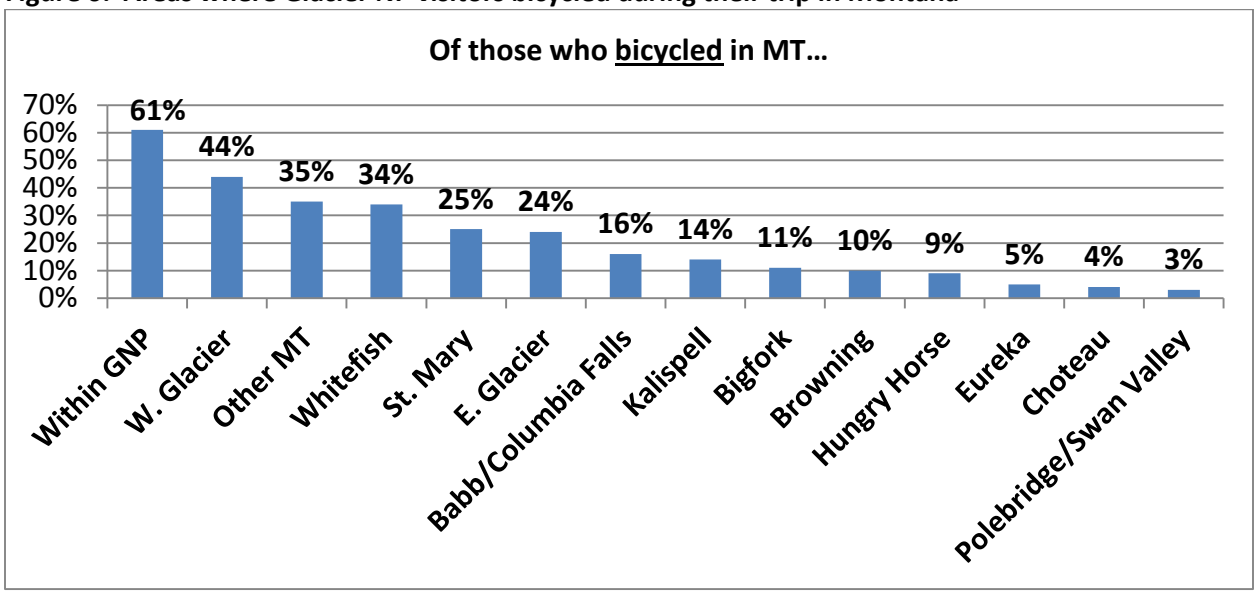
Table 2: Respondent bicycle behavior in Montana

Bicycle Mode (n=74)	Frequency	Percent
Brought a bike	62	84%
Bicycled into Montana	16	22%
Rented a bicycle	10	14%
Took an organized bicycle tour	8	11%

*Does not add to 100%. Respondents could check all that applied.

Those who bicycled in Montana were asked where they bicycled on this trip. Bicycling within GNP showed the highest percentage (61%), followed by those who bicycled in West Glacier (44%) and then other places around Montana (35%) as shown in Figure 6. This indicates that visitors to Glacier who bicycled in Montana did not just bicycle in the Glacier National Park vicinity since 35 percent of them were just as likely to be bicycling outside of northwest Montana.

Figure 6: Areas where Glacier NP visitors bicycled during their trip in Montana



The types of bicycling these 74 visitors to Glacier had engaged in while in Montana was mostly along the GTSR in Glacier (67%) followed by bicycling on city streets (45%) and highway bicycling (40%) (Table 3).

Table 3: Type of bicycling participated in on trip to Montana

On this trip in Montana, what type of bicycling did you participate in?	Frequency	Percent*
GTSR bicycling	49	67%
Bicycling on city streets	33	45%
Highway bicycling	29	40%
Paved-paths separate from the roadway	25	34%
Gravel roads or backcountry roads	23	32%
Mountain biking or cyclocross on single track trails	11	15%

*Does not add to 100%. Respondents could check all that applied.

Finally, bicycling related activities on this trip varied widely. As shown in Table 4, the highest participation rate was visiting a bicycle shop for repairs, clothing, and equipment or to rent a bike, with 42 percent of respondents doing this activity. This was followed by 23 percent taking a multi-day independent tour and 12 percent taking a multi-day tour supported with a vehicle.

Table 4: Bicycling related activities of those who bicycled on their Montana trip

Did you spectate or participate in…	Frequency	Percent*
Visited a bicycle shop on this trip	29	42%
Multi-day independent tour (bicycle as main travel mode)	17	23%
Multi-day supported-by -vehicle tour (bicycle as main travel mode)	9	12%
Bicycled on an Adventure Cycling Route in MT	9	12%
Participated or watched a bicycle special event	3	4%
Participated or watched a mountain bike or cyclocross race	1	1%

*Does not add to 100%. Respondents could check all that applied.

Summer visitors were asked about the types of accommodations they used while on this Montana trip (Table 5). Of the 12 accommodation options provided to the respondent, non-bicyclists were more likely to spend nights in hotel/motel bed & breakfasts (62%) compared to 39 percent for bicyclists. Bicyclist were more likely to spend nights camping on public and private lands (47% and 27%) compared to non-bicyclists (24% and 19%).

Table 5: Type of accommodations used on Montana trip to Glacier National Park

Accommodation Type	Bicyclists (n=74)*	Non-bicyclist (n=367)*
Public land camping	47% (35)	24% (87)
Hotel/motel/bed & breakfast	39% (29)	62% (228)
Private campground	27% (20)	19% (68)
Home of friend or relative	15% (11)	15% (54)
Vehicle in parking lot	11% (8)	7% (24)
Rental cabin/home	10% (7)	18% (65)
Warm showers	10% (7)	10% (36)
My second home/cabin/condo	7% (5)	2% (7)
Bicycle camp	4% (3)	--
Guest ranch	3% (2)	<1% (2)
Couch surfing	3% (2)	<1% (2)
Resort/condominium	1% (1)	4% (13)

*Does not add to 100%. Respondents could check all that applied.

Spending comparisons

The total amount of money spent by those who bicycled at some point on their trip in Montana and those who did not bicycle was asked of both respondent groups. It is important to note that with so few responding bicyclists, the sample of 74 is quite low for complete accuracy in regards to spending data and the dollar amounts within each category. With caution, comparisons are still provided. The data revealed that non-bicyclist groups in this study spent more than bicyclist groups by nearly $289 for the entire trip (Table 6). Further analysis shows that bicyclist groups spent more than non-bicyclist groups on camping, groceries/snacks, transportation, outfitter/guide, services and other categories. Non-bicyclist groups spent more on hotel/motel, restaurant/bar, retail, fuel, auto rental, and licenses/fees/admissions.

The findings of this study are not comparable to the Nickerson, et.al. 2014 report found at: http://scholarworks.umt.edu/itrr_pubs/322/. That project "Bicycle tourism: Providing economic development opportunities for Montana" focused on a different study population - visitors on a long-haul bicycle touring trip in Montana. That type of visitor is much different than a family who brought bikes with them and rode through the campground with their children, or a couple who drove to Glacier, then rode the GTSR. While the current study captured both types of bicyclists (leisure and long-haul bicyclists), the number of long-haul touring respondents in this current study were too few (16 in total) to run spending analysis on them alone. Therefore, numbers in Table 6 represent the spending of a variety of bicyclists.

Table 6: Spending comparison between bicyclists and non-bicyclists

	Bicyclists	Non-Bicyclists
	n=74	n=359
Nights in MT	10.45	7.10
delimited Nights to 30	8.92	6.84
Group size	2.43	2.77
Hotel, Motel	$341.55	$536.77
Camping	$52.11	$45.80
Restaurant, bar	$230.11	$243.67
Groceries, snacks	$131.56	$109.22
Retail	$76.69	$92.18
Transportation	$13.57	$12.81
Fuel	$88.09	$121.53
Auto rental	$22.17	$139.12
Outfitter, guide	$87.90	$51.44
Services	$14.14	$3.79
License, fees, admission	$10.40	$19.80
Other	$27.83	$8.70
Average Trip Group spending	$1,096.10	$1,384.83
Average Daily Group spending	$122.88	$202.46

Summary of summer bicyclists and non-bicyclists

Summer bicyclists were most likely to bring a bike with them, ride in Glacier National Park and the western communities near Glacier as well as other Montana areas, and ride on both city streets and highways at some point on their trip. Nearly half visited bicycle shops while in Montana. Over half were from the western United States and Canada including California, Montana, Washington, Alberta, and Oregon. These visitors were most likely to enter the state from the west or north. Bicyclists' average length of stay was nearly nine nights. Bicyclists were most likely to spend nights camping followed by hotel/motels.

Summer non-bicyclists were most likely to be from Washington, Montana, California, and Minnesota and stay nearly seven nights in Montana. These visitors drove I90 and I94, US-2, and Highway 93 north of Missoula to Glacier National Park. Two-thirds of non-bicycling visitors spent nights in hotel/motels followed by camping. Non-bicyclists spending in Montana was 26 percent more than their bicycling counterparts.

Spring Visitors

During spring of 2015, 211 visitors to Glacier National Park participated in the bicycle tourism survey. Visitors were intercepted on two separate days: Sunday, May 10 (Mother's Day) and Saturday June 6th. Both survey days were conducted at a time when the Going-to-Sun-Road was still being plowed in the higher elevations so the GTSR was only open to bicyclists and pedestrians. No motor vehicles were allowed on the road, providing a vehicle-free experience for the respondents to this study.

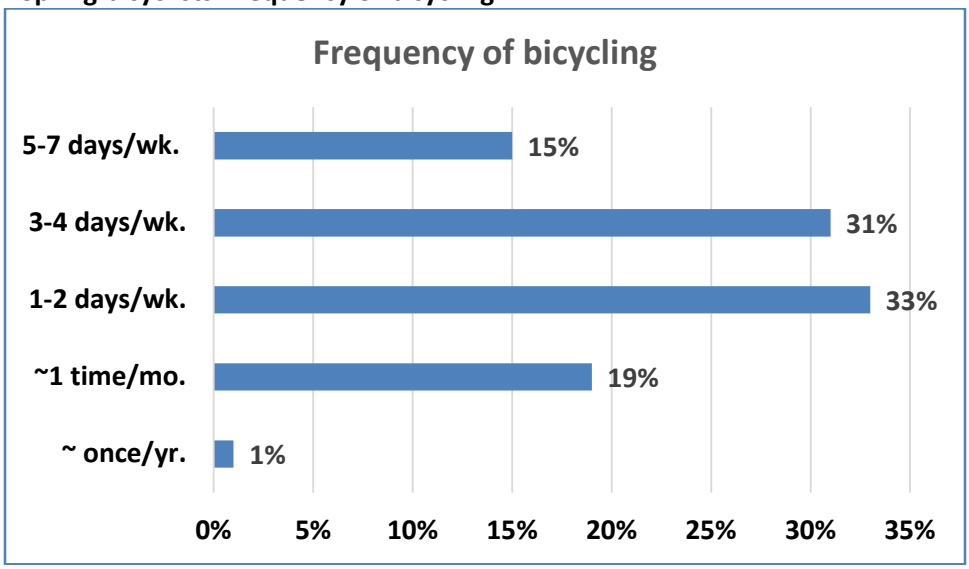
Demographics and trip characteristics

Residency of spring respondents showed that only 13 percent (28) were not residents of Montana, 61 percent (128) were Montanans residing in Flathead or Glacier Counties, and 26 percent (55) reside in other Montana counties. Nonresident visitors came from Washington (5), Colorado (4), Utah (3), Alberta, California, and Maine (2 each), and one each from Idaho, New Hampshire, Ohio, Wyoming, and the Netherlands. Five respondents did not report their place of residence.

Respondent ages ranged from 19 to 73 years old with a mean age of 44.97 years. Slightly fewer males (48%) completed the survey compared to females (52%).

Spring bicyclists were divided almost evenly in their frequency for riding a bike: 30 percent ride occasionally, 38 percent ride frequently, and 31 percent ride very frequently. Not surprisingly, 100 percent of spring respondents indicated that they ride for recreation purposes, however 39 percent said they also commute to and from work on their bicycle. More detailed responses to frequency of bicycling by respondents are shown in Figure 7.

Figure 7: Spring bicyclists' frequency of bicycling



All respondents to the spring survey have bicycled the Going-to-Sun-Road without vehicles on the road due to the methodology of intercepting these folks right before or after their bicycling trip in GNP. An additional 28 percent of these respondents have also bicycled the GTSR with motor vehicles on the road.

Bicycling attitudes by spring bicyclists

Spring bicyclists responded to a set of 11 attitude-critique statements regarding bicyclists' and motorists' behaviors on the road (Table 7). These 11 statements represented their overall beliefs about bicycling and were not specific to Glacier National Park. These statements were assessed by respondents before any Glacier-related bike statements so as to not confuse the respondent. Spring

bicyclists were in agreement that education about sharing the road, both for motorists and bicyclists, is important as each received the highest overall means (92% and 95% agreed with these statements). Further analysis of Table 7 indicates that spring bicyclists have a strong belief that bikes have a right to the road; that motorists should be educated; that motorists should be more courteous to bicyclists; but recognized that bicyclists should also be educated about sharing the road with vehicles.

Table 7: Spring bicyclist's critique toward bicycles and motor vehicles on roadways

In my daily life, I believe…	Disagree	Neutral	Agree	Mean*
Motorists should be educated about sharing the road with bicyclists	2% (4)	6% (12)	92% (195)	4.34
Bicyclists should be educated about sharing the road with vehicles	1% (3)	4% (9)	95% (199)	4.33
Bicyclists have just as much right to use the road as motorists	5% (11)	11% (24)	83% (176)	4.31
Motorists should be more courteous to bicyclists on the road	2% (5)	12% (25)	86% (181)	4.22
When possible, motorists should change lanes while passing bicyclists	7% (15)	12% (25)	81% (171)	4.12
Many motorists do not look out for bicyclists.	12% (25)	19% (41)	68% (145)	3.83
Bicyclists should be more courteous to motorists on the road	12% (25)	29% (62)	59% (124)	3.64
Bicyclists do not ride properly on the road	28% (59)	42% (88)	30% (64)	3.05
While driving, it is very frustrating sharing the road with bicyclists	53% (112)	28% (60)	18% (39)	2.56
Bicyclists should not be able to ride on main roads during high traffic	46% (97)	21% (45)	33% (69)	2.79
Bicyclists should be restricted to riding on paths/trials off the street	83% (174)	11% (23)	6% (14)	1.87

*Scale: 1=strongly disagree to 5=strongly agree; the strongly disagree and disagree were aggregated for this table as were strongly agree and agree.

Summary of spring bicyclists

The vast majority (87%) of spring respondents was from Montana, and slightly more than half were females (52%). Spring bicyclists are frequent bicycle riders (at least 1-2 times per week) and nearly 40 percent of them also commute to work on their bike. Spring bicyclists are strong in their belief that bicyclists have rights to the road and believe that motorists probably don't see it that way. Bicyclists do believe that both motorists and bicyclists need some education about sharing the road.

GNP bus drivers

The GTSR is a highly used road by motor vehicles including shuttle busses, Red Tour busses and Sun Tour busses. A bus driver may travel the GTSR multiple times in one day and is more likely to pass bicyclists along the road. Because of their frequent use of the road and their concerns with bicyclists on the same road, a separate survey of bus drivers was conducted.

Demographics and characteristics

Thirty bus drivers completed the on-line questionnaire. Bus driver ages ranged from 35-78 with 60.77 as the mean age. Seventy-seven percent of bus driver respondents were male. The majority has never bicycled along GTSR (80%), however four drivers have bicycled the road with no motor vehicles on it and two drivers have bicycled the road with motor vehicles on the road. Two-thirds of the drivers (20) have ridden a bicycle in the past 12 months. Of those bicyclists, three reported bicycling very frequently, five said frequently, and 12 bus drivers reported that they bicycle occasionally.

Bus driver and bicyclist interaction

Four questions regarding bus driver's interaction with bicyclists along the road were asked of the bus drivers. Three of the questions related to the bicyclists behavior and one question was about bus driver behavior. Figures 8-11 graphically display the answers by the bus drivers.

According to bus drivers, they infrequently encounter bicyclists riding side-by-side on the GTSR, which is a good thing since that is not allowed in GNP. Slightly over half of the bus drivers said that bicyclists did not move over when they could along the road. The majority of bus drivers did not experience bicyclists who passed on the right hand side of vehicles. Finally, bus drivers try to give bicyclists at least three feet when passing.

Figure 8: Bus drivers encountering side-by-side bikes

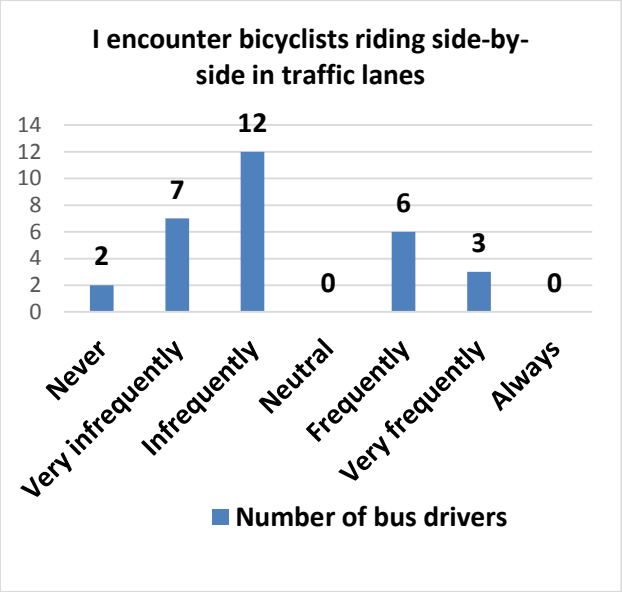


Figure 9: Bicyclists that do not move over

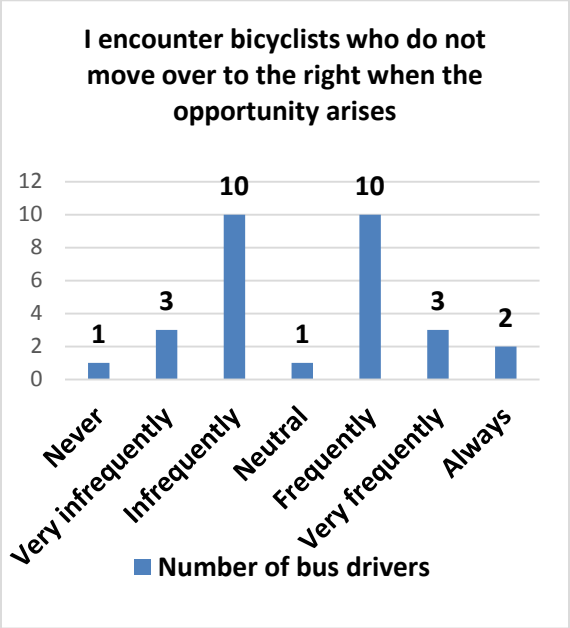


Figure 10: Space given by bus drivers to bikes

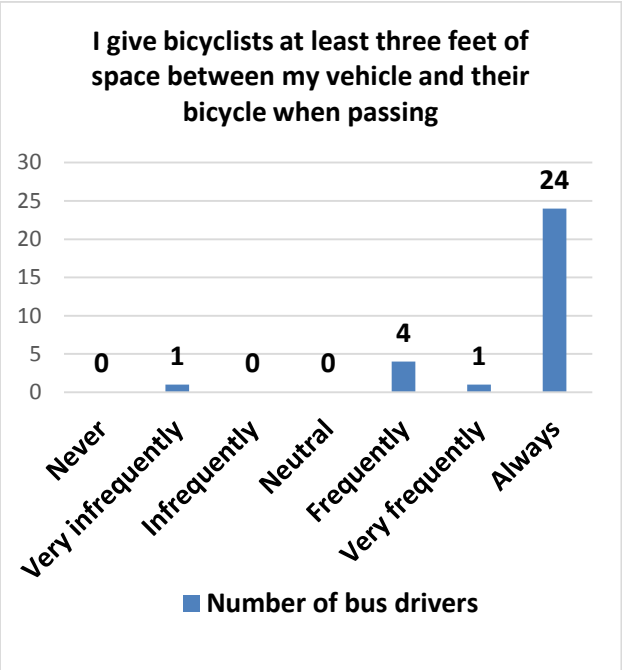
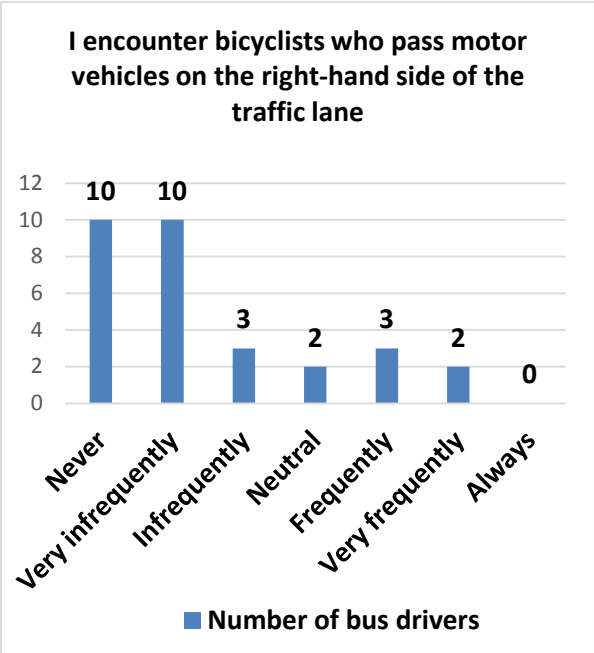


Figure 11: Bikes passing motorists on right



Bus driver bicycling attitudes

Bus drivers responded to a set of 11 attitude-critique questions regarding bicyclists and motorists' behaviors on the road (Table 8). These were the same question asked of the spring bicyclists, and while there were some similar attitudes as spring bicyclists, it was interesting to note slightly more attitude toward the need for bicyclists to improve their behaviors on the road. Three out of the top four statements that received the highest level of agreement were statements that bicyclists "should" do something (be educated, be more courteous, not ride on busy roads) showing a serious critique that bicyclists need to change their behavior.

Table 8: Bus drivers' critique toward bicycles and motor vehicles on roadways

Attitude statements	Disagree	Neutral	Agree	Mean*
Bicyclists should be educated about sharing the road with vehicles	0%	10% (3)	90% (27)	4.40
Bicyclists should be more courteous to motorists on the road	3% (1)	20% (6)	77% (23)	4.10
Motorists should be educated about sharing the road with bicyclists	3% (1)	23% (7)	73% (22)	4.00
Bicyclists should not be able to ride on main roads during high traffic	7% (2)	7% (2)	87% (26)	4.07
The idea of bicycling on busy roads frightens me	3% (1)	17% (5)	80% (24)	4.03
Many motorists do not look out for bicyclists.	7% (2)	17% (5)	77% (23)	3.93
Motorists should be more courteous to bicyclists on the road	7% (2)	33% (10)	60% (18)	3.70
While driving, it is very frustrating sharing the road with bicyclists	10% (3)	27% (8)	63% (19)	3.70
When possible, motorists should change lanes while passing bicyclists	17% (5)	10% (3)	73% (22)	3.67
Bicyclists do not ride properly on the road	17% (5)	33% (10)	50% (15)	3.53
Bicyclists have just as much right to use the road as motorists	17% (5)	27% (8)	57% (17)	3.50
Bicyclists should be restricted to riding on paths/trials off the street	20% (6)	47% (14)	33% (10)	3.27

*Scale: 1=strongly disagree to 5=strongly agree; the strongly disagree and disagree were aggregated for this table as were strongly agree and agree.

Summary of bus drivers

A majority of the bus drivers has never bicycled on the GTSR, but have bicycled in the past 12 months, indicating they are familiar with bicycling. Their critiques of bicycling show that they appear to be more motorist-centric by responding that bicyclists "should" be educated, more courteous, and not

ride on busy roads. While driving the GTSR, one-half of the bus drivers frequently encounter bicyclists who do not move over into pullouts when the opportunity arises. Most bus drivers, however, did not encounter bicyclists riding side-by-side, and all but one driver said they try to give bicyclists at least 3-feet when passing them on the GTSR.

Comparison between sample groups: knowledge, GTSR use and future use

This section looks at differences in a number of issues asked of each of the four groups previously discussed: summer bicyclists, summer non-bicyclists, spring bicyclists, and bus drivers. The groups were compared on knowledge of bicycling regulations, their critique about traveling along the GTSR, and their agreement to possible future travel scenarios on the GTSR.

Knowledge of bicycle regulations

Three yes/no knowledge questions were asked of each respondent with an option to answer "I don't know" (Table 9). The correct response is in parenthesis after each statement in the table. Questions 1 and 2 are state law within Montana and most other states. Question 3 is specific to Glacier National Park.

As shown in Table 9, it is clear that many visitors to GNP are unsure of the correct answers ("I don't know" responses). While two-thirds of the bus drivers were correct on two of the three statements, it is possible that bus drivers responded to question 2 as it related to GNP, and with such a narrow road they may have thought it was incorrect. Spring bicyclists had more correct answers than summer visitors (both bicyclist and non-bicyclists) indicating a need to educate the nonresident visitor on bicycling regulations since Montana residents were a vast majority of spring bicyclists.

Table 9: Comparative responses to bicycle knowledge questions

Question	Summer Bicyclists	Summer Non-Bicyclist	Spring Bicyclists	Bus Driver
1. When passing bicyclists, a motor vehicle can cross the solid yellow line when it is safe to do so. (yes)				
Yes	45%	48%	56%	67%
No	11%	18%	11%	20%
I don't know	44%	33%	16%	13%
2. Bicyclists are allowed to overtake a motor vehicle on the right-hand side of the traffic lane. (yes)				
Yes	23%	31%	24%	27%
No	27%	27%	38%	60%
I don't know	49%	42%	38%	13%
3. Bicyclists are allowed to ride side-by-side on the Going-to-Sun-Road. (no)				
Yes	15%	16%	21%	10%
No	53%	44%	51%	67%
I don't know	32%	40%	28%	23%

Use of Going-to-the-Sun Road

Respondents were asked the extent to which they agree to six questions about driving or bicycling on the GTSR on a 5-point Likert scale. Table 10 provides the percentages and means for each statement.

An analysis of variance was conducted to see if there were differences among the four groups (summer bicyclists, summer non-bicyclist, spring bicyclists, and bus drivers) followed by a Bonferroni post hoc test to understand which groups were different from each other.

First, we found that summer bicyclists were significantly different from the other three groups in their attitudes on questions 1-4 indicating, that summer bicyclists are less concerned about biking on the road with vehicles or driving on the road with bicycles, less concerned about sharing the road, and view fewer problems and difficulties with bicycling on the GTSR.

In question 5, "Getting to my final destination quickly on the GTSR is important to me," numerous differences were found. First, summer bicyclists disagree and are significantly different than summer non-bicyclist and bus drivers who are more likely to want to get to their destination a little faster. Second, spring bicyclists were significantly different than summer non-bicyclists and more likely to disagree but not significantly different than bus drivers. Finally, summer non-bicyclists and bus drivers are not different from each other in their attitudes toward getting to their final destination.

The last question in this series, "Bicycling is safe on the GTSR," showed that summer and spring bicyclists are more likely to agree that it is safe and are significantly different than bus drivers and summer non-bicyclists who disagreed with the statement.

Table 10: Attitudes toward traveling along the GTSR

Statement	Summer Bicyclists	Summer Non-Bicyclist	Spring Bicyclists	Bus Driver
1. With bicycles on the GTSR, the thought of driving worries me				
Disagree	**76%**	37%	35%	37%
Neutral	10%	19%	24%	20%
Agree	14%	**44%**	**42%**	**43%**
MEAN*	2.14[a]	3.13[b]	3.01[b]	3.07[b]
2. With motor vehicles on the GTSR, the thought of bicycling worries me				
Disagree	**50%**	18%	13%	7%
Neutral	18%	16%	13%	17%
Agree	32%	**66%**	**74%**	**76%**
MEAN*	2.74[a]	3.73[b]	3.79[b]	3.97[b]
3. Sharing the GTSR between bicyclists and motor vehicles is unsafe				
Disagree	**65%**	31%	24%	20%
Neutral	18%	22%	30%	10%
Agree	17%	**47%**	**46%**	**70%**
MEAN*	2.36[a]	3.29[b]	3.17[b]	3.80[b]
4. There are many problems and difficulties with bicycling the GTSR				
Disagree	**55%**	22%	21%	23%
Neutral	36%	32%	37%	17%
Agree	9%	**46%**	**42%**	**60%**
MEAN*	2.47[a]	3.32[b]	3.17[b]	3.57[b]
5. Getting to my final destination quickly on the GTSR is important to me				
Disagree	**57%**	**43%**	**58%**	37%
Neutral	27%	23%	27%	23%
Agree	16%	34%	15%	**40%**
MEAN*	2.28[a]	2.90[b]	2.42[ac]	3.00[bc]
6. Bicycling is safe on the GTSR				
Disagree	15%	**43%**	24%	**70%**
Neutral	31%	34%	**45%**	10%
Agree	**54%**	23%	31%	20%
MEAN*	3.38[a]	2.67[b]	3.09[a]	2.23[b]

Scale: 1=strongly disagree, 2= disagree, 3= neutral, 4= agree, 5=strongly agree

* If the groups share the same superscript letter, they are the same (not significantly different) on that statement.

Q1-4: Summer bicyclists were significantly different from the other three groups in their attitudes

Q5: Summer bicyclists were significantly different than non-bicyclists and bus drivers; and Spring cyclists were significantly different than summer non-bicyclists

Q6: Summer and spring bicyclists were significantly different than non-bicyclists and bus drivers

Future use of Going-to-the-Sun Road

Four questions were asked of each of the sample groups regarding future use of the GTSR with scenarios about use of motor vehicles, shuttle buses, and bicycles (Table 11). Findings showed some significant differences in each of the statements by sample groups as they responded to a 5=point scale from strongly disagree to strongly agree.

In question 1, respondents were asked, "In the future I would be willing to bicycle GTSR with motor vehicles on the road." It was found that summer bicyclists were significantly different than all three of the other groups (spring cyclists, bus drivers, and summer non-bicyclists) and were very likely to agree. It seems obvious that many of these respondents had already experienced riding the road with vehicles and therefore are willing to do it again in the future. In addition, spring bicyclists were significantly different from summer non-bicyclists who were more likely to disagree to the statement. Bus drivers and summer non-bicyclists showed no significant differences between the groups.

Question 2 regarding respondents' willingness to bicycle GTSR without motor vehicles showed that summer bicyclists (91%), spring cyclists (93%), and bus drivers (66%) agreed, and were all significantly different than summer non-bicyclists where 47 percent agreed. Summer bicyclists and spring bicyclists were not different from one another.

"In the future, I would be willing to bicycle GTSR with only shuttle busses on the road," showed that summer non-bicyclists were more likely to disagree and were significantly different from the other three groups.

Finally, question 4 stated, "In the future, I would be willing to have GTSR open to buses, bicyclists and pedestrians only." It was found that summer non-bicyclist were significantly different than the other three groups and were most likely to disagree while the others were more likely to agree.

Table 11: Responses to future scenarios of travel along the Going-to-the-Sun Road

Statement	Summer Bicyclists	Summer Non-Bicyclist	Spring Bicyclists	Bus Driver
1. In the future, I would be willing to bicycle GTRS *with* motor vehicles				
Disagree	11%	**62%**	**49%**	**60%**
Neutral	14%	15%	18%	30%
Agree	**75%**	23%	33%	10%
MEAN*	3.95[a]	2.25[b]	2.73[c]	2.13[bc]
2. In the future, I would be willing to bicycle GTRS with *NO* motor vehicles				
Disagree	4%	35%	1%	17%
Neutral	5%	17%	6%	17%
Agree	**91%**	**47%**	**93%**	**66%**
MEAN*	4.50[a]	3.05[b]	4.59[a]	3.77[c]
3. In the future, I would be willing to bicycle GTRS with only shuttle buses				
Disagree	15%	**46%**	11%	13%
Neutral	14%	19%	16%	20%
Agree	**71%**	35%	**73%**	**67%**
MEAN*	3.93[a]	2.71[b]	3.89[a]	3.67[a]
4. In the future, I would be willing to have GTRS open to buses, bicyclists and pedestrians only				
Disagree	34%	**64%**	25%	30%
Neutral	7%	14%	26%	13%
Agree	**59%**	22%	**49%**	**57%**
MEAN*	3.55[a]	2.27[b]	3.34[a]	3.37[a]

Scale: 1=strongly disagree, 2= disagree, 3= neutral, 4= agree, 5=strongly agree
* If the groups share the same superscript letter, they are the same (not significantly different) on that statement.
Q1: Summer bicyclist are significantly different than the other three groups and Spring bicyclists are different than summer non-bicyclists
Q2: Summer non-bicyclists are significantly different than summer bicyclists, spring bicyclist, and bus driver; Summer and spring bicyclists are not significantly different form each other
Q3: Summer non-bicyclists are significantly different than the other three groups
Q4: Summer non-bicyclists are significantly different than the other three groups

Conclusions & Recommendations

This report provided a comparison of four Glacier National Park user groups on their opinions, attitudes and knowledge of bicycling in Glacier National Park, including an analysis of trip spending in Montana by visitors to Glacier. The four user groups were summer bicyclists, summer non-bicyclists, spring bicyclists and bus drivers in the park. While bus drivers are not necessarily a user group in the same sense the other groups are "visitors" to the park, their frequent usage of the Going-to-Sun-Road to

transport visitors was deemed an important group to understand as it relates to traveling the GTSR and bicycling the road.

Looking at the three visitor groups, summer bicyclists spent the most amount of time in Montana and were also more likely to be male compared to the summer non-bicyclists and spring bicyclists. Summer bicyclists were most likely to be from the western states/provinces while spring bicyclist were mostly from Montana. Summer non-bicyclists were most likely to be from the west and Midwest.

Not all four groups were asked the exact same questions due to certain information needs from each group, but all groups did get asked the bicycling knowledge questions, use of GTSR, and future use of GTSR with varying differences revealed.

First of all, bus drivers were most knowledgeable about the three bicycling regulations followed by spring bicyclists, non-bicyclists and lastly, summer bicyclist. While it is unclear why the summer bicyclists appeared to be the least knowledgeable, they were most likely to say "I don't know" because they were not sure if the laws in Montana were different than other states. The conclusion, however, does point to the need to educate everyone about bicycling on the roads and the rights and responsibilities of bicyclists.

Second, the questions regarding use of the GTSR showed that summer bicyclists were the most positive regarding bikes on the road followed by spring bicyclists, summer non-bicyclists, and then bus drivers. In nearly all cases, the vast majority of bus drivers agreed that bicycling on the GTSR was unsafe, was worrisome, was problematic and they probably felt bicyclists were in their way when driving since getting to their final destination quickly was something they needed to do. While non-bicyclists were somewhat similar to bus drivers, their tendency to agree was less emphatic.

Third, the question on the future transportation scenarios on the GTSR showed that summer bicyclists will bike the road no matter what the scenario suggested. These folks want to have the privilege of bicycling the road and will do it with other motor vehicles or not. It doesn't matter. Interestingly, spring bicyclists and bus drivers were more similar in their responses to future scenarios in that more of both groups agreed to bicycling the road when there were restrictions to motor vehicles on the road. In contrast, nearly half of the summer non-bicyclists agreed to bicycling the road with no motor vehicles but when stated differently that the road would only be open to bicycles, shuttle buses and pedestrians, more than two-thirds disagreed. It appears the non-bicyclists do not want their rights of driving the GTSR to be taken away from them in the future. Part of that sentiment is arguably related to the fact that some folks simply do not bicycle, let alone bicycle on a steep mountain road. There are people out there who won't do it for a variety of reasons including health, fitness, and safety.

Recommendations

The data revealed that education on sharing the road between bicyclists and motorists is of utmost importance. Bicyclists and non-bicyclists believe both groups need education. Interestingly, the education needed is not just about bicycling the GTSR, but bicycling anywhere that bicycles and motorists might be sharing a roadway. In the case of bicycling the GTSR, results of a companion study conducted with this study did an experimental design that showed if people were given a brochure

when they entered the park and they read it, their attitudes toward sharing the road in Glacier were better than those who did not read the brochure. In addition, those who saw the sign "Bicycles may use full lane. Pass 3 ft. minimum," were significantly more likely to get that knowledge statement correct (see: Assessing Going-to-the-Sun Road Traveler's Attitudes, Knowledge and Perceptions of Bicycling, http://scholarworks.umt.edu/itrr_pubs/). It is therefore recommended that Glacier National Park do whatever they can to educate visitors to the park about bicycles and motor vehicles on the road.

Another recommendation, based on the results of this study, is for Glacier National Park to conduct reliable bicycle counts in the park and separate them out by roadways. This would include the GTSR, Many Glacier Road, East Glacier Road, Camas Road, North Fork Road, and pathways around the Apgar community and campground. Currently, there is no data to inform management about the numbers and potential numbers. Bicycling is growing in popularity nationwide; therefore, it can be expected to grow in Glacier as well. An accurate count of bicyclist can be monitored and compared to future counts, assisting in management decisions and added to the transportation plan for the park.

It is quite clear that not all people would or could ride a bicycle on the GTSR. Surprisingly, however, many respondents in each user group of this study (including non-bicyclists) expressed interest in riding the road in the future, but not with motorists on the road. This leads to two ideas:

- First, continue to let bicyclists ride the GTSR when the road is not completely plowed in the spring, and aim to plow the lower sections as early as possible each year. This not only provides the opportunity of bicycling without motorists, if consistent each spring, tourism providers in the area will see the need to open up and serve this user group. It will likely grow beyond the Montana resident if the visitor can be guaranteed to ride at least part of the higher elevation without vehicles. In the past few years, local marketing of biking the GTSR has already occurred. The businesses simply need to be assured that the road will be available to bicyclists by a certain time. Of course, winter conditions will always take precedence for road opening dates.
- Second, Glacier National Park management could look into the idea of charging extra for bicycling in the park when motor vehicles are restricted. Whether it's in the spring or there are car-free days, it might be a privilege these types of users (bicyclists) would pay for in the future. The precedence is that backcountry campers pay extra for a campsite, so is it likely that bicyclists would be willing to pay for their time on the road? Perhaps another study could explore the idea.

Finally, bicycling in Glacier National park along the GTSR is a recreation experience that some visitors have had and enjoyed. Many visitors would like the experience but either are too afraid to ride with motorists or come to the park without a bicycle. It is recommended that concessionaires in the park start renting high quality bicycles that allow the visitor another type of recreation experience in the park.

Appendix A – Survey Instruments

Summer bicyclists and non-bicyclists survey

Spring bicyclists survey

Bus driver survey

SUMMER BICYCLISTS & NON-BICYCLISTS: Your Trip in Glacier National Park and Montana

Instructions: You received this survey while in Glacier National Park. Please keep this trip in mind as you answer the following questions. We are interested in your bicycling, travel routes, and economic contributions to the state of Montana. Please answer the following questions.

Q1 **On this trip in Montana, did you participate in any bicycling?**

- ☐ Yes
- ☐ No (if no, skip to Q7)

Q2 **On this trip in Montana, did you... (Please "X" all that apply.)**

- ☐ Bring a bike with you.
- ☐ Rent a bicycle.
- ☐ Take an organized bicycle tour.
- ☐ Bicycle into Montana.

Q3 **On this trip in Montana, please check all the towns or the closest town to where you bicycled...**

- ☐ Babb
- ☐ Bigfork
- ☐ Browning
- ☐ Columbia Falls
- ☐ Choteau
- ☐ East Glacier (town)
- ☐ Eureka
- ☐ Hungry Horse
- ☐ Kalispell
- ☐ Polebridge
- ☐ St. Mary
- ☐ Swan Valley
- ☐ West Glacier (town)
- ☐ Whitefish
- ☐ Within Glacier NP
- ☐ Other areas of Montana

Q4 **On this trip in Montana, what type of bicycling did you participate in... (Please "X" all that apply.)**

- ☐ Bicycling on the Going-to-the-Sun Road
- ☐ Mountain biking or cyclo-cross on single track trails
- ☐ Paved-paths separate from the roadway
- ☐ Gravel roads or backcountry roads
- ☐ Bicycling on city streets
- ☐ Highway bicycling

Q5 **On this trip in Montana, did you spectate or participate in...(Please "X" all that apply.)**

- ☐ A bicycle special event (fundraiser, group ride, etc).
- ☐ A road-bike race.
- ☐ A mountain bike or cyclocross race.
- ☐ Bicycling on an Adventure Cycling Association route.
- ☐ Multi-day independent tour, where your bicycle is your primary mode of transportation.
- ☐ Multi-day supported tour (i.e. vehicle or guided support), where your bicycle is your primary mode of transportation.

Q6 **On this trip in Montana, did you visit a bicycle shop for repairs, clothing, equipment, or other bike retail.**

- ☐ Yes
- ☐ No

Q7 **Please record your best estimate of the TOTAL amount of money (US dollars) you and your family/travel group (if applicable) will have spent in Montana on this trip in each of the following categories. Please estimate any expenses you have not yet incurred.**

Accommodations (hotel/motel, B&B, etc.) $ ☐

Camping (Private & Public) $ ☐

Restaurants and Bars $ ☐

Groceries and Snacks $ ☐

Retail Purchases $ ☐

Transportation Fares (e.g. bus, taxi) $ ☐

Fuel/Gasoline $ ☐

Auto Rental $ ☐

Guided or Outfitted Trips $ ☐

Services (e.g. rentals, repairs, medical) $ ☐

Fees/Licenses/Admissions (e.g. park fees, movies) $ ☐

Other purchases $ ☐

Q8 **How many people, including yourself, does the above spending represent (e.g. travel group/family size)?** ☐

Q9 **For this trip in Montana, how many nights did you spend away from home?** ☐

Q10 **For this trip in Montana, what types of accommodations did you stay in? (Please "X" all that apply.)**

- ☐ Hotel/motel/bed & breakfast
- ☐ Rental cabin/home
- ☐ Public land camping
- ☐ Private campground
- ☐ Home of friend/relative
- ☐ My second home/cabin/condo
- ☐ Resort/condominium
- ☐ Guest ranch
- ☐ Warm Showers
- ☐ Couch Surfing
- ☐ A bicycle camp
- ☐ Vehicle in parking lot

Q11 **In Montana...**

	Yes	No	I don't know
When passing bicyclists, a motor vehicle can cross the solid yellow line when it is safe to do so	☐	☐	☐
Bicyclists are allowed to overtake a motor vehicle on the right-hand side of the traffic lane.	☐	☐	☐
Bicyclists are allowed to ride side-by-side on the Going-to-the-Sun Road.	☐	☐	☐

Q12 **To what extent do you agree with the following statements?**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
In the future, I would be willing to bicycle the Going-to-the-Sun Road (GTTSR) with motor vehicles on the road.	☐	☐	☐	☐	☐
In the future, I would be willing to bicycle the GTTSR with no motor vehicles on the road.	☐	☐	☐	☐	☐
In the future, I would be willing to bicycle the GTTSR with shuttle busses, but no other motor vehicles on the road.	☐	☐	☐	☐	☐
In the future, I would be willing to have the GTTSR open to shuttle busses, bicyclists, and pedestrians only (no private motor vehicles).	☐	☐	☐	☐	☐

Q13 **Please rate your level of agreement with the following statements:**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
With bicyclists on the Going-to-the-Sun Road (GTTSR), the thought of driving worries me.	☐	☐	☐	☐	☐
With motor vehicles on the GTTSR, the thought of riding a bicycle worries me.	☐	☐	☐	☐	☐
Sharing the road between bicyclists and motor vehicles is unsafe along the GTTSR.	☐	☐	☐	☐	☐
Getting to my final destination quickly using the GTTSR is important to me.	☐	☐	☐	☐	☐
Bicycling is safe on the GTTSR.	☐	☐	☐	☐	☐
There are many problems and difficulties with bicycling the GTTSR.	☐	☐	☐	☐	☐

Q14 **In what state, Canadian province, or other country do you permanently reside?** ☐

Q15 **If a Montana resident, in what county do you permanently reside?** ☐

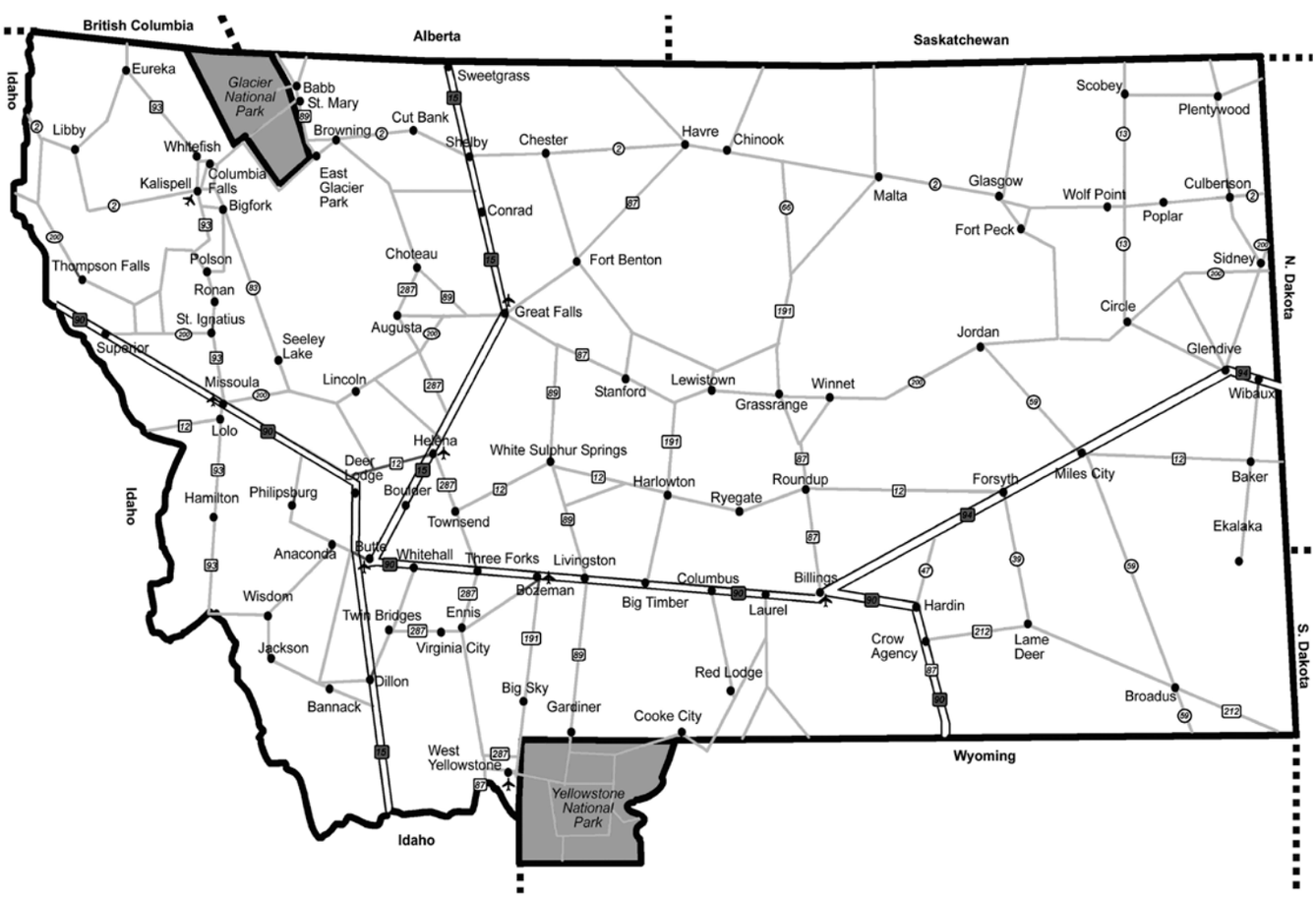
Q16 **What is your gender?** ☐ Female ☐ Male

Q17 **What is your age?** ☐

Finally, please show us your route in MT

Map Instructions: Please trace your travel route to Glacier National Park on the map.

1. Place an "E" on the map to indicate where you entered Montana (nonresident), or where you began this trip to Glacier NP (residents).
2. Draw a continuous line from your placed your "E" to Glacier National Park.
3. Circle all the towns (or nearest location to) where you spent nights on this trip.



Thank you for your time!

SPRING BICYCLISTS: Traveling Along the Going-to-the-Sun Road

Instructions: We are interested in your attitudes about bicycling and interactions that occur between bicyclists and motor vehicles. Please answer the following questions.

Q1 **Have you ridden a bicycle in the past 12 months?** ☐ Yes ☐ No (if no, skip to Q5)

Q2 **I ride a bicycle…** ☐ Occasionally ☐ Frequently ☐ Very frequently

Q3 **For what reasons do you bicycle? (Please "X" all that apply.)** ☐ Commuting/ Transportation ☐ Recreation

Q4 **Generally, I bicycle about:** ☐ 1 time/ year ☐ 1 time/ month ☐ 1-2 days/ week ☐ 3-4 days/ week ☐ 5-7 days/ week

Q5 **In my daily life, I believe that:**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Bicyclists have just as much right to use the road as motorists.	☐	☐	☐	☐	☐
Bicyclists should not be able to ride on main roads during high traffic times.	☐	☐	☐	☐	☐
When possible, motorists should change lanes when passing bicyclists.	☐	☐	☐	☐	☐
Many motorists do not look out for bicyclists.	☐	☐	☐	☐	☐
Bicyclists should be more courteous to motorists on the road.	☐	☐	☐	☐	☐
Bicyclists do not ride properly on the road.	☐	☐	☐	☐	☐
Motorists should be educated about sharing the road with bicyclists.	☐	☐	☐	☐	☐
While driving, it is very frustrating sharing the road with bicyclists.	☐	☐	☐	☐	☐
Bicyclists should be restricted to riding on paths or trails that are off-streets.	☐	☐	☐	☐	☐
Motorists should be more courteous to bicyclists on the road.	☐	☐	☐	☐	☐
Bicyclists should be educated about sharing the road with motor vehicles.	☐	☐	☐	☐	☐

Q6 **I have bicycled the Going-to-the-Sun Road... (Think of all trips and please "X" all that apply.)**

☐ N/A - I have not bicycled the Going-to-the-Sun Road. ☐ with motor vehicles on the road. ☐ without motor vehicles on the road.

Q7 **In Montana…**

	Yes	No	I don't know
A bicyclist is not legally entitled to ride on the roads.	☐	☐	☐
A bicyclist may use an entire lane.	☐	☐	☐
A bicycle is considered a vehicle and has the same rights and responsibilities on the road as a motor vehicle.	☐	☐	☐
When passing bicyclists, a motor vehicle can cross the solid yellow line when it is safe to do so.	☐	☐	☐
Bicyclists are allowed to overtake a motor vehicle on the right-hand side of the traffic lane.	☐	☐	☐
Bicyclists are allowed to ride side-by-side on the Going-to-the-Sun Road.	☐	☐	☐

Q8 **To what extent do you agree with the following statements?**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
In the future, I would be willing to bicycle the Going-to-the-Sun Road (GTTSR) with motor vehicles on the road.	☐	☐	☐	☐	☐
In the future, I would be willing to bicycle the GTTSR with no motor vehicles on the road.	☐	☐	☐	☐	☐
In the future, I would be willing to bicycle the GTTSR with shuttle busses, but no other motor vehicles on the road.	☐	☐	☐	☐	☐
There are many problems and difficulties with bicycling the GTTSR.	☐	☐	☐	☐	☐
In the future, I would be willing to have the GTTSR open to shuttle busses, bicyclists, and pedestrians only (no private motor vehicles).	☐	☐	☐	☐	☐

Q9 **Please rate your level of agreement with the following statements:**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
With bicyclists on the Going-to-the-Sun Road (GTTSR), the thought of driving worries me.	☐	☐	☐	☐	☐
With motor vehicles on the GTTSR, the thought of riding a bicycle worries me.	☐	☐	☐	☐	☐
I prefer traveling the road slowly for a better experience along the GTTSR.	☐	☐	☐	☐	☐
Sharing the road between bicyclists and motor vehicles is unsafe along the GTTSR.	☐	☐	☐	☐	☐
Getting to my final destination quickly using the GTTSR is important to me.	☐	☐	☐	☐	☐
Bicycling is safe on the GTTSR.	☐	☐	☐	☐	☐
Bicyclists should be allowed to travel along the GTTSR any time of day.	☐	☐	☐	☐	☐

Q10 **Have/will you participate in any bicycling on <u>this trip</u> in Montana?** ☐ Yes ☐ No (if no, skip to Q14)

Q11 **On this trip, did/will you...(Please "X" all that apply.)**

☐ Bring a bike with you.
☐ Take an organized bicycle tour.
☐ Rent a bicycle.
☐ Travel in Montana by bicycle only (no support vehicle).

Q12 **In what areas did you bicycle on this trip? (Please "X" all that apply.)**

☐ Babb
☐ Browning
☐ Columbia Falls
☐ East Glacier
☐ Eureka
☐ Hungry Horse
☐ Kalispell
☐ St. Mary
☐ West Glacier
☐ Whitefish
☐ Within Glacier NP
☐ Parts of Montana other than the Northwest

Q13 **What type of bicycling did/will you participate in while in Montana on this trip? (Please "X" all that apply.)**

☐ Highway bicycling
☐ Mountain/trail bicycling
☐ Community bicycling

Q14 **Are you a Montana resident?** ☐ Yes ☐ No (if no, skip to Q15)

Q14a **Do you reside in Flathead or Glacier County?** ☐ Yes ☐ No

Q15 **What state, Canadian province, or other country do you permanently reside?** ☐

Q16 **On this trip, how many nights will you have spent away from home in Montana?** ☐

Q17 **In what types of accommodations did you stay while on this trip in Montana? (Please "X" all that apply.)**

☐ Hotel/motel/bed & breakfast
☐ Rental cabin/home
☐ Public land camping
☐ Private campground
☐ Home of friend/relative
☐ My second home/cabin/condo
☐ Resort/condominium
☐ Guest ranch
☐ Vehicle in parking lot

Q18 **Please record your best estimate of the TOTAL amount of money (US dollars) you and your family/travel group (if applicable) will spend <u>in Montana</u> on this trip in each of the following categories. Please estimate any expenses you have not yet incurred.**

******If part of a travel group, please report your group's expenditures <u>on one survey</u> only.******

Accommodations (hotel/motel, B&B, etc.) $ ☐
Camping (Private & Public) $ ☐
Restaurants and Bars $ ☐
Groceries and Snacks $ ☐
Retail Purchases $ ☐
Transportation Fares (e.g. bus, taxi) $ ☐
Fuel/Gasoline $ ☐
Auto Rental $ ☐
Guided or Outfitted Trips $ ☐
Services (e.g. rentals, repairs, medical) $ ☐
Fees/Licenses/Admissions (e.g. park fees, movies) $ ☐
Other purchases $ ☐

Q19 **How many people, including yourself, does the above spending represent (e.g. travel group/family size)?** ☐

Please continue to the next page, you are almost finished!

Q20 **What is your gender?** ☐ Female ☐ Male

Q21 **What is your age?** ☐

To be entered into a drawing for a $500 Visa gift card as thanks for participation in this survey, please enter your contact information. (Your info will be kept confidential, will not be shared, and will be destroyed after the October drawing.)

Name: ☐

Phone # or Email: ☐

BUS DRIVER SURVEY: Traveling Along the Going-to-the-Sun Road

Instructions: We are interested in your attitudes about bicycling and interactions that occur between bicyclists and busses. Please answer the following questions.

Q1 **Along the Going-to-the-Sun Road:**

	Never	Very infrequently	Infrequently	Neutral	Frequently	Very frequently	Always
I encounter bicyclists riding side-by-side in a traffic lane.	☐	☐	☐	☐	☐	☐	☐
I encounter bicyclists along the road who do not move over to the right when the opportunity arises.	☐	☐	☐	☐	☐	☐	☐
When I pass bicyclists, I give them at least three feet of space between my vehicle and their bicycle.	☐	☐	☐	☐	☐	☐	☐
On the road, I encounter bicyclists who pass motor vehicles on the right-hand side of the traffic lane.	☐	☐	☐	☐	☐	☐	☐

Q2 **Please rate your level of agreement with the following statements:**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
With bicyclists on the Going-to-the-Sun Road (GTTSR), the thought of driving worries me.	☐	☐	☐	☐	☐
With motor vehicles on the GTTSR, the thought of riding a bicycle worries me.	☐	☐	☐	☐	☐
Sharing the road between bicyclists and motor vehicles is unsafe along the GTTSR.	☐	☐	☐	☐	☐
Getting to my final destination quickly using the GTTSR is important to me.	☐	☐	☐	☐	☐
Bicycling is safe on the GTTSR.	☐	☐	☐	☐	☐
Bicyclists should be allowed to travel along the GTTSR any time of day.	☐	☐	☐	☐	☐
There are many problems and difficulties with bicycling the GTTSR.	☐	☐	☐	☐	☐

Q3 **In Montana…**

	Yes	No	I don't know
A bicyclist is not legally entitled to ride on the roads.	☐	☐	☐
A bicyclist may use an entire lane.	☐	☐	☐
A bicycle is considered a vehicle and has the same rights and responsibilities on the road as a motor vehicle.	☐	☐	☐
When passing bicyclists, a motor vehicle can cross the solid yellow line when it is safe to do so.	☐	☐	☐
Bicyclists are allowed to overtake a motor vehicle on the right-hand side of the traffic lane.	☐	☐	☐
Bicyclists are allowed to ride side-by-side on the Going-to-the-Sun Road.	☐	☐	☐

Q4 **To what extent do you agree with the following statements?**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
In the future, I would be willing to bicycle the Going-to-the-Sun Road (GTTSR) with motor vehicles on the road.	☐	☐	☐	☐	☐
In the future, I would be willing to bicycle the GTTSR with no motor vehicles on the road.	☐	☐	☐	☐	☐
In the future, I would be willing to bicycle the GTTSR with shuttle busses, but no other motor vehicles on the road.	☐	☐	☐	☐	☐
In the future, I would be willing to have the GTTSR open to shuttle busses, bicyclists, and pedestrians only (no private motor vehicles).	☐	☐	☐	☐	☐

Please continue to the next page.

Q5 **In my daily life, I believe that:**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Bicyclists have just as much right to use the road as motorists.	☐	☐	☐	☐	☐
Bicyclists should not be able to ride on main roads during high traffic times.	☐	☐	☐	☐	☐
When possible, motorists should change lanes while passing bicyclists.	☐	☐	☐	☐	☐
Many motorists do not look out for bicyclists.	☐	☐	☐	☐	☐
Bicyclists should be more courteous to motorists on the road.	☐	☐	☐	☐	☐
Bicyclists do not ride properly on the road.	☐	☐	☐	☐	☐
Motorists should be educated about sharing the road with bicyclists.	☐	☐	☐	☐	☐
While driving, it is very frustrating sharing the road with bicyclists.	☐	☐	☐	☐	☐
Bicyclists should be restricted to riding on paths or trails that are off-streets.	☐	☐	☐	☐	☐
Motorists should be more courteous to bicyclists on the road.	☐	☐	☐	☐	☐
Bicyclists should be educated about sharing the road with motor vehicles.	☐	☐	☐	☐	☐
The idea of bicycling on busy roads frightens me. (Whether or not you are a cyclist.)	☐	☐	☐	☐	☐

Q6 **Have you ridden a bicycle in the past 12 months?** ☐ Yes ☐ No (if no, skip to Q10)

Q7 **I ride a bicycle…** ☐ Occasionally ☐ Frequently ☐ Very frequently

Q8 **For what reasons do you bicycle? (Please "X" all that apply.)** ☐ Commuting/ Transportation ☐ Recreation

Q9 **In a year, I generally bicycle:** ☐ 1 time/ year ☐ 1 time/ month ☐ 1-2 days/ week ☐ 3-4 days/ week ☐ 5-7 days/ week

Q10 **I have bicycled the Going-to-the-Sun Road... (Think of all trips and please "X" all that apply.)**

☐ N/A - I have not bicycled the Going-to-the-Sun Road. ☐ with motor vehicles on the road. ☐ without motor vehicles on the road.

Q11 **What is your gender?** ☐ Female ☐ Male

Q12 **What is your age?**

☐

Q13 **Please provide comments about your driving encounters with bicyclists on the Going-to-the-Sun Road.**

Q14 **Please give some solutions to bus-bicycle challenges on the Going-to-the-Sun Road.**

Thank You!