

Thompson Falls Project 2018 Recreation Visitor Study Report

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**NorthWestern[®]
Energy**



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Summary

- o A recreation visitor survey was conducted in 2018 during the peak recreation use season (Memorial Day weekend through Labor Day weekend) at NorthWestern Energy's Thompson Falls Hydroelectric Project.
- o Nine recreation sites associated with the Project were included in the study. Sampling occurred on 60 days over the course of the study period and each site was sampled about 58 times over a total of about 34 hours.
- o Surveys from 244 recreation visitors were collected. Visitor response to the study was excellent, with 91% of contacted visitors participating in the survey.
- o Fifty-five percent of visitors were male and 45% were female.
- o The median age of visitors (aged 16 or older) was 48 years and most age groups were well represented.
- o Three-quarters of visitors were from Montana, and half were from Thompson Falls.
- o One-third of visitors were using the recreation site for the first time, while two-thirds were repeat visitors. Visitors with previous experience had generally visited for 7 years and made 10 visits per year.
- o The median group size at recreation sites was two people.
- o Two-thirds of visitors stayed at the site for one hour or less.
- o Hiking, walking or running were popular activities, with 33% participating. Fifteen percent reported using the site to relax, while socializing and picnicking were also popular (13% each). Water-based activities were enjoyed by fewer visitors than in past years (10% fished from shore and 5% swam) due to unusual environmental conditions.
- o When asked about the importance of various reasons for their visit, being outdoors and enjoying nature were highly rated.
- o Overall, visitors were very satisfied with recreation site development and management, with 85% preferring to leave things as is. Areas for improvement were noted by visitors to the Cherry Creek Access Site.
- o Visitors preferring changes most-often wanted additional basic facilities (garbage cans, toilets, benches, picnic tables, etc.), or improved management of bathroom facilities.
- o Crowding is not a factor at recreation sites overall, and only 2% of visitors reported experiencing problems of any kind on their site visit.
- o When given the chance to offer additional comments about the recreation opportunities, about half reiterated needs for site amenity improvements while about one-third expressed desires for additional new facilities or amenities.
- o When results were compared to those of previous visitor surveys (conducted in 2008 and 2014), visitor and trip characteristics were very similar, but visitors' desire for changes to recreation facilities or management continued to decline (from 43% in 2008 to 15% in 2018).

1 Introduction

1.1 Background

NorthWestern Energy monitors recreation use associated with its Thompson Falls Hydroelectric Project (Project) as part of its FERC-related recreation responsibilities. Article 406 of the Project's FERC license requires recreational use monitoring and reporting at regular intervals¹ to help gauge the adequacy of project-related recreation opportunities and facilities.

Recreation monitoring helps NorthWestern Energy and its recreation management partners, including the City of Thompson Falls, Sanders County, Montana Fish, Wildlife & Parks, and U.S. Forest Service, better understand recreation use and issues associated with the Project, and provide appropriate facilities and opportunities to the recreating public.

1.2 Visitor Study Overview

The 2018 study sampled visitors at nine recreation sites associated with the Project (Table 1 and Figure 1). Six of the sites are managed, entirely or in part, by NorthWestern Energy.

Visitors were sampled on 60 randomly-selected days between the beginning of the Memorial Day weekend through Labor Day, 2018 (May 25th through September 6th), which is the peak recreation use season. Each recreation site was sampled about 58 times at various times of the day between 8:00 a.m. and 9:00 p.m.

Visitor groups were approached on-site and one member (age 16 or over) from each group was randomly selected to participate in the survey. Visitor response was excellent, with 91% of contacted visitors participating in the study. The visitor survey questionnaire was administered as an interview and responses were entered into a tablet computer.

In total, 244 visitors participated in the survey. Results from the 2018 visitor survey provide information about visitor characteristics, site use, opinions about facilities, problems encountered, visitor satisfaction, perceptions of crowding, and other factors.

1.3 Report Organization

The remainder of this report is organized into two sections and two appendices.

The *Study Methods* section describes the objectives of the visitor survey and the sampling framework.

The *Visitor Survey Results* section discusses study results.

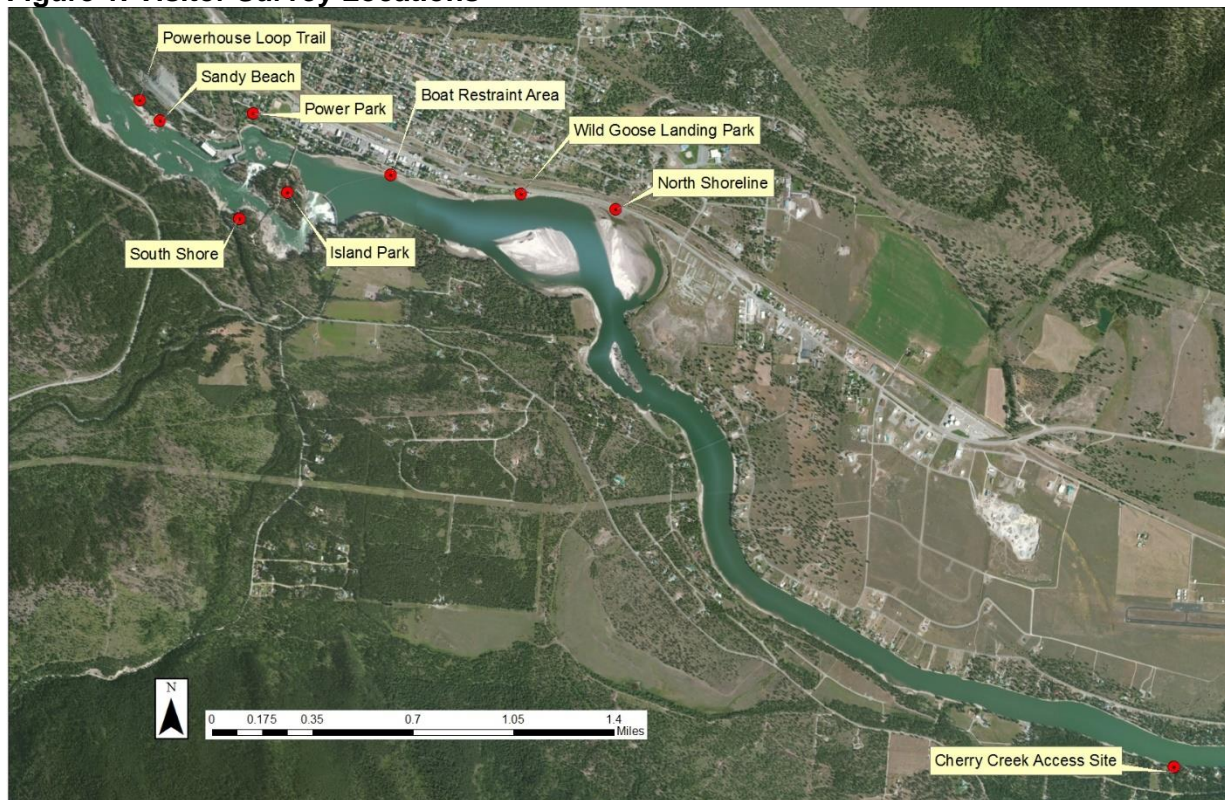
The visitor survey questionnaire is included as *Appendix A* and *Appendix B* describes environmental factors influencing 2018 visitation.

¹ Recreation monitoring was initially conducted at four-year intervals and transitioned to studies every six years beginning in 2008. Previous visitor studies were conducted in 1999, 2003, 2008 and 2014. The 2018 monitoring was conducted earlier than scheduled to provide updated information for Project relicensing purposes.

Table 1. Visitor Survey Sites

Recreation Site ²	Management Entity	Surveyed Areas
North shoreline between old mill site and Wild Goose Landing Park	Montana Department of Transportation (highway easement)	Undeveloped and informal use area along north shoreline (and Highway 200) between abandoned mill site and Wild Goose Landing Park
Wild Goose Landing Park	City of Thompson Falls	All areas within park
Boat restraint area (north shore)	NorthWestern Energy	Undeveloped and informal use area along shoreline at the north end of boat restraint
Island Park	NorthWestern Energy	All areas within park
Power Park	NorthWestern Energy	All areas within park
Sandy Beach	NorthWestern Energy	Undeveloped and informal use area downstream of the original powerhouse on the north side of the river
Powerhouse Loop Trail	NorthWestern Energy, Avista, Rimrock Lodge	Trail segment from Power Park downstream to Rimrock Lodge
South Shore	NorthWestern Energy	Undeveloped and informal use area along south shore of the river between High Bridge and the mouth of Prospect Creek
Cherry Creek Access Site	Sanders County	Water access site on south shore of reservoir at Cherry Creek

Figure 1. Visitor Survey Locations



² Ordered beginning near the old mill site east of the City of Thompson Falls and proceeding counter-clockwise around the study area.

2 Study Methods

2.1 Survey Goal and Objectives

The primary goal of the visitor study was to acquire information that would help recreation managers better understand recreation use and issues associated with the Thompson Falls Hydroelectric Project.

Specific survey objectives included acquiring information about the visitor's:

- o Previous site use;
- o Length of visit;
- o Group size;
- o Recreation activities;
- o Motivations for visit;
- o Opinions about crowding and adequacy of site facilities;
- o Problems encountered, if any; and
- o Geographic origin and socio-demographic characteristics.

Objectives of the sampling framework were to:

- o Arrive at a sample that was representative of typical recreation use at the sites during the sampling period; and
- o Use methods that allow results to be aggregated across sites to characterize recreation within the study area.

Because recreation use in the study area is relatively low, collecting sufficient data to allow high statistical confidence in site-specific results was impractical if not impossible, even with the most rigorous sampling approach.³ However, sufficient data could be gathered to allow adequate confidence in study area results (i.e., the aggregation of results from all surveyed recreation sites).

2.2 Study Area

The study area was the nine recreation sites identified in Table 1, which are the primary recreation sites associated with the Thompson Falls Hydroelectric Project.

2.3 Population of Interest

The population of interest consisted of all recreationists aged 16 years or older who used any of the nine recreation sites included in the study from May 25th (beginning of Memorial Day Weekend) through September 3rd (Labor Day), 2018.

³ 384 cases would be required at each site to be 95% confident that results are within 5% of population values, for binomial random variables at the worst case where $p = 0.5$.

2.4 Sampling Strategy

Visitor interviews were conducted during “sampling events,” defined as randomly chosen time periods to sample at randomly chosen recreation sites. Systematic random sampling was used to select sampling locations and times. The primary objective of the sampling schedule was to arrive at a sample that was representative of typical recreation use during the study period.

Over the course of the study, 307 hours of sampling occurred on 60 days, between 8:00 a.m. and 8:00 p.m. Sampling was typically scheduled for 6.5-hour work days, and each site was visited an average of 58 times (35 minutes each visit and 34 hours total per site, on average) during the sampling timeframe. The schedule provided a representative sample of times of the day and days of the week over the course of the 102-day study period.

Reasonable attempts were made to include in the sample one individual (aged 16 years or older) from every group of visitors present at the recreation site during the sampling event. A recreation group was defined as any group of individuals, such as family, friends, or tour group, visiting the recreation site together. Non-recreationists, such as power company or agency employees or volunteers, were excluded from the sample.

Groups of visitors were approached by the survey technician on site, briefly informed of the survey’s purpose and asked to participate. Typically this required the following script:

“Hello, my name is (first name). I’m conducting a recreation survey here for NorthWestern Energy. Would you mind if I asked some questions about your visit to this site? It will only take a few minutes.”

If asked for additional information about the survey’s purpose, the survey technician added:

“The information will help land managers better understand your needs and opinions.”

The survey respondent was randomly chosen from the group by selecting the person (aged 16 or older) with the most recent past birthday. If the selected person opted not to participate, the survey technician chose the person with the next most recent birthday, and so on. If no one in the group agreed to participate in the study, the survey technician noted the group refusal for survey response rate calculation.

In order to limit the amount of participation of any one person or group in the study and aid in acquiring a diverse sample, the same person could be interviewed only once at each recreation site during the study period. In other words, once a person had been interviewed at a site at any time, they were eliminated from future sampling at that site, but could be included again at other sites.

The survey technician used a tablet computer to administer the survey. The survey questionnaire (**Appendix A**) was programmed into the tablet, which led the survey technician through the sequence of questions, and the technician entered visitor responses directly into the device.

3 Visitor Survey Results

3.1 Response Rates and Sample Sizes

The visitor survey was conducted on 60 randomly-selected days between May 25 and September 6, 2018, known as the peak recreation season. Environmental conditions during this timeframe were not typical, however, with extremely high runoff in the early part of the season followed by drawdown of the reservoir to facilitate replacement of stanchion gates on the Main Dam (see Appendix B for more information). These two conditions greatly influenced use of the waterway for recreation.

Of the 269 visitors intercepted at recreation sites, 91% (244 visitors) participated in the survey (Table 2). Because of the high response rate, any error in study results related to non-response bias was insignificant. While it was anticipated that far more recreationists would be encountered during the course of the study, visitors that were found at study sites were generally very willing to participate in the recreation visitor survey, resulting in a high response rate.

The sample size of 244 is sufficient to provide reasonable statistical confidence in aggregate results.⁴ Sample sizes at individual recreation sites ranged from a high of 87 at Island Park to a low of 2 at Sandy Beach. Three of the nine sites – Island Park, Wild Goose Landing Park, and South Shore – contributed about two-thirds (69%) of the sample.

High response rates combined with equal sampling intensity (i.e., the time spent sampling at each site was about the same) produce results that provide a reasonable measure of Project-wide recreation.⁵

Table 2. Response Rate and Sample Size by Recreation Site

Recreation Site	Sample Size	Percent of Total
North shoreline between old mill site and Wild Goose Landing Park	14	6%
Wild Goose Landing Park	44	18%
Boat restraint area (north shore)	2	1%
Island Park	87	36%
Power Park	24	10%
Sandy Beach	7	3%
Powerhouse Loop Trail	22	9%
South Shore	36	15%
Cherry Creek Access Site	8	3%
Total	244	100%

⁴ For binomial random variables (e.g., the proportion of visitors that participate in an activity or were first-time visitors), at the worst case where $p=0.5$, we are 95% confident that the true proportion is $\pm 6.25\%$.

⁵ Weighting of site-specific results was not necessary.

3.2 Notes on Interpreting Results

Survey results are generally reported for all sites combined due to relatively small sample sizes at individual recreation sites. However, site-specific results are reported for a few factors related to crowding and opinions about site facilities or management to provide some visitor input to managers (though the information may not be statistically representative of all visitors to a specific recreation site).⁶ Readers should use caution when interpreting these site-specific results due to the low sample sizes.

Repeat site use by visitors was not recorded because visitors were sampled only once at each site over the course of the study period.⁷ As such, to some degree, results under-report site use associated with frequent site visitors, such as some area residents or others that visit the same site many times over the season. Where applicable, results from this visitor study are compared to results from previous studies conducted in 2014 and 2008.

Importantly, during the 2018 study, unusual environmental conditions affected the availability of water-related recreation opportunities, which reduced on-water and shoreline-based activity participation (boating, fishing and swimming). These shifts in use were reactions to extreme river flows and a reservoir drawdown, and should not be considered as indicators of long-term trends in site use.

3.3 Visitor Characteristics

Fifty-five percent of recreation site visitors were male and 45% were female (Table 3). This is a slight increase in the proportion of female recreationists compared to the 2014 study, when the male/female proportion was 58/42, and in the 2008 study when the proportion was 60/40.

Table 3. Visitor Gender

Gender	
Male	55%
Female	45%

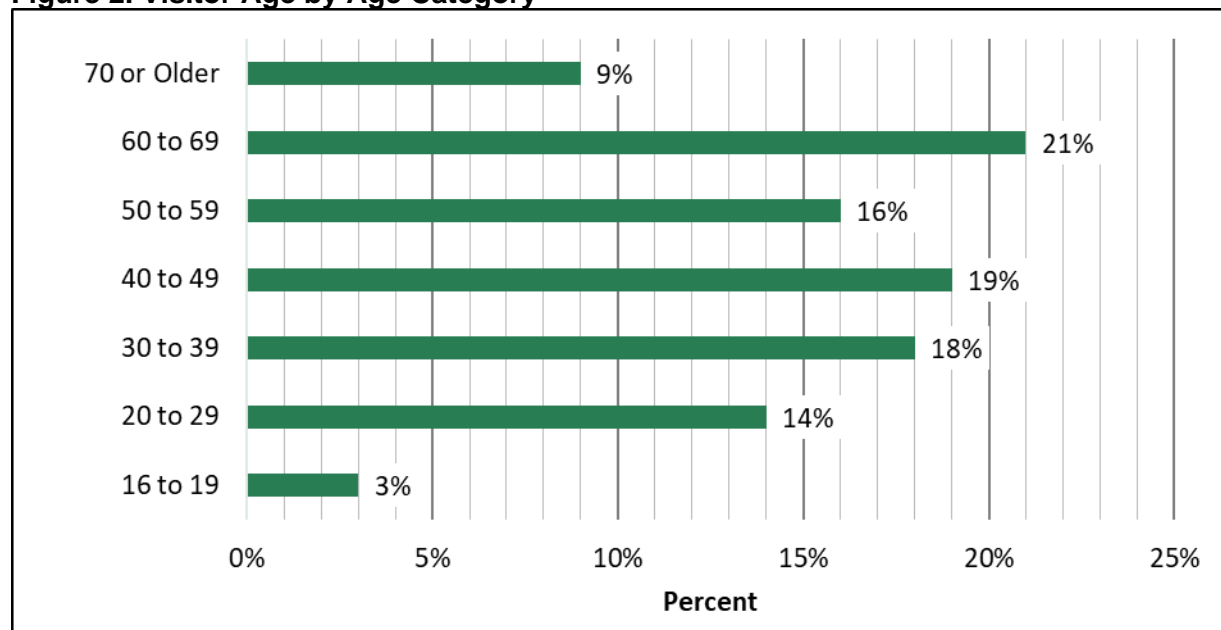
Use of recreation sites is well distributed among the various age classes of visitors 16 and older (the minimum age included in the study, Figure 2). While the percentage of users in the 16-19 year-old category has remained relatively constant since the 2008 and 2014 studies (17% and 16% respectively), the proportion of visitors 70 years and older has grown from 5% in 2008 to 8% in 2014 to 9% in 2018. This is not surprising given that the percentage of the Sanders County population 65 years and older has grown 5.8% between 2014 and 2018.⁸ Regardless, the median age of visitors (aged 16 years or older) was 48 years in 2018, which aligns with the 2014 study (49 years) and the 2008 study (48 years).

⁶ This exception was made, although statistical confidence in site-specific results is very low, because it was felt the feedback was useful as “food for thought” related to site-specific management.

⁷ Sampling visitors only once at each site ensures that a repeat visitor is not unduly disturbed or burdened by a repeat request for survey participation. Visitors could, however, be sampled again at a different site.

⁸ <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

Figure 2. Visitor Age by Age Category



The recreation sites attracted as many out-of-area visitors as they did local residents (Table 4). Three-quarters of visitors lived in Montana and half of all visitors were from Thompson Falls. A substantial number of visitors were from Washington state and Idaho (7% and 5% respectively). Visitor origin remains similar to the 2014 and 2008 studies, though Montana residents comprised a slightly higher percentage than in the past (75% in 2018 compared to 72% in 2014 and 71% in 2008). Residents of Thompson Falls made up roughly the same proportion in 2018 and 2014 (50% and 49% respectively).

Table 4. Visitor Origin

Origin	Percent
Montana	75%
Thompson Falls	50%
Plains	2%
Trout Creek	5%
Missoula	7%
Other Montana locations	11%
Washington	7%
Idaho	5%
California	4%
Oregon	3%
Other States	6%
Other Countries	1%

Sixty-six percent of visitors had visited the site previously, while 34% were first-time visitors (Table 5). Not surprisingly, almost all site users (97%) from Thompson Falls were repeat visitors, while users from out-of-state tended to be first-time visitors (77%). Results are very similar to the 2014 and 2008 studies, when 71% and 68% were repeat visitors, respectively, and 29% and 32% were visiting the site for the first time.

Table 5. Previous Site Experience

Site Experience	
Repeat Visitor	66%
First-time Visitor	34%

Repeat visitors had generally been visiting for 7 years and made 10 visits per year (median values). Some local residents reported visiting the site almost daily. Results were similar in the 2014 and 2008 studies, when repeat visitors reported using the site for 9 years and 12 visits per year and 10 years and 12 visits per year, respectively.

3.4 Trip Characteristics

Eighty-six percent of recreation groups⁹ contained 4 or fewer people and the median group size was two people (Table 6). The median group size has remained unchanged from the 2014 and 2008 studies.

Table 6. Group Size

Group Size	Percent	Cumulative Percent
1	28%	28%
2	34%	62%
3	12%	73%
4	12%	85%
5	4%	89%
6	5%	94%
7 or more	5%	100%

⁹ A recreation group was defined as any group of individuals, such as family or friends, visiting a recreation site together. Non-recreationists, such as power company or management agency employees or volunteers, were excluded from the sample.

Visitors generally used the recreation site for a short period of time, with about two-thirds (65%) of visitors staying for one hour or less (Table 7).¹⁰ Trip duration was the same in the 2014 and 2008 studies, when the median trip duration was also one hour.

Table 7. Length of Stay

Length of Stay (hours)	Percent	Cumulative Percent
0.5	24%	24%
1.0	41%	65%
2.0	20%	85%
3.0	7%	92%
4.0	4%	96%
5 or more	4%	100%

3.5 Recreation Activities and Experiences

Activity participation, which is a key trip characteristic, was heavily influenced by the water conditions in 2018. Extremely high water in the early part of the season made on-water activities unsafe or undesirable, while the subsequent drawdown of the reservoir (to allow for replacement of stanchion gates on the Main and Dry Channel Dams) made launching watercraft, swimming, or fishing from shore very difficult into early August. These issues were alleviated when the reservoir was refilled in early August, allowing for more typical patterns of recreation participation for the last 4 weeks of the peak use season. For example, participation in swimming increased from no groups in the early part of the season to 8% of groups mid-season to 18% of groups in the late season, after the reservoir was refilled. Similarly, on-water activity participation increased from no groups in the early part of the season to 7% mid-season and 14% once the reservoir was refilled.

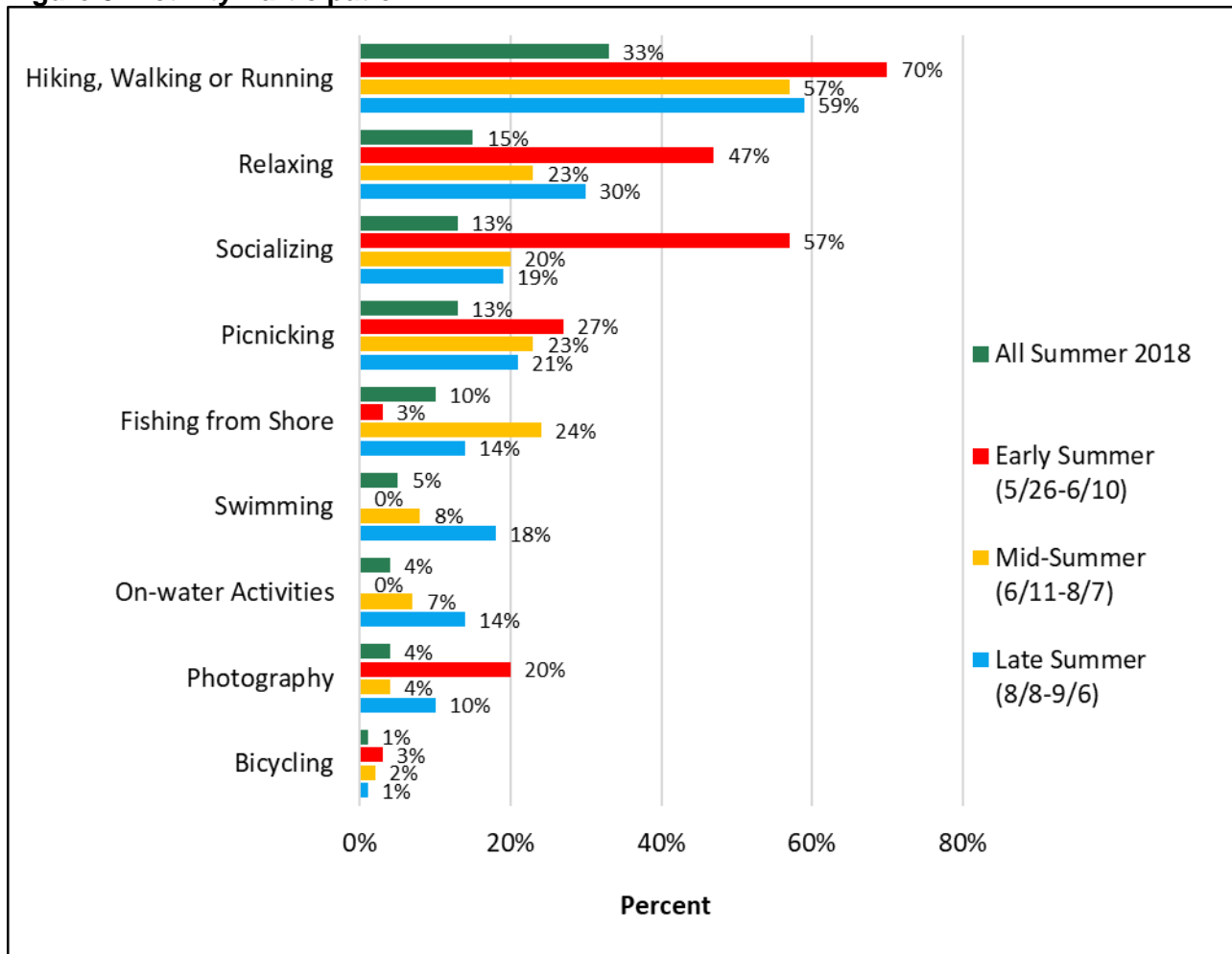
Compared to 2014, overall participation levels in many land-based activities were quite similar. For instance, participation in walking, hiking, or running – the most popular activity in both 2018 and 2014 – as well as relaxing, picnicking, photography, and biking were within 3% of 2014 participation levels (33%, 15%, 13%, 4%, and 1%, respectively, Figure 3). However, participation in water-based activities that originate from the shoreline were vastly different, with fishing from shore dropping from 20% in 2014 to 10% overall participation in 2018, and swimming dropping from 17% in 2014 to 5% overall participation in 2018. These overall changes in use levels are reasonable considering the conditions of the extreme high water and subsequent reservoir drawdown that left shoreline areas de-watered for much of the recreation season.

Interestingly, on-water activities – including fishing from a boat, motorboating, waterskiing, riding personal watercraft, and non-motorized boating – appears to have declined to a somewhat lesser degree than shoreline-based uses, dropping from 7% in 2014 to 4% in 2018. However,

¹⁰ Length of stay was rounded to the nearest hour, except for stays of 30 minutes or less, which were recorded as 0.5 hours.

limitation in the study protocol make it likely that these uses are somewhat underestimated overall¹¹ so the decline in use may also be under-reported.

Figure 3. Activity Participation



Draw down of Thompson Reservoir left shoreline and access areas void of water for much of July and early August to facilitate work on the Main and Dry Channel Dams. *Photo credit: Linda Elliott.*

¹¹ Watercraft users are often at a site only for launching or loading and not present at the site for significant amounts of time, making them difficult to contact and include in a sample. Therefore, it is likely that boating-related activities are somewhat under-reported, but consistent sampling strategies provide for a reasonable gauge of change in use over time.

To be outdoors and enjoy nature are two driving factors for why people participated in outdoor recreation at the study sites, with 98% of respondents indicating that being outdoors is very or extremely important and 94% indicating that enjoying nature is very or extremely important (Table 8).

Seventy-five percent said that finding solitude was very or extremely important, 74% said that being with family or friends was very or extremely important, and 68% said that excitement was very or extremely important.

Over the past 10 years, the motivation to be outdoors or to find solitude has varied among respondents (Table 9). At the same time, enjoying nature has become slightly more important, with small increases in the proportion of visitors rating it very or extremely important, and being with family or friends has become slightly less important. The trend that stands out the most, though, is the increase in importance of finding excitement, which has become more important for 11% more visitors in 2018 than it was in 2008.

Table 8. 2018 Reason for Visiting

Reason for Visiting	(1) Not at All Important	(2) Not Very Important	(3) Somewhat Important	(4) Very Important	(5) Extremely Important	Average (mean) Response
To be outdoors	1%	1%	1%	23%	75%	4.7
To enjoy nature	1%	1%	4%	34%	60%	4.5
To be with friends or family	3%	4%	19%	21%	53%	4.2
To find some solitude	2%	3%	20%	41%	34%	4.0
For excitement	1%	5%	26%	48%	20%	3.8

Table 9. Motivation Trends

Reason for Visiting	Percentage of Visitors Rating Reason as Very or Extremely Important		
	2018	2014	2008
To be outdoors	98%	94%	95%
To enjoy nature	94%	91%	90%
To be with friends or family	74%	79%	79%
To find some solitude	75%	68%	79%
For excitement	68%	60%	57%

Almost three-quarters (72%) of visitors were aware of other recreation areas along the Clark Fork River or reservoirs in the Thompson Falls area. Thompson Falls State Park (55%), Wild Goose Landing Park (50%), and Island Park (43%) were the most commonly known recreation areas by visitors that were aware of other sites, while the boat restraint area on the north shore of Thompson Falls Reservoir was the least commonly known site (Table 10).

Table 10. Awareness of Other Recreation Sites

Recreation Site	Percent of Site Visitors Aware of Other Recreation Areas (n=175)		Percent of Site Visitors Aware of Other Recreation Areas (n=175)
North shoreline between old mill site and Wild Goose Landing Park	12%	Powerhouse Loop Trail	32%
Wild Goose Landing Park	50%	South Shore	14%
Boat restraint area (north shore)	7%	Cherry Creek Access Site	12%
Island Park	43%	Thompson Falls State Park	55%
Power Park	34%	Flat Iron Ridge Fishing Access Site	35%
Sandy Beach	12%	Other sites not listed above	3%

Determining use of recently constructed trails was of interest in the study, and all visitors were asked if they had ever used the Powerhouse Loop Trail or State Park Trail. Nearly half (44%) of visitors had used either the loop trail or the trail segment that extends along the Clark Fork River to Thompson Falls State Park.

3.6 Visitor Satisfaction and Crowding

Beginning with the 2018 study, visitors were asked to rate their overall satisfaction with the recreation site, satisfaction with specific site amenities, and level of crowding at the site.

Visitors reported very high levels of satisfaction with sites. On a scale of 1 (not at all satisfied) to 5 (extremely satisfied), 97% of visitors were very or extremely satisfied with the site they visited, with an overall average response of 4.4 (Table 11). Satisfaction ratings were highest at Power Park and Sandy Beach (4.6) and lowest at Cherry Creek Access Site (3.8).

1	2	3	4	5
Not at all Satisfied	Not very Satisfied	Somewhat Satisfied	Very Satisfied	Extremely Satisfied

Table 11. Visitor Satisfaction with Site

Recreation Site	Avg.	1 Not at All Satisfied	2 Not Very Satisfied	3 Somewhat Satisfied	4 Very Satisfied	5 Extremely Satisfied
North shoreline between old mill site and Wild Goose Landing Park (n=14)	4.1	--	7%	--	71%	21%
Wild Goose Landing Park (n=43)	4.2	--	--	2%	72%	26%
Boat restraint area (north shore, n=2)	4.0	--	--	--	100%	--
Island Park (n=86)	4.5	--	--	--	48%	52%
Power Park (n=21)	4.6	--	--	5%	29%	67%
Sandy Beach (n=7)	4.6	--	--	--	43%	57%
Powerhouse Loop Trail (n=22)	4.5	--	--	--	55%	46%
South Shore (n=36)	4.3	--	--	6%	61%	33%
Cherry Creek Access Site (n=8)	3.8	--	--	25%	75%	--
All Sites (n=238)	4.4	--	<1%	3%	56%	41%

Visitors were also generally satisfied with specific site features and amenities (Tables 12 and 13). Visitors rated satisfaction with boat docks and launches lowest overall, though this is not surprising in a year when the boat launches were largely unusable due to extreme high water followed by a drawdown that de-watered the ramps for much of the season. Cleanliness of the area, degree of naturalness, and quality of interpretive/educational information were rated more satisfactory.

The Cherry Creek Access Site garnered the least favorable rating among all sites for satisfaction with the picnic area, boat dock/launch, maintenance of facilities, and cleanliness of the area, indicating a need for management improvements. The quality of interpretive/educational information was rated lowest at Wild Goose Landing Park. However, a new information kiosk was constructed and installed late in summer 2018, which should address this concern. The degree of naturalness rating was lowest on the north shoreline between the old mill site and Wild

Goose Landing Park, which is not surprising since it's adjacent to highway 200, the railroad, and the former mill site.

Table 12. Mean Visitor Satisfaction with Site Amenities

Recreation Site	Picnic Area	Boat Dock/ Launch	Maintenance of Facilities	Cleanliness of Area
North shoreline between old mill site and Wild Goose Landing Park	n/a	n/a	4.0	3.5
Wild Goose Landing Park	4.0	3.9	3.5	4.1
Boat restraint area (north shore)	n/a	n/a	n/a	4.0
Island Park	3.8	n/a	4.2	4.6
Power Park	4.2	n/a	4.3	4.4
Sandy Beach	n/a	n/a	3.8	4.6
Powerhouse Loop Trail	3.6	n/a	4.4	4.6
South Shore	3.5	n/a	3.4	3.6
Cherry Creek Access Site	2.4	2.8	2.3	2.8
All Sites	3.8	3.7	3.9	4.2

Table 13. Mean Visitor Satisfaction with Site Amenities

Recreation Site	Quality of Interpretive/Educational Information	Degree of Naturalness	Behavior of Other People
North shoreline between old mill site and Wild Goose Landing Park	n/a	3.3	3.9
Wild Goose Landing Park	3.0	4.1	4.2
Boat restraint area (north shore)	n/a	4.0	3.5
Island Park	4.4	4.1	4.6
Power Park	4.1	4.3	4.6
Sandy Beach	4.2	4.6	4.7
Powerhouse Loop Trail	4.0	4.6	4.6
South Shore	n/a	4.3	4.0
Cherry Creek Access Site	n/a	4.1	4.3
All Sites	4.2	4.2	4.4

Ratings of crowdedness indicated that crowding is generally not a problem, with 92% of visitors reporting that sites were not at all or not very crowded (Table 14). Sandy Beach was perceived to be the most crowded of all sites, which may be due to its small size that can only accommodate a few recreationists at once. The Powerhouse Loop Trail and boat restraint were rated not at all crowded by all visitors.

1	2	3	4	5
Not at all Crowded	Not very Crowded	Somewhat Crowded	Very Crowded	Extremely Crowded

Table 14. Visitor Rating of Crowdedness

Recreation Site	Avg.	1 Not at All Crowded	2 Not Very Crowded	3 Somewhat Crowded	4 Very Crowded	5 Extremely Crowded
North shoreline between old mill site and Wild Goose Landing Park (n=14)	1.6	71%	7%	7%	14%	--
Wild Goose Landing Park (n=43)	1.5	67%	21%	9%	2%	--
Boat restraint area (north shore, n=2)	1.0	100%	--	--	--	--
Island Park (n=86)	1.3	74%	21%	2%	2%	--
Power Park (n=24)	1.3	75%	25%	--	--	--
Sandy Beach (n=7)	2.1	57%	14%	--	14%	14%
Powerhouse Loop Trail (n=22)	1.0	100%	--	--	--	--
South Shore (n=36)	1.5	67%	22%	6%	6%	--
Cherry Creek Access Site (n=8)	1.4	75%	13%	13%	--	--
All Sites (n=242)	1.4	74%	18%	4%	3%	<1%

3.7 Opinions about Facilities

Probably one of the most striking differences in 2018 visitor responses compared to prior years is the proportion of visitors that feel no changes are needed at recreation sites. In 2018, just 15% of visitors said they would prefer to see changes, compared to 26% in 2014 and 43% ten years ago (Table 15).

This result is probably due to the many recreation enhancements made to facilities over the past 10 years, including construction of the Powerhouse Loop Trail and State Park Trail, addition of benches and a toilet along these new trail segments, benches at Power Park and Island Park, improvements to the boat launch and dock approach at Wild Goose Landing Park, repair and reopening of the High Bridge, development of a parking area at the north entrance to Island Park and a parking area and toilet at the south entrance, and development of a fish ladder viewing area, interpretive exhibits, and addition of a toilet at Island Park. Many of these changes and additions addressed concerns expressed by visitors in the 2008 and 2014 visitor studies.

Table 15. Need for Changes Trends

Need for Changes	2018	2014	2008
Leave As Is	85%	74%	57%
Prefer Change	15%	26%	43%

Visitors that indicated they would prefer something changed about a site were asked what they would like to see added, removed, or changed. While this is useful information for managing individual recreation sites, readers should exercise caution when interpreting results because sample sizes at individual sites are small and statistical confidence in site-specific results is low.

A total of 37 visitors (15%) made 61 suggestions for changes to recreation sites. The largest number of suggestions were made regarding Cherry Creek Access Site (16) and Wild Goose Landing Park (11). Less than half of respondents to any one site indicated a need for change with the exception of the boat restraint area and Cherry Creek Access Site (Table 16). Only two visitors provided input on changes to the boat restraint area, and they would prefer more amenities than the site currently provides. Input regarding the Cherry Creek Access Site reflected a need for better management of the site, in terms of fixing picnic tables, removing debris piles, improving the bathroom, signage and information, presence of litter, and vegetation management, as well as adding benches and garbage cans (Table 17).

Suggestions at Wild Goose Landing Park were similar to those for Cherry Creek Access Site: improve the restroom, dock, amount of parking, number of picnic tables, etc. Although no visitors surveyed on the Powerhouse Loop Trail preferred changes, when all area visitors that had used the Powerhouse Loop Trail or State Park Trail were asked, 9% indicated they would prefer changes. Most of these changes (69%) were requests for more site amenities (garbage cans, pet waste bags, seating and benches, more signs and information) while the remaining requests were for a smoother, bike-friendly trail and improved access.

Table 16. Visitors Preferring Changes by Site

Recreation Site	Number of Visitors	Percent of Site Visitors	Percent of Area Visitors
North shoreline between old mill site and Wild Goose Landing Park (<i>n</i> =14)	2	14%	1%
Wild Goose Landing Park (<i>n</i> =44)	9	21%	4%
Boat restraint area (north shore) (<i>n</i> =2)	2	100%	1%
Island Park (<i>n</i> =84)	8	10%	3%
Power Park (<i>n</i> =24)	4	17%	2%
Sandy Beach (<i>n</i> =7)	2	29%	1%
Powerhouse Loop Trail (<i>n</i> =22)	0	0%	0%
South Shore (<i>n</i> =36)	5	14%	2%
Cherry Creek Access Site (<i>n</i> =8)	5	63%	2%
Total (<i>n</i>=241)	37	N/A	15%

Table 17. Changes Preferred by Site

Recreation Site	Preferred Change	Percent of Site Visitors	Preferred Change	Percent of Site Visitors
North shoreline between old mill site and Wild Goose Landing Park (n=2)	Add picnic tables	21%	Add pet waste bags	7%
	Add toilet, bathroom	7%	Clean up litter	7%
	Add benches	7%	Clean up slash piles and debris	7%
Wild Goose Landing Park (n=9)	Improve restroom, add door	6%	Dredge reservoir	2%
	Improve dock, put dock out	4%	Fix pump house	2%
	Add parking	2%	Water grass	2%
	Add picnic tables	2%	Improve area development	2%
Boat restraint area (north shore) (n=2)	Add drinking water	50%	Improve water level	50%
	Add picnic tables	50%		
Island Park (n=8)	Add signs and information	3%	Improve bathrooms	1%
	Add picnic tables	2%	Remove sandbar	1%
	Add garbage cans	1%		
Power Park (n=4)	Add garbage cans	4%	Add swings	4%
	Improve bathrooms	4%	Add more trails	4%
	Clean site better	4%		
Sandy Beach (n=2)	Add more trails	14%		
	Pave trail, smoother trail to site	14%		
Powerhouse Loop Trail	No changes suggested			
South Shore (n=5)	Add toilets, bathrooms	6%	Clean up litter	3%
	Remove sand bar, gravel bar	6%	Improve walking path	3%
	Add picnic tables	3%		
Cherry Creek Access Site (n=5)	Fix and add picnic tables	39%	Add signs and information	13%
	Remove burn piles, debris	39%	Clean up litter	13%
	Improve bathrooms	26%	Add pet waste bags	13%
	Add garbage cans	26%	Improve boat ramp	13%
	Add benches	13%	Improve grown-over picnic sites	13%

3.8 Problems during Site Visit

Only 2% of visitors reported experiencing problems on their visit to the site, which is less than the percentage that reported problems in 2014 (4%) and 2008 (5%). Problems included bathrooms that were locked or dirty, and low water levels that made boat launching difficult.

3.9 Visitor Comments

At the end of the survey, visitors were given an opportunity to provide additional open-ended input regarding the recreational opportunities at the site or in the area. Nine percent of respondents offered additional comments. About one-fifth of those (18%) used the opportunity to express appreciation for the historical information and cost-free access. Nearly half of them (45%) reiterated previous remarks for improvements, especially for trash receptacles, additional or improved picnic tables, upgraded restroom conditions, and additional information. About one-third (35%) expressed concerns not previously gathered through the survey, including:

- At Wild Goose Landing Park, add a bench or pedestrian access along the water, add a gazebo, beautify the area with more grass and weed management, and do more boat checks.
- Add sand at the South Shore Recreation Area.
- Clean out the reservoir.
- Add a river access take-out spot between Plains and Thompson Falls.

Appendix A: Survey Questionnaire

1. Case #: _____ 2. Month/Day: _____ / _____ 3. Time: _____ (24 hour clock)

4. Site: North shoreline (between mill and Wild Goose) Sandy Beach
 Wild Goose Landing Park Powerhouse Loop Trail
 Boat Restraint (north shore) South Shore Recreation Area
 Island Park Cherry Creek Access Site
 Power Park

5. Gender: Male Female 6. _____ "What is your age?"

7. "Where do you live?" City/Town: _____ State: _____

8. "Is this your first visit to this recreation site?"

Yes No

↓ 9. _____ "About how many years have you been visiting the site?"
 10. _____ "About how many days a year do you visit the site?"
 11. "How long do you usually stay?" Hours: _____

12. "How long will you stay at this site on this trip?" Hours: _____

13. _____ "Including yourself, how many people are in your traveling group on this trip?"
 Adult Males: _____ Adult Females: _____ Children under 18: _____

14. "How do you feel about the recreational development here? Would you like to see the area left as it is or would you prefer any changes?"

Left as is Prefer changes → "What changes would you prefer to see?"
 ↓ Improved: _____
 Added: _____
 Removed: _____

15. How crowded did you feel at this site during this visit?
 1 2 3 4 5
 Not at all crowded Not very crowded Somewhat crowded Very crowded Extremely crowded

"I am going to read a list of five reasons why people participate in outdoor recreation. Please tell me the number on this card (provide card) that corresponds to how important that reason is to you **today**."

1 2 3 4 5
 Not at all important Not very important Somewhat important Very important Extremely important

18. _____ To enjoy nature 21. _____ For excitement
 19. _____ To be with friends or family 22. _____ To find some solitude
 20. _____ To be outdoors

Please rate your satisfaction with the following conditions at this site. (N/A responses will be filled in to indicate a particular amenity doesn't exist at the site. Amenities for which a respondent refuses to answer will be left blank.)

1 2 3 4 5
 Not at all satisfied Not very satisfied Somewhat satisfied Very satisfied Extremely satisfied

- | | |
|--|---|
| 23. ____ Picnic area conditions | 26. ____ Maintenance of facilities |
| 24. ____ Boat dock/launch conditions | 27. ____ Cleanliness of area |
| 25. ____ Quality of interpretive/
educational information | 28. ____ Condition or degree of naturalness |
| | 29. ____ Behavior of other people |

30. What is your overall satisfaction with this site?

1 2 3 4 5
 Not at all satisfied Not very satisfied Somewhat satisfied Very satisfied Extremely satisfied

"Which of the following activities are you participating in while visiting this site?" (Check all that apply)

- | | |
|--|--------------------------------------|
| 31. ____ Fishing from shore | 37. ____ Swimming |
| 32. ____ Fishing from a boat | 38. ____ Picnicking |
| 33. ____ Motorboating | 39. ____ Socializing |
| 34. ____ Waterskiing, tubing or wakeboarding | 40. ____ Relaxing |
| 35. ____ Riding a motorized PWC (<i>jetski, etc.</i>) | 41. ____ Photography or nature study |
| 36. ____ Using a non-motorized watercraft (<i>canoe, kayak, paddleboard, raft, float tube, etc.</i>) | 42. ____ Hiking, walking or running |
| | 43. ____ Bicycling |

44. "Have you experienced any problems on this trip to this site?"

No Yes → "What were they?" _____
 ↓

45. Are you aware of other recreation areas along the river or reservoir near Thompson Falls?

No Yes → "Which ones?" *Check all that apply.*

- | | |
|--|-------------------------------------|
| ____ North shoreline (between mill and Wild Goose) | ____ Cherry Creek Access Site |
| ____ Wild Goose Landing Park | ____ South Shore |
| ____ Boat Restraint (north shore) | ____ Thompson Falls State Park |
| ____ Island Park | ____ Flat Iron Ridge FAS |
| ____ Power Park | ____ Other (<i>specify</i>) _____ |
| ____ SandyBeach | |
| ____ Powerhouse Loop Trail | |

46. Have you ever used the Powerhouse Loop Trail or State Park Trail?

No Yes → 47. "How satisfied are you with those trails overall?"

1 2 3 4 5
 Not at all satisfied Not very satisfied Somewhat satisfied Very satisfied Extremely satisfied

↓
 48. "Is there anything you would prefer changed about the trails?"
 No → Yes What? _____

49. "And finally, is there anything else we should know about the recreational opportunities at this site or in the area?" _____

"Thank you very much for your help!"

Appendix B: Environmental Factors Influencing 2018 Visitation

Environmental conditions during much of the 2018 study period (May 25 through September 6) were not typical due to extremely high runoff in the early part of the season followed by drawdown of Thompson Falls Reservoir. These two conditions greatly influenced use of the waterway for recreation.

Average daily discharge of the Clark Fork River near Plains during May 2018 was twice the historic May average¹² and about 60% higher than during May 2014, the year of the previous visitor survey (Figure 4). Discharge peaked on May 27 and 28, 2018 (Memorial Day Sunday and Monday) at 103,000 cubic feet per second (cfs), compared to peak discharge on May 29, 2014 of 82,300 cfs. Discharge typically prevents much on-water activity until it drops below about 30,000 cfs, usually in late June or early July, and recreationists feel safe on the water.

While high flows impacted the amount of water-based recreation in May and June 2018, it was the resulting drawdown of Thompson Reservoir that impacted water-based recreation for July and early August. Accommodating flows over about 100,000 cfs at the Thompson Falls Main Dam (which peaked at 105,000 cfs in late May) required passing large amounts of debris, which in turn required stanchion boards to be released to accommodate material flowing through the dam gates. Once the flows receded, the reservoir level had to be dropped so that the stanchion boards could be replaced and dam operations could return to normal. It wasn't until early August that the reservoir was refilled to normal full pool level (Figure 4).

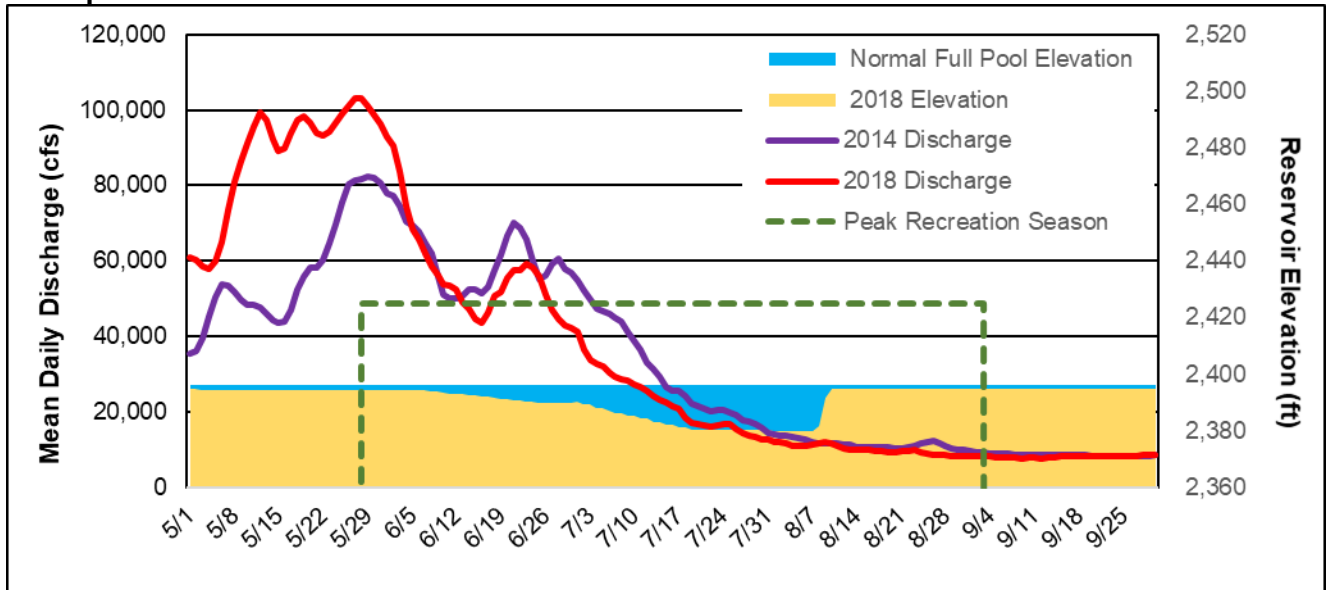
Drawing down the reservoir to accommodate replacing the stanchions caused the water to recede from the typical shorelines (including boat launches and popular swimming areas) and made water-based recreation difficult. Once the reservoir was refilled recreational use returned to normal.

High water in the early season (May through late June) and low reservoir levels in the mid-season (early July to mid-August) made it difficult for visitors to enjoy on-water recreation during much of the 2018 peak recreation season. While the 30% increase in sampling intensity in 2018 (compared to 2014) did not produce higher sample sizes as intended, a significant reduction in the overall sample size would have been likely had that sampling intensity not been increased, resulting in much lower confidence in survey results.

The activity patterns demonstrated by recreationists in 2018 are not considered typical as there was a notable reduction in on-water and shoreline-based activities (fishing from boat or shore, swimming, boating, etc.) and a notable increase in some site-based activities (relaxing, picnicking, socializing, etc.). However, these shifts in use were reactions to the water flows and reservoir level and should not be considered a variation in the long-term trends of site use. Instead, the modified recreation use in 2018 demonstrates that recreation sites associated with the Project are well equipped to accommodate a variety of uses, both water-based (when appropriate) and land-based.

¹² USGS gage 12389000 near Plains MT, historic May average (1911-2017)

Figure 4. Mean Daily Discharge of Clark Fork River near Plains and Daily Elevation of Thompson Reservoir*



* While mean daily discharge and reservoir elevation are charted here to demonstrate water fluctuations during May-September 2018, some values closely approximate actual values for the purpose of illustration, so that the concepts of flows and elevation are clearly displayed and understood. It is not the intent to report incorrect data in this graph, but to demonstrate water conditions in 2018.

Shoreline photos during drawdown (*Linda Elliot photo credit*).

