

Visitor Survey on the Recreation Segment of the Salmon Wild and Scenic River System

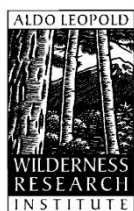


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EXECUTIVE SUMMARY

Planners and managers of the recreation segment of the Salmon Wild and Scenic River (WSR) will eventually need to develop a user capacity, a monitoring plan, and a lands and facilities plan. To support these needs, we conducted a river user survey in the high-use season of 2021 and 2022, with 719 surveys distributed, yielding 332 usable surveys (46% response rate); which represents the second phase of research support (following a river use monitoring study in the high-use season of 2020). Below we highlight select findings.

Visitor and trip characteristics

- Most respondents (61%) have been visiting this stretch of the Salmon River for 10+ years.
- The most frequent primary activity of respondents (39%) was non-motorized floating.
- 24% of respondents were daytrip users. The average daytrip was 7 hours.
- The sample consisted of 251 primary users (77%), or those users that focused their visitor experience within the recreation segment of the Salmon WSR from North Fork to Corn Creek. Primary users were more likely to be local or regional (within a 3-hour drive to the river), and more likely to be older, to have been visiting the recreation segment for longer, and to have reported diminished trust in the USFS as an agency responsible for managing the river.
- The sample consisted of 74 secondary users (23%), or users that focused their visitor experience on the permitted, wild segments of the Salmon WSR. Secondary users tended to have traveled from long distances and were more likely to be first time visitors.

Summary findings – a question by question look at the full-sample averages

- Overall, outdoor recreation and wildlife habitat and diversity of animal species were the two most important WSR river purposes, and economic value for mineral extraction and recreation free from rules and regulations were the two least important WSR river purposes.
 - However, recreation free from rules and regulations was significantly more important to primary users than secondary users.
- Social and ecological conditions were generally viewed as not problematic, and most respondents viewed the facilities within the river corridor as excellent or good.
 - However, open-ended comments highlight some concerns, including an increase in use, a lack of enforcement of rules and regulations, negative changes in fisheries, and fire damage.
- 48% of respondents would not change their next trip to the Salmon River even if they believed there were “too many people”; highlighting the adaptability of recreationists.
- Management actions or policies with the highest level of agreement include protection of scenery through limiting human development, and restricting irrigation and water consumption if needed to protect river flows and wildlife habitat.

Distilling findings and exploring divergent perspectives

- Using factor analysis, we distilled visitor opinions regarding WSR purposes and values, potential policies and management actions, and social and ecological conditions into nine WSR concepts. In other words, the majority of the survey can be conceptualized as addressing opinions regarding: (1) Instream flow and undeveloped landscapes; (2) Landscape production and free recreation access; (3) Reconnection and interpretation; (4) Restraining recreation; (5) Fewer people for the experience and the resource; (6)

Resource impacts; (7) On-river experience; (8) Experience from shore; (9) Backdrop of the experience. These nine core issues of WSR management are viewed differently by three different groups (or clusters) of river users.

- Cluster 2 and cluster 3 are mostly aligned with a view of WSR management where restricting both access and adjacent land uses may be appropriate; these clusters appear to perceive a stronger tradeoff between adjacent land uses such as agriculture and important river values. Differently, cluster 1 has a view that WSR values and adjacent land uses are in less tension, as expressed by an opposition to restraining recreation, and support for landscape production and free recreation access.
- Cluster 1 and cluster 3 are aligned in the view that the existing visitor experience is mostly unproblematic. Differently, cluster 2 expressed concerns about the condition of the visitor experience.
- The clusters are different in a few ways that potentially explain their perspectives related to the nine WSR concepts. Respondents in cluster 1 and cluster 2 tended to have been visiting the Salmon WSR for a longer amount of time, whereas cluster 3 had more respondents that were experiencing their first visit; these dynamics are understandable when considering that cluster 3 was more likely to include respondents who were both secondary users and from distant locations.
- Respondents in cluster 1 tended to report diminished trust with the USFS, relative to cluster 2 and 3. Further, cluster 1 has respondents that were less likely to change their trip if they perceived too many people in the river corridor, whereas cluster 3 had a higher percentage of respondents that were quite or extremely likely to change their trip due to the presence of too many people.

Implications for Salmon WSR planning

- Combining both the monitoring and the visitor survey phase of research highlights an opportunity to embrace a wait-and-see approach for managers regarding use limitations, whereby both use and river user perceptions are monitored going forward to better understand potential changes in recreation experiences.
- Managers have an opportunity to proactively enhance the recreation experience via facility improvements (e.g., expanded boat ramps, more bathrooms) and road maintenance.
- For determining a user capacity, it appears that visitor use is not currently threatening the recreation ORV. However, it is an open question as to whether other ORVs, such as fisheries and wildlife, are being threatened by recreation use.
- Salmon WSR visitors may be more amenable to a decision rationale for limiting use that emphasizes the protection of non-recreation ORVs, in part because a desirable recreation experience varies depending on the visitor.
- There may be an opportunity to vary recreation experiences across the Salmon WSR system, as well as the WSR regional system, by recognizing the different niches filled by different regional rivers and different segments of the Salmon WSR system.
- More than 40 years after the original management guidance for the recreation segment, our research suggests that the original management objectives continue to fill a niche within the broader Salmon WSR system. Specifically, our research highlights cluster 1 (90% of whom are primary users), which is supported by a river section with little regulatory control, and is defined by respondents who have been visiting for over 10 years and have reported diminished trust with the USFS.

1. INTRODUCTION

In 1968, the United States Congress passed the National Wild and Scenic Rivers System Act. This Act enabled Congress or the Secretary of the Interior to designate rivers across the country with outstanding natural, cultural, and recreational values with additional protection to preserve these values, a free-flowing condition, and enjoyment for current and future generations (Wild and Scenic Rivers Act, 1968). To be considered eligible for a Wild and Scenic River (WSR) designation, a river must possess one or more “outstandingly remarkable values” (ORVs) (Interagency Wild and Scenic Rivers Coordinating Council, 2019; Interagency Wild and Scenic Rivers Coordinating Council, 2007), in addition to possessing a free-flowing water course (i.e. no impoundments). Some of these ORVs include, but are not limited to, scenery (e.g. landforms that are rare, unique, or exemplary), fish (e.g. the river provides high quality habitat for fish species, especially species that are threatened or endangered), and Indigenous history (e.g. the river corridor contains evidence of use and occupation by Native Americans) (Interagency Wild and Scenic Rivers Coordinating Council, 1999).

WSRs are federally managed to protect, enhance, and preserve the ORVs that led to their designation (Interagency Wild and Scenic Rivers Coordinating Council, 2019). The approach to protecting and enhancing ORVs on WSRs is primarily supported by a comprehensive river management plan (CRMP), which provides general directions for managers and planners administering a WSR. Specifically, a CRMP includes a description of the regional river setting, goals and desired conditions for protecting ORVs, a ‘user capacity’¹ with associated management approaches, and a monitoring strategy (“Newly Designated Wild and Scenic River”, 2010). Understanding the people who visit, explore, and enjoy spending time within WSR corridors is an important facet of developing (and updating) CRMPs; as desired conditions, user capacities, and monitoring strategies are developed, understanding social perceptions of visitors, in addition to their trip behaviors, is integral. WSR managers can benefit from social science research and visitor monitoring to both inform planning efforts, and communicate those efforts to an interested, and often highly engaged, public.

To support WSR planning, we developed a two-phase approach to be piloted on a section of the Main Salmon WSR in Idaho (i.e., the ‘recreation’ classified segment from North Fork to Corn Creek). The first phase included monitoring of river floaters (see Oppler et al. 2021, which is available in the data archive for the monitoring phase (Oppler et al. 2025)). The second phase included implementation of a visitor use survey, which collected information on trip characteristics, visitor perceptions of social and environmental conditions, opinions on potential management actions, perceptions about the importance of river values, views on the level and quality of facilities, and demographic characteristics of visitors. This report focuses on the results from the visitor use survey, but in the discussion section (Section 5) we highlight how both phases (i.e., monitoring and research) can, when combined, provide valuable support for

¹ User capacity, or similarly ‘visitor capacity’ or ‘social carrying capacity’, has been defined in various ways and evolved over time (Graefe et al. 2011). For the purposes of the WSR determination of user capacity, the following definition is that guiding federal land management agencies: “The maximum amounts and kinds of public use that a WSR collectively or by analysis area can accommodate without degrading river values. At a minimum, each CRMP must deal with or discuss the maximum number of people that can be received on lands in the river corridor controlled by the river manager” (Interagency Wild and Scenic Rivers Coordinating Council, 2018:18). A ‘user capacity’ determination is required by the 1982 Secretarial Guidelines (47 Fed. Reg. 39453) and a 2008 court decision related to the Merced River in Yosemite National Park (Friends of Yosemite Valley v. Kempthorne, 520 F.3d 1024 2008).

informing and communicating a CRMP. The report proceeds with an overview of the study area (Section 2) and methods (Section 3). In Section 4, we provide an overview of the survey results, and discuss the implications for the results for WSR planning in Section 5.

2. STUDY AREA

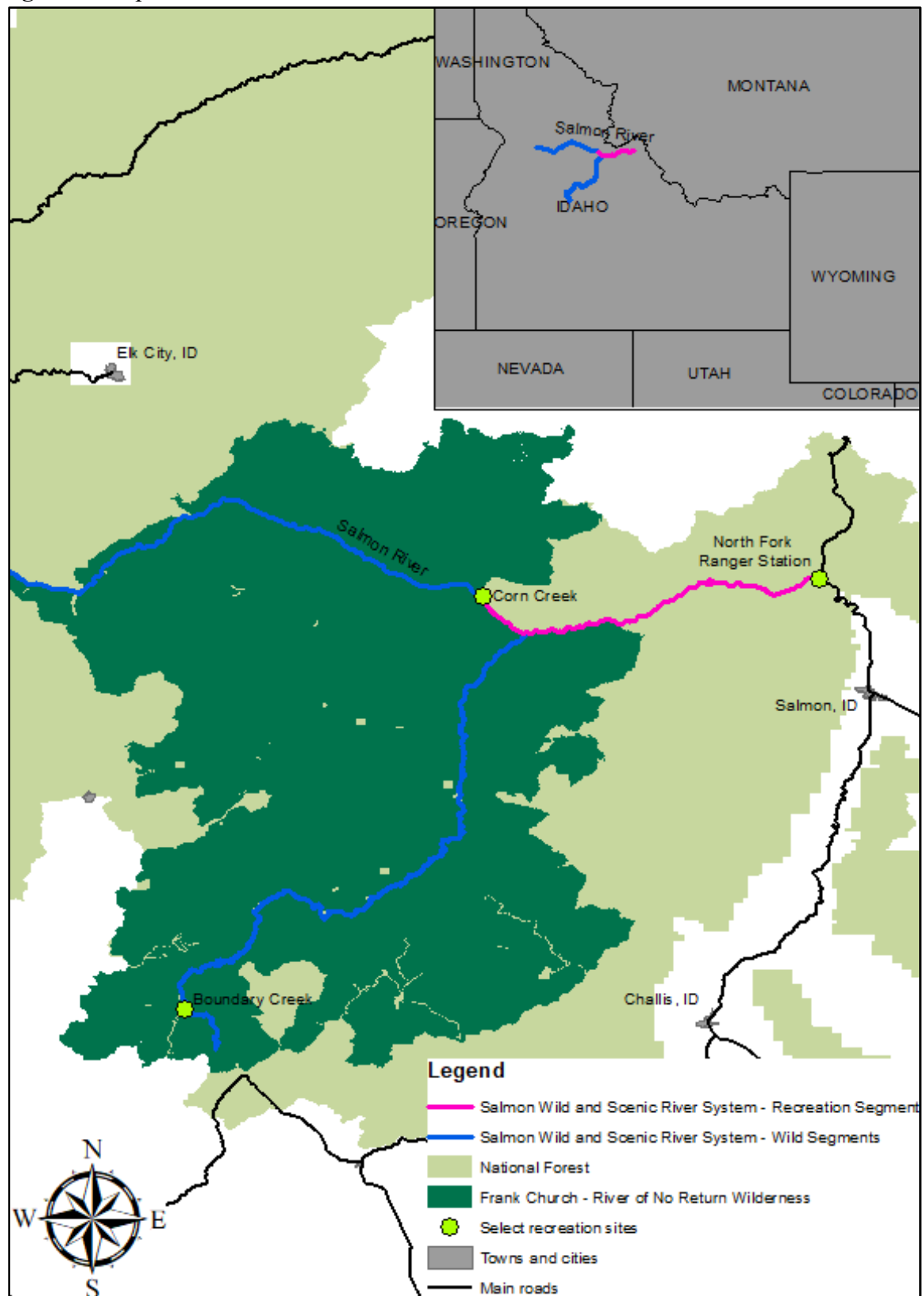
The Wild and Scenic Salmon River was designated in July 1980 with the Central Idaho Wilderness Act in recognition of its ORVs, including scenery, recreation, geology, fish, wildlife, water quality, botany, prehistory, history, and cultural traditional use (USDA Forest Service, 2003). The WSR system on the Salmon River encompasses 79 miles of wild classification and 46 miles of recreational classification (Figure 1).

Currently, the guiding documents for managing the Salmon WSR system are the Frank Church – River of No Return Wilderness (FC – RONRW) Plan (USDA Forest Service 2003), and the Salmon Wild and Scenic River Management Plan (USDA Forest Service 1982). Regarding the ORVs of the Salmon WSR system, these two documents provide a limited amount of distinction between the ‘wild’ segments and ‘recreation’ segment of the system. That is, the ORVs (described in an appendix of USDA Forest Service 2003) are framed for the entire system, with occasional specific reference to the ‘recreation’ segment (e.g., the recreation ORV highlights that the ‘recreation’ segment is primarily for day use, with specific activities such as using the river to reach hunting camps). The ‘wild’ and ‘recreation’ segments are more distinct within the context of specific management directions. For instance, the River Management Plan (USDA Forest Service 1982:5) offers four ‘management objectives’ for the ‘recreation’ segment:

- Manage this section of river to maximize a wide range of river-oriented recreation activities consistent with the overall objectives of designated Recreation Rivers and the specific provisions of the Central Idaho Wilderness Act;
- Develop those facilities necessary to fulfill the above objective with minimum adverse impact on the river resource;
- Manage this river section with as little regulatory control as possible;
- Monitor user demands to determine use levels at which conflicts arise which are unresolvable without regulation.

The distinct managerial, environmental, and social settings on the ‘wild’ and ‘recreation’ segments support different visitor experiences. For instance, the ‘wild’ segments of the Salmon WSR include stretches of the Middle and Main Salmon, which are internationally known multi-day river trips flowing through remote designated wilderness that require highly coveted permits distributed through a lottery system. In 2023, 21,460 people applied for a Middle Fork of the Salmon permit, with 375 permits awarded for a success rate of 1.75% (USDA Forest Service, 2023). Visitor use on the ‘wild’ segments is generally well understood, due to the ‘control’ season (i.e., the permitting requirements), a limited amount floating outside the control season, and the challenge of accessing the river corridor. Further, the ‘control’ season constitutes, in large part, both the user capacity and monitoring requirements for the ‘wild’ segments.

Figure 1. Map of the Wild & Scenic Salmon River



In contrast, the ‘recreation’ segment of Salmon WSR system, which encompasses the 46 miles from North Fork to Corn Creek, provides a mostly unregulated visitor experience with full road accessibility, no requirements to use the river (e.g., float permit), and camping on a first-come-first served basis. Additionally, the ‘recreation’ segment is experienced as people pass through it at the beginning of their Main Salmon permitted trip, pass through it at the end of their Middle Fork of the Salmon permitted trip, and/or participate in a variety of visitor activities that are not necessarily water-based, but nonetheless within the river corridor. The ‘recreation’ segment, as part of the broader Salmon WSR system, is missing required CRMP components, including a user capacity determination, a monitoring strategy, and the development of lands and facilities. In support of this managerial need, U.S. Forest Service (USFS) managers and planners of the Salmon-Challis National Forest in Idaho invested in visitor use monitoring and a visitor use survey to better understand use numbers and patterns, perceptions, and expectations along the recreation segment of the Salmon River.

3. DATA COLLECTION

We highlight the methods for data collection and analysis of a visitor survey within the Salmon River recreation segment. Elsewhere, the details of the monitoring phase are available, in addition to the raw data and final report, are freely available and securely stored within the USFS archive (Armatas et al. 2025a). Additionally, the survey instrument, raw data (with associated materials including coding manual), and methods of the visitor survey phase are freely available and securely stored within the USFS archive (Armatas et al. 2025b).

Data collection included the distribution of surveys during the summer (June through August) and fall (September through November) of 2021 and 2022. Between June and August, sampling days occurred each week on both Saturday and Sunday and at least one weekday (Monday through Thursday) for a total of approximately 24-28 sampling days. Investing in two weekend days of sampling per one day of weekday sampling is consistent with river use, with the camera monitoring data (Oppler et al. 2025) indicating that 53% of floating occurring on Friday, Saturday, and Sundays. Between September and November, sampling only occurred on weekends (Fridays included). While only sampling on weekends during September through November introduced the potential to bias the sample towards weekend users, sampling was limited by project resources; and further river monitoring data (Oppler et al. 2025) indicated that 67% of river use in September occurred Friday through Sunday.

Field technicians distributed surveys to adult users at multiple access points: 1) Spring Creek Campground (mile marker 15.5); 2) Cove Creek Boat Ramp (mile marker 25.5); 3) Corn Creek Campground (mile marker 45.5); 4) a dispersed camping area near Transfer Gulch; 5) Spring Creek dispersed camping area (east end); 6) Ebenezer Campground; 7) Stoddard Trailhead; 8) various pull-outs and dispersed camping areas where other recreationists, such as fishers or hunters, were seen. River users/groups that were putting-in to float from Corn Creek down into the Wild section of the Salmon River were included in the sampling as they were using the campground and other aspects of the Corridor. River users/groups that were part of commercial trips on the Middle Fork of the Salmon River were excluded from sampling, as river managers and planners were primarily interested in non-commercial use for this study. River users/groups taking out from private trips on the Middle Fork of the Salmon were included in the sample, as they are non-commercial users and they experience the ‘recreation’ segment, at least, via the river takeout and the drive out of the WSR corridor.

During sampling days at these locations, field technicians approached adult visitors exiting the river or using the day-use area or campgrounds and asked if they would like to participate in this study. The unit of analysis in this study was the individual, and we did not prevent multiple people in a group from taking the survey; however, it was common for only one individual in a group to take the survey. Visitors who consented were given a hard copy of the survey to complete on-site and could return to the field technicians, or deposit in a temporary drop-box set up on the road leading out of the area. On occasion, field technicians orally administered the survey and recorded responses using the Qualtrics app installed on a tablet. In addition to systematic sampling approaches, and due to the relatively low-use of the area and the resources available for survey administration, one convenience sampling approach was used. Hard copies were left on vehicles for visitors to complete and return the survey, using pre-filled return envelopes. Technicians recorded the make, model, color, and license plates of these vehicles to ensure multiple surveys were not left on the same vehicle.

3.1. Sample representativeness and potential limitations

Prior to presenting results, we discuss sample representativeness and some potential limitations of these data. The goal of survey methodology is to collect surveys from a sample of river users that represents the population of river users. Our sampling approach was designed, with a heavier focus on weekends, to represent basic patterns of river use. And, generally, if a survey sampling approach is random, then it should be representative of the general population. However, given the resources available for this study, the relatively low-use of the corridor by ‘primary users’, and two sampling seasons challenges by wildfires and very low water, we employed some ‘convenience’ sampling whereby surveys were left on vehicles. It is possible that this supplemental convenience sampling approach, when compared to a fully systematic and random sampling approach, influenced the sample. Additionally, despite intentions to track non-response, the survey implementation team did not adequately collect non-response questions, therefore impeding our ability to understand how those who did respond to the survey differed from those that did not.

Despite these potential limitations, the survey data analyzed herein represents the most thorough and robust data set on visitors to the recreation segment of the Salmon WSR corridor, thus providing a baseline for current and future WSR management and planning. Further, by comparing the river monitoring data from 2020 with the responses to particular questions from the survey sample in 2021 and 2022, we are able to understand if the survey sample is generally representative of the broader river user population. Table 1 highlight two variables, average people per craft and the proportion of craft type used to float the Salmon River, as reported by respondents and as captured by the monitoring study in 2020. As shown, the monitoring data and survey sample data are well aligned, with a potential over-representation of non-motorized rafter/dory users, and an underrepresentation of kayakers (or single person crafts), in the survey sample relative to the monitoring data.

Table 1. Checking sample representativeness

Variable	Sample (survey data)	Monitoring (camera data)
Average people per craft	2.16	2.36
Proportion of river use by craft type*		
Non-motorized raft or dory	76.6%	69.7%
Motorized boat	2.5%	1.8%
Canoe, kayak, or single person raft (including innertubes)	19.3%	28.0%
Stand-up paddle board	1.6%	0.5%

*Note: Calculation of the proportion of river use by craft type for the survey data (i.e., the sample) was estimated by relating the number of craft reported to the types of craft reported. When a respondent indicated multiple types of craft were used, the total number of craft reported was distributed equally across the different types of craft reported. While this yields an estimate, only 14.5% of respondents indicated multiple types of craft were used.

4. SUMMARY ANALYSES AND AGGREGATE FINDINGS

Across both field seasons, a total of 719 surveys (see Appendix A for the full version of the questionnaire) were distributed and 332 completed surveys were collected (46% response rate). The 332 responses were exported from Qualtrics to an excel spreadsheet, then uploaded to R for cleaning and analysis. Within this summary analyses section, descriptive statistics are provided, including proportions (i.e., counts) and average responses. Generalized linear models and chi-square tests of independence were performed to understand, in large part, the difference between primary and secondary users. Common themes, or codes, were identified within the text responses for each open-ended question. Longer open-ended responses were frequently categorized into two or more codes, meaning that the total number of codes was higher than the total number of open-ended responses.

4.1. Type of users: segmenting the population into primary and secondary users

To add nuance to our understanding of how (and by whom) the ‘recreation’ segment of the Salmon River is being used (within the broader Salmon WSR system), we defined the non-commercial river-user population as consisting of “primary” and “secondary” users:

- *Primary*: The activity and majority of time spent occurred within the recreational segment of the river corridor (i.e., from North Fork to Corn Creek) (n=251);
- *Secondary*: The activity and majority of time spent occurred within the wild segments of the Salmon WSR system (i.e., floaters of the permitted section of the Main Salmon or floaters of the permitted section of the Middle Fork of the Salmon) (n=74).

To parse the sample into primary users (majority of experience occurred along the recreation segment from North Fork to Corn Creek) and secondary users (majority of experience occurred within the permitted sections of the broader Salmon WSR system), we assessed, first, whether people went boating or not. Because primary users were not necessarily participating in a floating activity (e.g., activities such as picnicking, fishing along the road, and camping within the recreation segment), whereas secondary users were all boating within the permitted sections of the WSR system. 62% of respondents (n=202) reported that they went boating, whereas 38% (n=123) did not.

To understand how many of the 201 boaters were primarily floating within the recreation segment from North Fork to Corn Creek, we assessed where they started and ended their float trip. Those who listed a combination of put-in and take-out locations for the permitted sections were considered secondary users, while all other boaters (and non-boaters) were considered primary users. Overall, the sample consisted of 251 primary users, and 74 secondary users.

4.1.1. *The relationship between geographic origin of visitors and type of user*

Table 1 summarizes the geographic origin (and frequency) of Salmon River users (based on the ZIP code of their primary residence). In total, 296 respondents provided 160 unique ZIP codes spanning 22 states. The majority of respondents were from Idaho (58%), 239 respondents (81%) were from ID or one of the neighboring states (MT, WY, UT, NV, OR, WA).

Table 1. Respondents state of origin (defined by reported zip code) (n=296)

State	Frequency	Percentage
Idaho	171	57.8%
Montana	24	8.1%
Colorado	23	7.8%
Utah	17	5.7%
Washington	11	3.7%
California	10	3.4%
Arizona	6	2.0%
Pennsylvania	3	1.0%
South Dakota	2	0.7%
Texas	2	0.7%
Nevada	2	0.7%
Alabama	2	0.7%

Note: The following states had a single participant report a zip code within that state – Alaska, Georgia, Iowa, Michigan, North Carolina, New York, Virginia, Wisconsin, West Virginia, Wyoming

To facilitate analysis, we worked with managers to categorize river users as:

- *Local:* Defined as visitors with Salmon, Challis, Carmen, and North Fork, ID ZIP codes (n=60);
- *Regional:* All remaining ID ZIP codes, plus 15 MT ZIP codes that border Highway 93 north of Salmon, ID to Missoula, MT (n=125);
- *Distant:* All remaining ZIP codes (n=111).

Using a chi-square test ($p < 0.001$), we found distant users were more likely to be boaters (77%, $n=86$) than regional (53%, $n=64$) or local (55%, $n=32$) users, which is likely related to the fact that most secondary users were distant users. All respondents who went boating were asked to answer additional questions regarding their activities and itineraries on the water. Indeed, a chi-square test found a significant difference in geographic origins (i.e. local, regional, distant) when respondents were categorized by user type ($p < 0.001$). Among primary users ($n=250$), 22% ($n=56$) were locals, 42% were regional users ($n=104$), and 24% ($n=61$) were distant users. Conversely, among secondary users ($n=74$), 4% ($n=3$) were locals, 22% ($n=16$) were regional users, and 68% ($n=50$) were distant users.

In general, these basic summary analyses and statistical tests highlight a non-commercial river user population of the recreation segment that consists of: (1) primary users spending the majority of their experience within the river corridor from North Fork to Corn Creek; these primary users tend to be local or regional (within a three-hour drive) and; (2) secondary users spending the majority of their time on the permitted sections of the Salmon WSR system, who pass through the North Fork to Corn Creek corridor while starting or ending their trip; these users tend to be traveling long distances.

4.2. Demographics

Table 2 summarizes the demographic characteristics of the respondents. Overall, respondents were predominately white, non-Hispanic, with two-thirds being male, and just over half being older than 55 years old, and having an income below \$100,000 (56%).

Table 2. Overall demographic characteristics of river users

Demographic characteristic (n = number of responses to each question out of 332 responses total)	Frequency of responses	Percentage of responses
<i>Age (n = 317)</i>		
18-24 years old	12	3.8%
25-44 years old	66	20.8%
45-54 years old	63	19.9%
55-64 years old	67	21.1%
65+ years old	109	34.4%
<i>Gender (n = 312)</i>		
Man	209	67.0%
Woman	101	32.4%
Other	2	0.01%
<i>Hispanic or Latino/Latina (n = 289)</i>		
Yes	9	3.0%
No	280	97.0%
<i>Ethnicity/Race (n = 321)</i>		
White	289	90.0%
Other*	16	4.9%
American Indian or Alaskan native	11	3.4%
Black or African American	3	1.0%
Asian	1	0.3%
Native Hawaiian or Pacific Islander	1	0.3%
<i>Income (n = 277)</i>		
Less than \$49,999	55	19.9%
\$50,000-\$99,999	100	36.1%
\$100,000-\$149,999	59	21.3%
\$150,000-\$199,999	44	15.9%
\$200,000 or more	19	6.9%

Note: *For “other”, the following replies were provided (with frequency): no response (5), Hispanic/Latino (3), American (2), Mexican (2), “shouldn’t matter” (2), human (1), and Native of Lemhi County (1).

Generally, primary users and local users had lower incomes and were older than secondary users and distant users². The mean income for local users was near the range of \$50,000 to \$99,999, whereas the average income of distant users was closer to the range of \$100,000 to \$149,999. Local and primary users more frequently reported older age ranges (55-64 and 65+). Regarding gender, regional and distant users were more likely to be men³.

4.3. Trip characteristics of Salmon River users

This section focuses on how river users spend their time in the recreation segment of the Salmon WSR corridor, including the type of activity engaged in, the stretch of river floated (if boating),

² For income, an ordered logistic regression model found a significant difference in reported income between geographic origin ($p < 0.001$) and user type ($p = 0.01$). For age, an ordered logistic regression model found a significant difference in age ranges between geographic origin ($p = 0.06$) and user type ($p = 0.002$).

³ A chi-square test indicated a significant difference in responses between geographic origin ($p = 0.02$) and gender. 55% ($n = 33$) and 42% ($n = 25$) of local users identified as men and women, respectively, whereas 73% ($n = 90$) and 27% ($n = 34$) of regional users identified as men and women and 67% ($n = 72$) and 33% ($n = 35$) of distant users identified as men and women.

group size and number of vehicles used, the length of their trip, and the extent of time that people have been experiencing the river corridor (i.e., first-time visitors versus long-time visitors).

4.3.1. *Type of activities participated in*

Table 3 summarizes the primary activities of respondents, with about 39% (n=127) of respondents indicating their primary activity was floating via non-motorized watercraft. The least frequently reported primary activities were floating via motorized watercraft (1%, n=3) and swimming (1%, n=3).

Table 3. Primary activities of all respondents (n=323)

Primary activity	Frequency	Percentage
Floating (non-motorized watercraft)	127	39.3%
Fishing (from shore)	54	16.7%
Fishing (non-motorized watercraft)	42	13.0%
Camping	34	10.5%
Other	19	5.9%
Hunting	17	5.3%
Fishing (motorized watercraft)	15	4.6%
Driving for pleasure	9	2.8%
Floating (motorized watercraft)	3	0.9%
Swimming	3	0.9%

Note: Specific “other” activities included work, ATV use, cabin, playing with dog, hiking, horseback riding, visiting hot springs, photography, and rafting

A chi-square test indicated that primary activities were significantly impacted by geographic origin ($p < 0.001$), with 62% (n=69) of distant users reporting non-motorized floating as their primary activity compared to 24% (n=14) of local users and 23% (n=28) of regional users. This result is likely due to distant users, in large part, being secondary users who were boating a wild segment of the Salmon WSR system.

4.3.2. *Overnight versus day-use, group size, and number of vehicles used*

Most respondents were overnight users (76%, n=244), as compared to day-users (24%, n=76). On average, overnight users’ trips were six nights long, with an average day-use trip of 7 hours. A generalized linear model (GLM)⁴ revealed no significant differences in duration of day-use trips or overnight trips between geographic origin or user types of respondents.

The average group size reported (n=313) was six adults, with 81 respondents reporting children in their group (on average there were 3 children per group). While the average group size was six, the median group size was three, which reflects a significant number of large groups. It is common for those recreating in the wild segment of the Salmon WSR system to have large groups; indeed, a GLM indicated there is a significant difference in group size between user types ($p < 0.001$). Primary users had an average group size of roughly 5 adults, whereas secondary users had an average group size of roughly 11 adults.

The maximum reported number of vehicles being used to travel to the Salmon River for the respondent’s trip (n=315) was 14, and the mean was three. Similar to the results related to group size, a GLM revealed a significant association between the number of vehicles used for

⁴ We used a negative binomial error distribution for count variables (e.g., nights) and a gamma error distribution for the continuous variables (e.g., hours).

their trip and user type ($p < 0.001$). For primary users, the mean number of vehicles was two, whereas for secondary users, the mean was four vehicles.

4.3.3. Boating put-ins, take-outs, stretches floated, and crafts type and craft number

Table 4 provides an overview of where boaters started their trips, which highlights that Spring Creek River Access is the most popular starting point for float trips of primary users, with a near even split between secondary users putting in for the Middle Fork Salmon permitted stretch (i.e., with various put-ins around the “Middle Fork area”) and the Main Fork Salmon permitted stretch (i.e., Corn Creek).

Table 4. Put-in locations of boating respondents (n=197)

Put-in	Frequency	Percentage
Corn Creek	41	20.8%
Spring Creek	36	18.3%
Middle Fork area	33	16.8%
Deadwater	15	7.6%
Other*	14	7.1%
Cove Creek	14	7.1%
Cache Bar	13	6.6%
Indianola	13	6.6%
Squaw Creek	8	4.1%
Bobcat Gulch	4	2.0%
North Fork	3	1.5%
Gold Hill Mine/Houlihan's	3	1.5%

Note*: The following put-in locations were listed by respondents once – Salmon-Copper-Canyon, Shoup Bridge, Red Rock, Confluence, “between ramps”, Camas Creek, No-Name Beach, Owl Creek, Poverty Flat, Panther Creek, Stoddard, Duncan's Outpost, and Pine Creek.

Table 5 provides an overview of where boaters ended their trips. Spring Creek and Cove Creek were the two most popular take-out points for primary user float trips, while Cache Bar, Corn Creek, and Carey Creek were the most popular take-out points for float trips of secondary users. When considering both the put-in point and take-out point, the most frequent stretches of river floated were Spring Creek to Cove Creek (16%, n=19) for primary users, and the Middle Fork area to Cache Bar (16%, n=30), followed by Corn Creek to Carey Creek (14%, n=26), for secondary users.

With regard to types of crafts used for floating, non-motorized raft or drift boat was the most frequent type of boat taken (72%, n=170), with the second most frequent type of craft being a canoe, kayak, or single-person raft (19%, n=44); less frequently used crafts include a motorized boat (6%, n=15) and paddleboard (2%, n=5). The average number of boats reported by respondents for their group was four, and there was a significant difference in the number of boats taken when respondents were categorized by user type. A GLM, using a negative binomial error distribution ($p < 0.001$), highlighted that primary users (average 2.4 boats) were more likely to bring fewer boats than secondary users (average of 6.2 boats). The higher number of boats used by secondary users reflects, in general, a different type of trip through the wild segment of the Salmon WSR system, which is generally more gear intensive.

Table 5. Take-out locations of boating respondents (n=193)

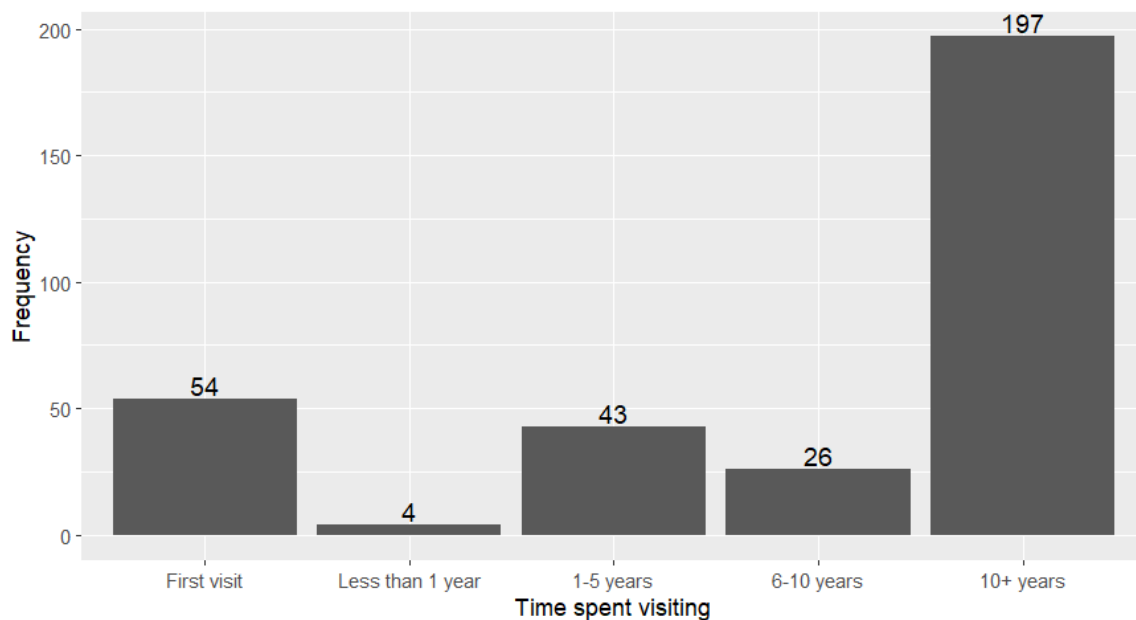
Take-out	Frequency	Percentage
Cache Bar	40	20.7%
Spring Creek	29	15.0%
Cove Creek	27	14.0%
Carey Creek	27	14.0%
Corn Creek	27	14.0%
Other*	10	5.2%
Spring Bar	8	4.1%
Poverty Flats	7	3.6%
Squaw Creek	3	1.6%
Copper Mine	3	1.6%
Deadwater	3	1.6%
Indianola	3	1.6%
Rams Head	2	1.0%
Stoddard	2	1.0%
Vinegar	2	1.0%

Note*: The following take-out locations were listed by respondents once – Cove Creek Bridge, Heller Bar on Snake River, North Fork, Shoup, Horse pasture above Spring Creek, Owl Creek, Cadigan Flats, Colson Creek, Ebenezer Campground, Lucille, “unsure of location”

4.3.4. Extent of time visiting the river corridor

Figure 2 highlights the length of time that respondents have been visiting the Salmon WSR system, with about 61% of respondents (n=197) reporting that they have been visiting this section of the Salmon River for more than 10 years. First-time visitors were the second most frequent response (n=54).

Figure 2. Time spent visiting the Salmon River (n=324)



A chi-square test indicated that time spent visiting was significantly impacted by geographic origin ($p < 0.001$) and user type ($p < 0.001$). Overall, local and regional users more frequently

reported visiting for 10+ years; distant users were more varied in the amount of time visiting. Additionally, 31% of secondary users (n=23) were first time visitors, whereas only 13% of primary users (n=31) were first time visitors.

4.4. River values of respondents

To understand the river values of respondents, they were asked to rate the importance of 17 purposes of the recreational segment of the Salmon River. The purposes, in large part, were derived from the ORVs that managers are mandated to enhance and protect, while also incorporating important community values and river-adjacent uses such as agriculture and mineral extraction.

Figure 3 highlights the level of importance assigned to the 17 river purposes; the figure is ordered by the proportion of “very important” responses, with the highest (i.e., outdoor recreation - 90%) at the top, and the lowest (i.e., economic value for mineral extraction – 17%) at the bottom. In general, all river values or purposes are considered either “very important” or “moderately important” by more than 50% of respondents; the only exception is mineral extraction, which is the purpose with the highest proportion of “not at all important” responses (44%). Table 6, sorted by average level of importance of each river purpose (from highest to lowest), reinforces that respondents consider outdoor recreation, wildlife habitat, scenery, fisheries, and watershed protection and water quality as very important. Table 6 shows that economic value of mineral extraction is only slightly important (on average), with agricultural livelihoods and lifestyles and a visitor experience free from rules and regulations as between slightly important and moderately important. However, it is important to recognize that many respondents did consider these purposes as either moderately or very important.

Figure 3. Perceptions of importance of Salmon River purposes

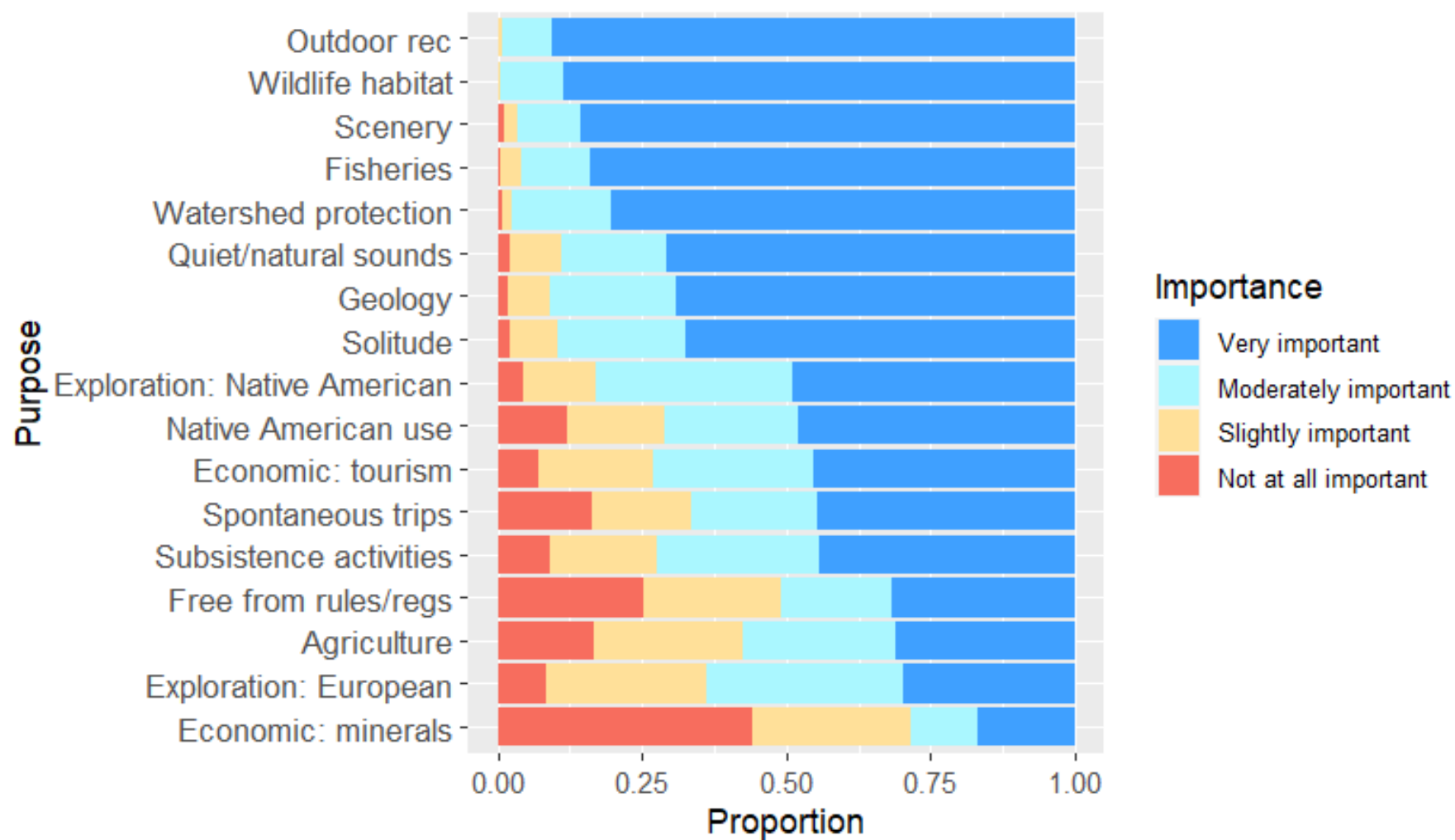


Table 6. Perceptions of importance of Salmon River purposes

Purpose	Not at all important	Slightly Important	Moderately important	Very important	Mean	Total
Outdoor recreation	0	3	28	293	2.9	324
Wildlife habitat and a diversity of animal species	0	2	36	291	2.9	329
Scenery/scenic landscapes	4	7	36	279	2.8	326
Fisheries and diversity of fish species	2	11	39	275	2.8	327
Watershed protection and water quality	3	5	56	262	2.8	326
Quiet and natural sounds	7	30	60	233	2.6	330
Solitude	7	27	71	219	2.6	324
Geologic features	6	23	71	224	2.5	324
Exploration of Native American history and culture	14	42	111	159	2.3	326
Native American use (e.g. religious activities, fishing, gather)	39	55	75	156	2.1	325
Economic value for tourism and guiding	23	64	89	146	2.1	322
Subsistence activities	29	60	90	143	2.1	322
A spontaneous trip that does not require much planning	53	55	71	144	2.0	323
Exploration of European history and cultural heritage	28	90	112	97	1.9	327
Agricultural livelihoods and lifestyles	54	84	87	101	1.7	326
A visitor experience free from rules and regulations	82	78	62	103	1.6	325
Economic value for mineral extraction	143	88	38	54	1.0	323

Note: Means were calculated where 0=Not at all important, 1 = slightly important, 2 = moderately important, and 3=Very important

Greater nuance related to the importance of river purposes become more evident when considering differences between geographic origin and primary and secondary users. Tables 7 and 8 list the statistically significant differences (using ordered logistic regression) in mean responses between geographic origins and user types. For instance, local and regional users, and similarly primary users, generally considered spontaneous trips, trips free from rules and regulations, and subsistence activities to be more important than distant and secondary users. Whereas Native American use was most important to local and distant users. For additional nuance related to perceptions of the most important river purposes, see the results presented in Section 5.

Table 7. Average responses for WSR purposes by geographic origin

Purpose	Local users' mean	Regional users' mean	Distant users' mean	p-value
Fisheries and diversity of fish species	3.9	3.9	3.7	0.003
Native American use (e.g. religious activities, fishing, gather)	3.3	2.8	3.2	<0.001
A spontaneous trip that does not require much planning	3.5	3.0	2.5	<0.001
Subsistence activities	3.3	3.2	2.8	0.001
A visitor experience free from rules and regulations	2.3	2.9	2.3	<0.001
Economic value for mineral extraction	1.9	2.2	1.7	0.01

Note: Means were calculated where 1=Not at all important and 4=Very important. Only statistically significantly different responses were included.

Table 8. Average responses for WSR purposes by user type

Purpose	Primary users' mean	Secondary users' mean	p-value
Fisheries and diversity of fish species	3.8	3.7	0.008
Watershed protection and water quality	3.8	3.9	0.047
Exploration of Native American history and culture	3.2	3.5	0.01
Native American use (e.g. religious activities, fishing, gather)	3.0	3.4	<0.001
A spontaneous trip that does not require much planning	3.2	2.2	<0.001
Subsistence activities	3.2	2.8	0.01
A visitor experience free from rules and regulations	2.7	2.1	<0.001

Note: Means were calculated where 1=Not at all important and 4=Very important. Only statistically significantly different responses were included.

4.5. Salmon River users' knowledge and observations of change

Management of a Wild and Scenic River, and what it entails, may be unfamiliar to river users. Therefore, understanding awareness of river users with regard to formal Wild and Scenic designation is important, as it can provide rationale for raising awareness around formal designation. Further, understanding perceptions of how the Salmon River has changed over time can highlight those elements of an experience that are salient to river users, and perhaps inform management efforts regarding which facets of the river corridor need attention.

4.5.1. *Awareness of Wild and Scenic designation*

For the Salmon River, the majority of respondents were aware of the Wild and Scenic designation for the Salmon River (82%, n=265) and understood the purpose of Wild and Scenic designations (86%, n=279). When considering geographic origin, there was a significant difference ($p=0.005$) in awareness of WSR designation, with awareness of local users being 97% (n=57), regional users being 80% (n=96), and distant users being 77% (n=84).

4.5.2. *Observed changes on the Salmon River over time*

Respondents were asked if they had noticed any changes along the recreation segment and were provided space to explain what they had observed. 185 respondents (67%) confirmed that they had noticed changes, 55 respondents (17%) did not observe any changes⁵, and 90 respondents (27%) were considered ineligible to report changes (i.e. it was a first visit or had been more than five years since last visit). Perhaps unsurprisingly, distant users (and secondary users) were less likely to have noticed any changes⁶. Of the 185 respondents who noticed changes, 83% (n=153) reported noticing negative changes and 59% (n=109) reported noticing positive changes (respondents could report both positive and negative changes). Respondents' text responses were analyzed by identifying common themes, or codes, across responses. For reported positive changes, responses were categorized into 23 unique codes. Each response could include multiple codes/themes. For example, one respondent wrote "The stuff on the road to keep the dust down. Restrooms have been clean and stocked"; this was split into two codes, road maintenance and bathroom cleanliness.

Table 9 summarizes the reported positive changes, with 35% (n=37) of respondents highlighting positive road maintenance and upkeep, 14% (n=15) of respondents highlighting the consistency of the area (i.e., suggesting that no change was positive), and 10% (n=11) of respondents recognizing positive recreation area management (e.g., upkeep and improvement of recreation area facilities and infrastructure, such as boat ramps and campgrounds).

⁵ The survey design limits our understanding of who observed no changes, because it asked for observed positive and negative changes or, alternatively, respondents indicated they were ineligible to report on changes because they had never visited (or had not visited for 5 years). To estimate how many had not observed any changes, we counted those respondents who: (1) DID NOT check the box as being ineligible to report changes; (2) DID NOT enter any positive or negative changes; AND (3) answered the question immediately before and after the change question (Q9).

⁶ Chi-square tests indicated significant differences in responses when respondents were categorized by geographic origin ($p<0.001$) and user type ($p<0.001$). 43% (n=40) of distant users reported noticing changes, whereas 83% (n=84) and 90% (n=47) of regional and local users, respectively, reported noticing changes; 77% (n=160) of primary users reported noticing changes, while only 33% (n=21) of secondary users reported noticing changes.

Table 9. Categorized positive changes reported by respondents (n=106)

Code	Frequency (percentage)	Example
Road maintenance	37 (34.9%)	“road maintenance has improved”
Consistency	15 (14.2%)	“It is the same as it was 12 years ago when we started coming up here”
Recreation area management	11 (10.4%)	“Campgrounds are well maintained”
Bathrooms	11 (10.4%)	“more outhouses”
Bridges	8 (7.6%)	“Bridges have been improved...”
Place-based attachment	7 (6.6%)	“We love this place”
General cleanliness	6 (5.7%)	“the area is kept clean...”
Staff	5 (4.7%)	“Very good rangers at Corn Creek”
More people	5 (4.7%)	“Very large increase in the number of campers- people fishing”
Fisheries & wildlife	4 (3.8%)	“More steelhead in the river this year than in past”, “Lots of animals”
Rule enforcement	4 (3.8%)	“Stopped the fishermen from camping on the road”
Interpretive materials	3 (2.8%)	“Sign marking Idaho wilderness at confluence”
Access	3 (2.8%)	“better access”
Less people	2 (1.9%)	“Not many more people”

Note: There were single responses for the following positive changes: visitor behavior (“...most visitors respect the area”), clean beaches (“clean beaches for the most part”), no mining (“no new or continued mining”), reservation system (“...better reservation at campsites”), free camping (“still have free camping at horse pasture!”), invasive species monitoring (“I appreciate the AIS boat inspection station at North Fork”), and in-stream flow (“good consistent flows”).

Table 10 summarizes the reported negative changes, with responses categorized into 20 unique codes. Thirty (21%) respondents reported “more people” as a negative change (these responses were usually about an overall increase in people visiting the area, though two respondents specifically referenced hunters and anglers), 16% (n=23) of respondents referenced management as a negative change (e.g., poor maintenance and upkeep of boat ramps and interpretive signs, poor enforcement of existing rules and regulations), and 15% (n=22) of respondents referenced “fisheries” (e.g., lower numbers of fish species, particularly steelhead trout).

Table 10. Categorized negative changes reported by respondents (n=148)

Code	Frequency (percentage)	Examples
More people	30 (20.3%)	“Amount of people has greatly increased”
Maintenance/management	23 (15.5%)	“NO enforcement of existing rules”, “boat ramps not well maintained”, “Increased neglect, Stoddard trail now almost unthinkable”
Fisheries	22 (14.9%)	“Less fish especially steelhead or salmon”
Fire	20 (13.5%)	“fires destroying landscapes for miles”, “fire damage”
Trash	17 (11.5%)	“I’ve noticed a lot more littering in the river corridor”
Environmental degradation	16 (10.8%)	“The use of MgCl for dust control has caused hundreds of pine trees to die along the road”, “Main Salmon water seems more turbid/impacted by use upstream”
Traffic/more vehicles	15 (10.1%)	“too much traffic”, “More ATVs/UTVs”
Visitor behavior	10 (6.8%)	“They [out-of-staters] are disrespectful”, “Tires slashed on vehicles parked at Cache Bar in May 2020”
Road maintenance/issues	10 (6.8%)	“The river road between Cache & Corn is just horrible”
Unsafe driving	9 (6.1%)	“Summer traffic due to shuttle companies is terrible/dangerous”
Congestion	9 (6.1%)	“Busier and tight on access”, “too many people trying to launch at corn creek”
Boats (jet/drift)	8 (5.4%)	“In 2022 jet boats seemed more prevalent”
Commercial use	7 (4.7%)	“Closure of Cove Creek to camping to favor commercial outfitters”
Camp area issues	7 (4.7%)	“Less camping options”
Non-locals	7 (4.7%)	“Too many out-of-staters, Montana, Colorado, Wash., Utah”
Damaged infrastructure	6 (4.1%)	“Infrastructure in general and interpretive signing in particular are in need of repair or replacement”
Private property	5 (3.4%)	“More houses more no trespassing signs”
Mining & development	4 (2.7%)	“mining exploration”
Lost local business (Shoup)	4 (2.7%)	“Small businesses such as Shoup closed”

Note: Six responses were categorized as miscellaneous (i.e., individual codes that did not fit with any other group), which include: “bees”, “don’t know of extra regulations”, and “bossy young checker Corn Creek”.

4.6. Perceived problems and the impact on quality of visit

River users were asked to consider how potential environmental impacts (Q13) and social impacts (Q10) influenced their experience; that is, the survey asked respondents to indicate how problematic (or not problematic) various conditions were (e.g., amount of litter, seeing mining activity, seeing traffic on the road, number of other people encountered).

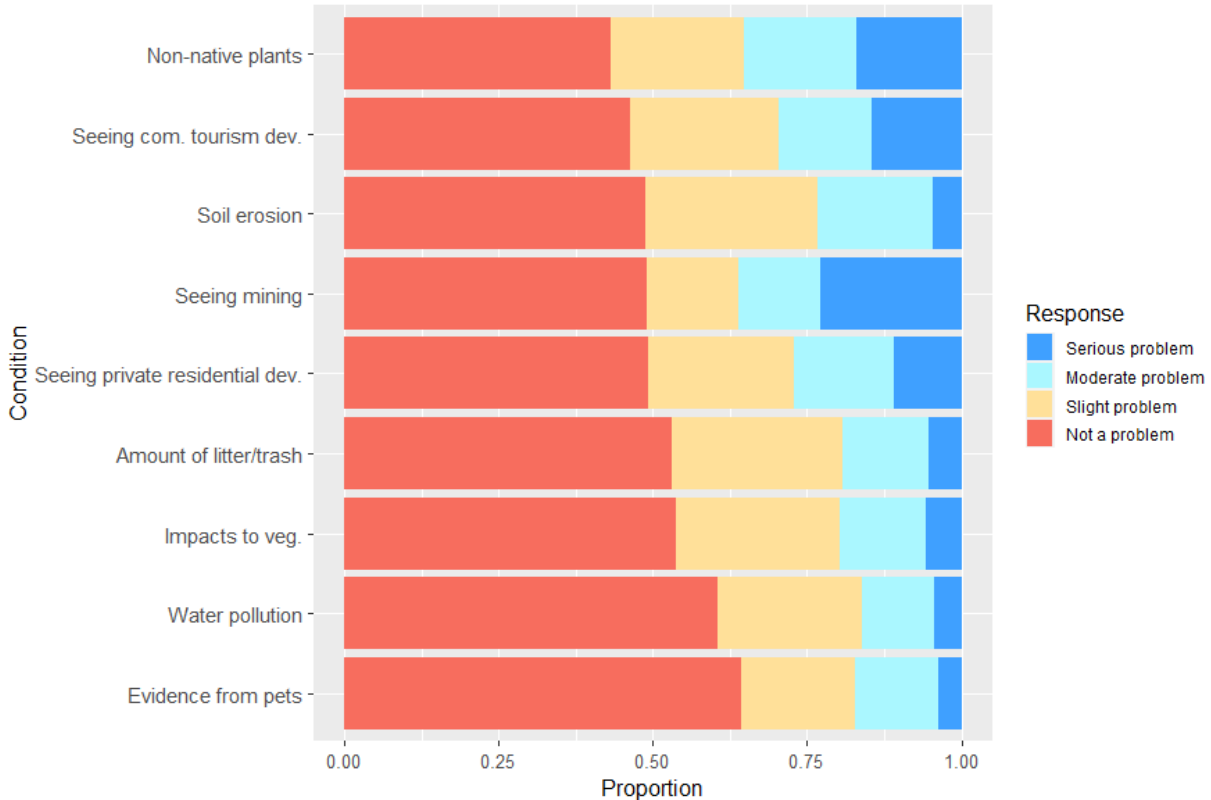
4.6.1. Perceived problems related to environmental conditions

Respondents were presented with nine statements about environmental conditions along the Salmon River, and were asked to indicate if such conditions were: 1) not a problem; 2) slight problem; 3) moderate problem; 4) serious problem or; 5) did not observe. “Did not observe” responses were excluded from analysis.

Figure 4 summarizes the proportion of responses for each environmental condition, and the most frequent response to each environmental condition was “not a problem”. The condition with the highest proportion of “not a problem” responses was “evidence from pets/animals” (64%, n=187); the condition with the lowest proportion of “not a problem” responses was “non-

native plants” (43.2%, n=114). “Seeing mining activity and development” had the highest proportion of “serious problem” responses (23%, n=55).

Figure 4. Perceptions of environmental conditions along the Salmon River

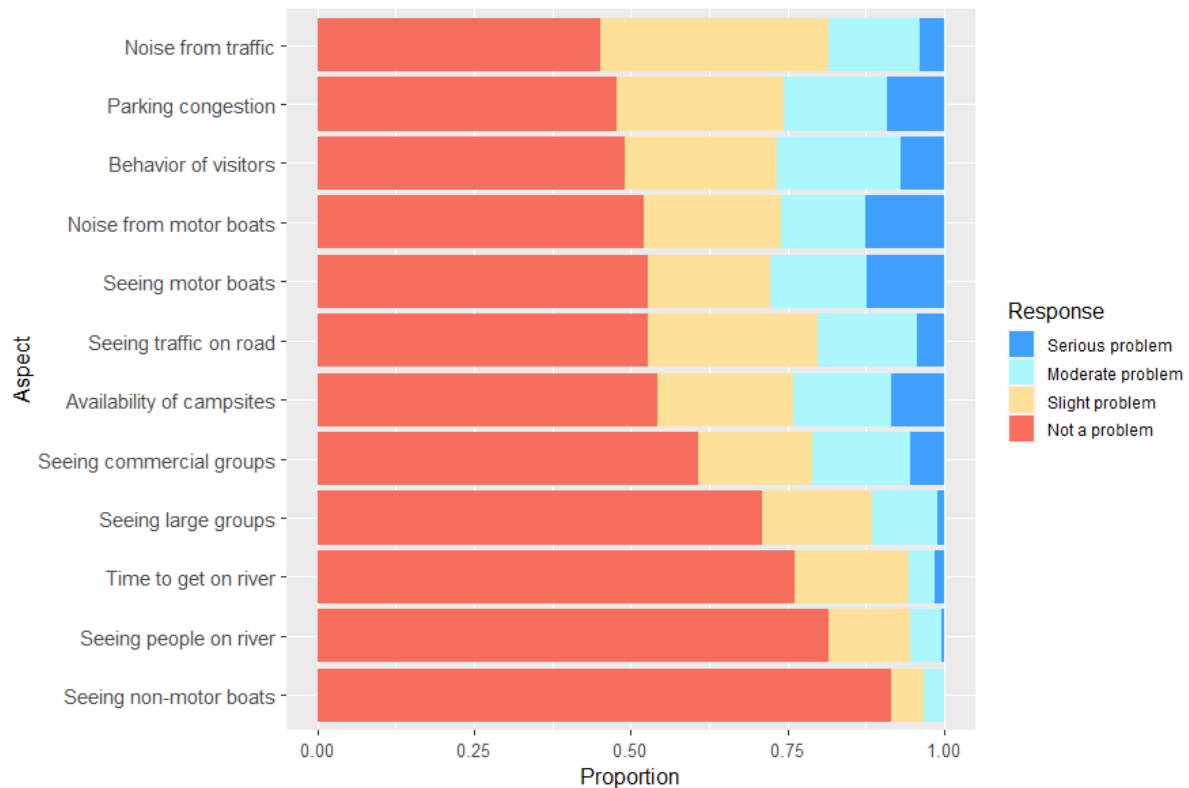


Chi-square tests indicated a significant difference in responses between respondent segments only between geographic origin to the statement “amount of litter/trash” ($p < 0.01$). A larger proportion of local users reported litter to be a problem (i.e., indicated ‘slight’, ‘moderate’, or ‘serious’ problem); 63% of local users indicated litter was a problem, compared to 38% of distant users and 46% of regional users. This indicates that the amount of litter/trash was more problematic for local users compared to users of other geographic origins.

4.6.2. Perceived problems related to social conditions

In general, respondents did not view the social conditions of the Salmon River visitor experience to be problematic. “Not a problem” was the most frequent response to all 12 social aspects of the visitor experience (Figure 5). The largest issues participants noted were related to noise from traffic, parking congestion, behavior of other visitors, and seeing traffic on the road. However, these issues could be deemed minor when considering that the largest issue identified by respondents (i.e., “seeing motor boats”) was only seen as a serious or moderate problem by about 28% of respondents.

Figure 5. Perceptions of social conditions along the Salmon River



4.6.3. Visitor expectations of social and environmental conditions

After indicating the impact that environmental and social conditions had on the quality of their trip, respondents were asked to indicate how their experience with these conditions compared to their prior expectations (Q11 and Q14). Overall, the largest proportion of responses for each social aspect was “no expectations”. When “no expectations” was excluded from the analysis, the most frequent response for each statement was “as expected”. Figure 6 highlights the proportion of responses with regard to social condition expectations, and Figure 7 provides an overview of responses related to environmental conditions.

Figure 6. Alignment between expectations and actual social conditions

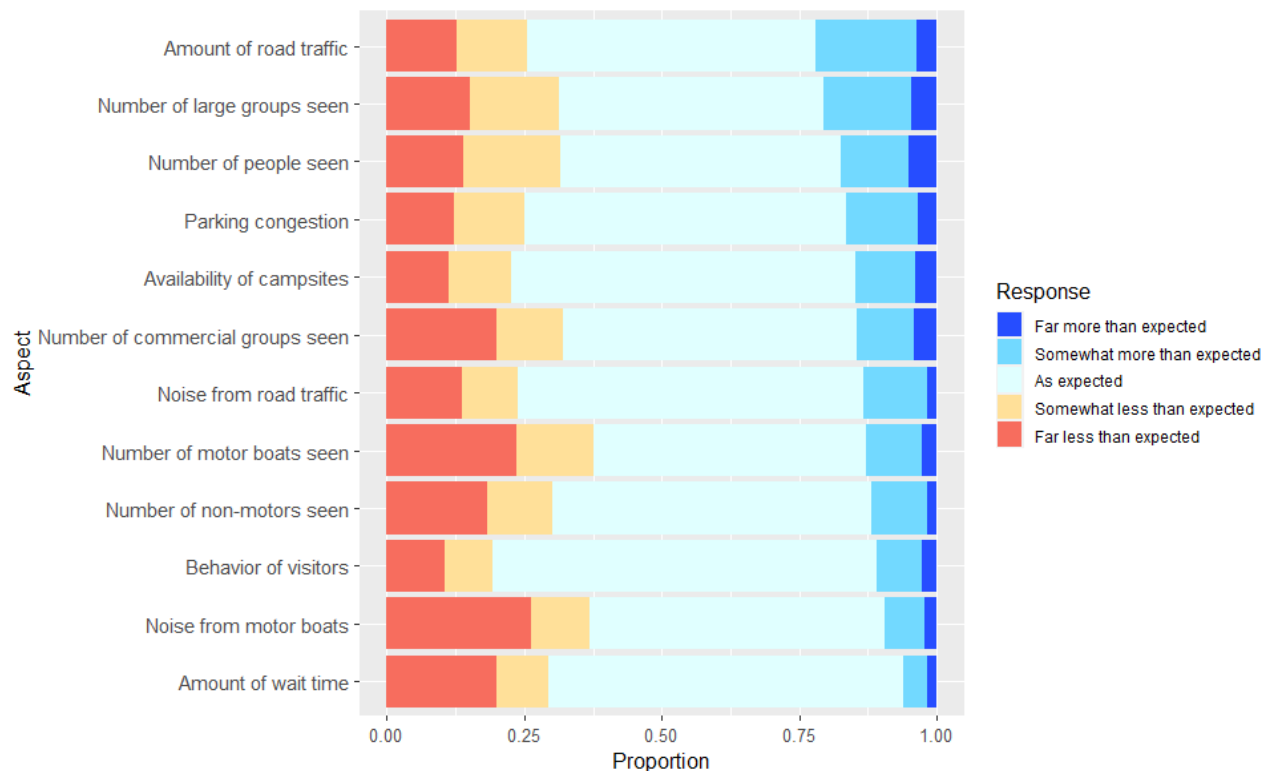
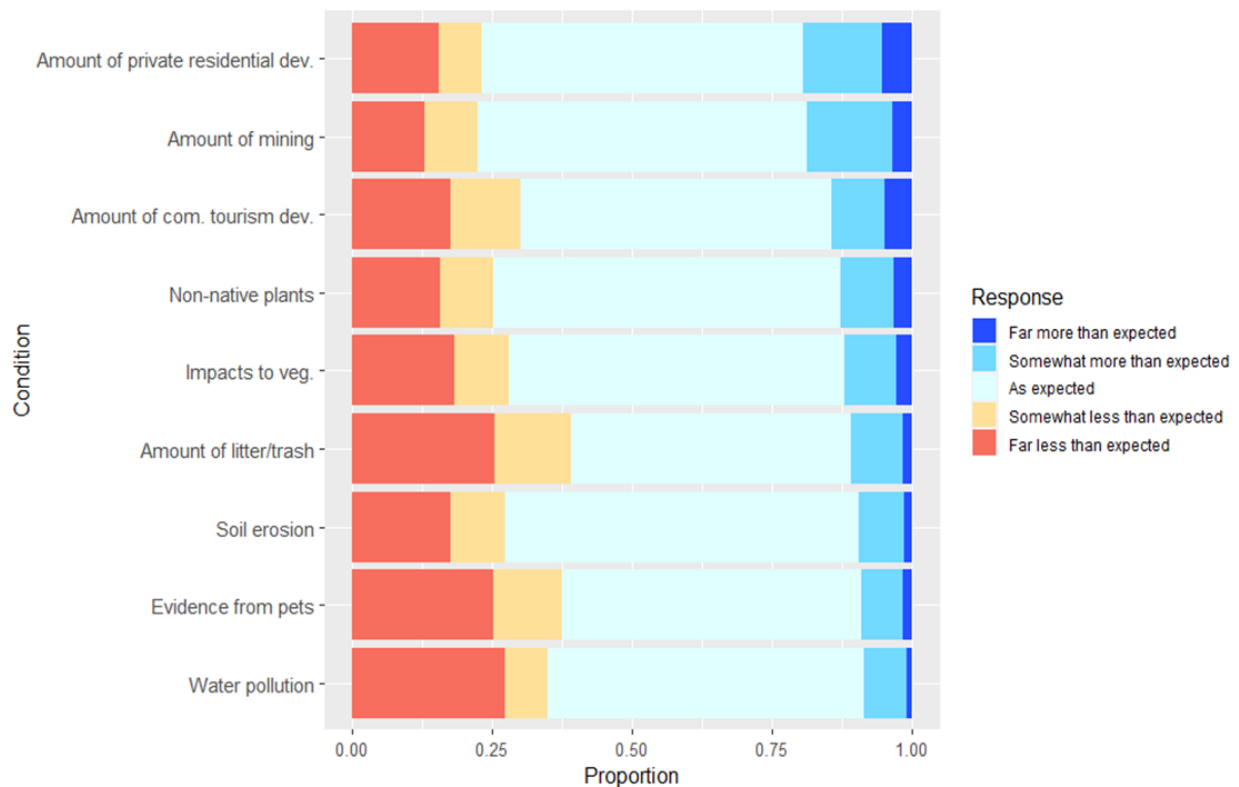


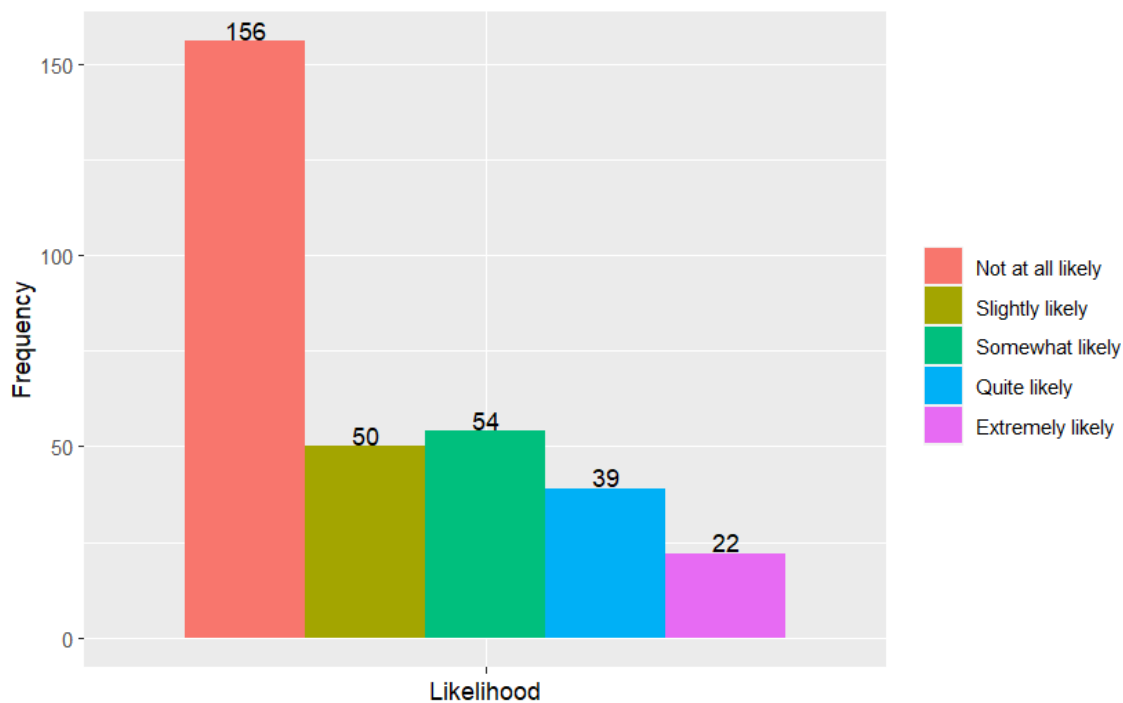
Figure 7. Alignment between expectations and actual environmental conditions



4.7. Likelihood of recreators changing their trip due to number of people in the corridor

Respondents were asked to rate how likely it was that the presence of too many people would cause them to change their next trip to the Salmon River (Q12). Figure 8 summarizes the responses, with the most frequent response as “not at all likely” (48%, n=156) and the least frequent response as “extremely likely” (7%, n=22). The response to this question highlights, at least in part, that river users on the Salmon WSR are adaptable, and on average are unlikely to be displaced by a perception of too many people being in the river corridor.

Figure 8. Frequency of respondents' likelihood to change plans (n=322)



Indeed, when respondents that indicated that there was any likelihood of changing their behavior were asked how they would change their trip (Q12a), only 27 people suggested that they would choose another river. Most respondents, as shown in Table 11, indicated that they would continue to recreate on the Salmon WSR River, but perhaps during a different day, time, or season. 153 respondents indicated what they would change; because they could choose multiple options, there were 209 total selections (thus the “n” in Table 20). The most frequently reported change was to switch days of the week (47%, n=72). The least frequently reported change was to choose another river (18%, n=27).

Table 11. Frequency and percentage of changes all respondents would make (n=209)

Change	Frequency	Percentage
Change day	72	47.1%
Change starting time	44	28.8%
Change season	38	24.8%
Other action*	28	18.3%
Choose another river**	27	17.7%

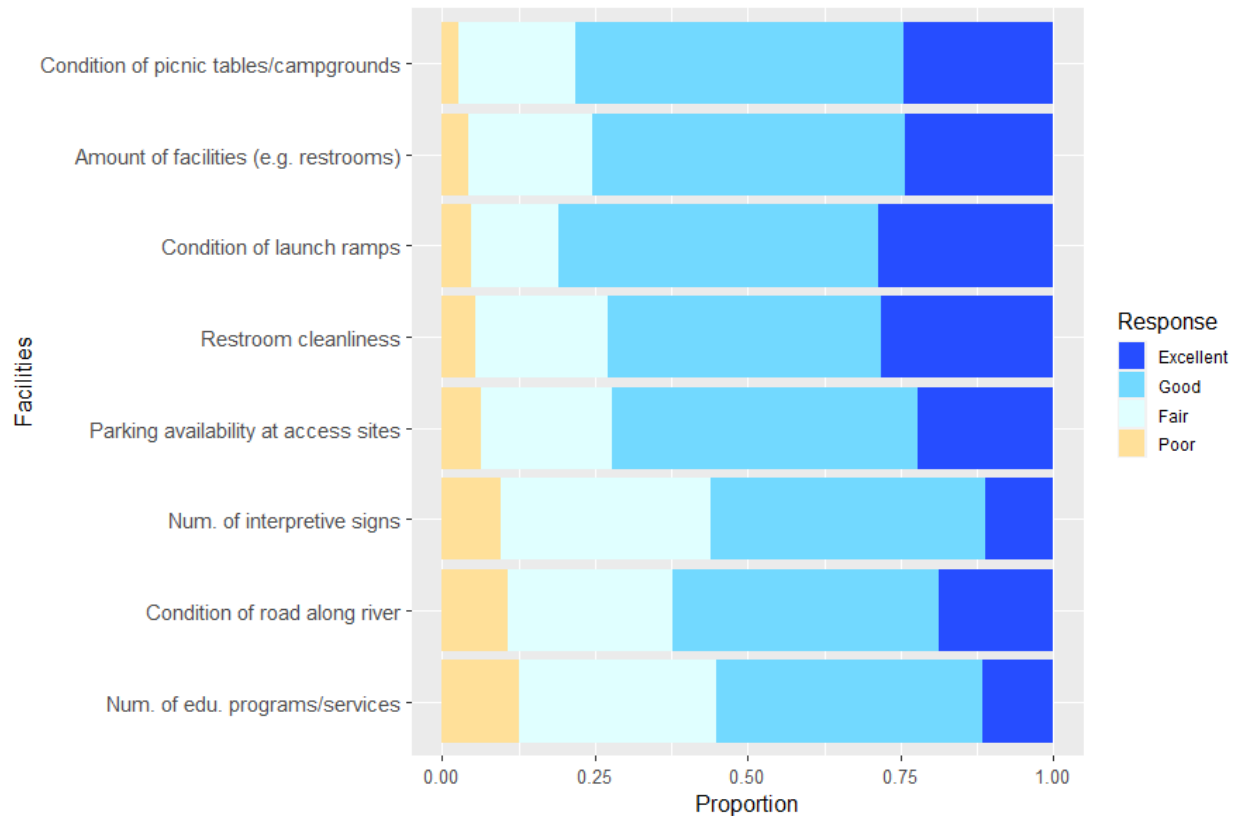
Notes: *As specific ‘other actions’, respondents most frequently (n=10) indicated that they would choose other activities or other locations (e.g., “go somewhere else”, “golf”), the second most frequent response (n=5) was to choose another area or activity along the Salmon River (e.g., “stay longer on upper section”, choose “different starting points”). Others noted they would “still go and bothered by the crowds” (n=2), “avoid peak times” (n=2), or “lobby for fewer commercial trips, preference for locals” (n=2).

**As specific responses for “choose another river”, people most frequently (n=6) indicated they would choose another part of the Salmon River (e.g., “Middle Fork of [the] Salmon”), three people indicated they would choose the Lochsa, and three people indicated that they were unsure of which specific river they would choose.

4.8. Opinions on facilities

Respondents were asked to rate, from poor to excellent, their views of eight facility related statements (Q15); participants could also indicate “not applicable” if they did not interact with a particular facility (“Not applicable” responses were excluded from analysis.). Figure 9 summarizes the responses related to facilities, with the vast majority of respondents indicating that, overall, facilities were either “good” or “excellent”. Only the statements “condition of road along river” and the “number of educational programs or services” had more than 10% of respondents indicate that the condition was poor.

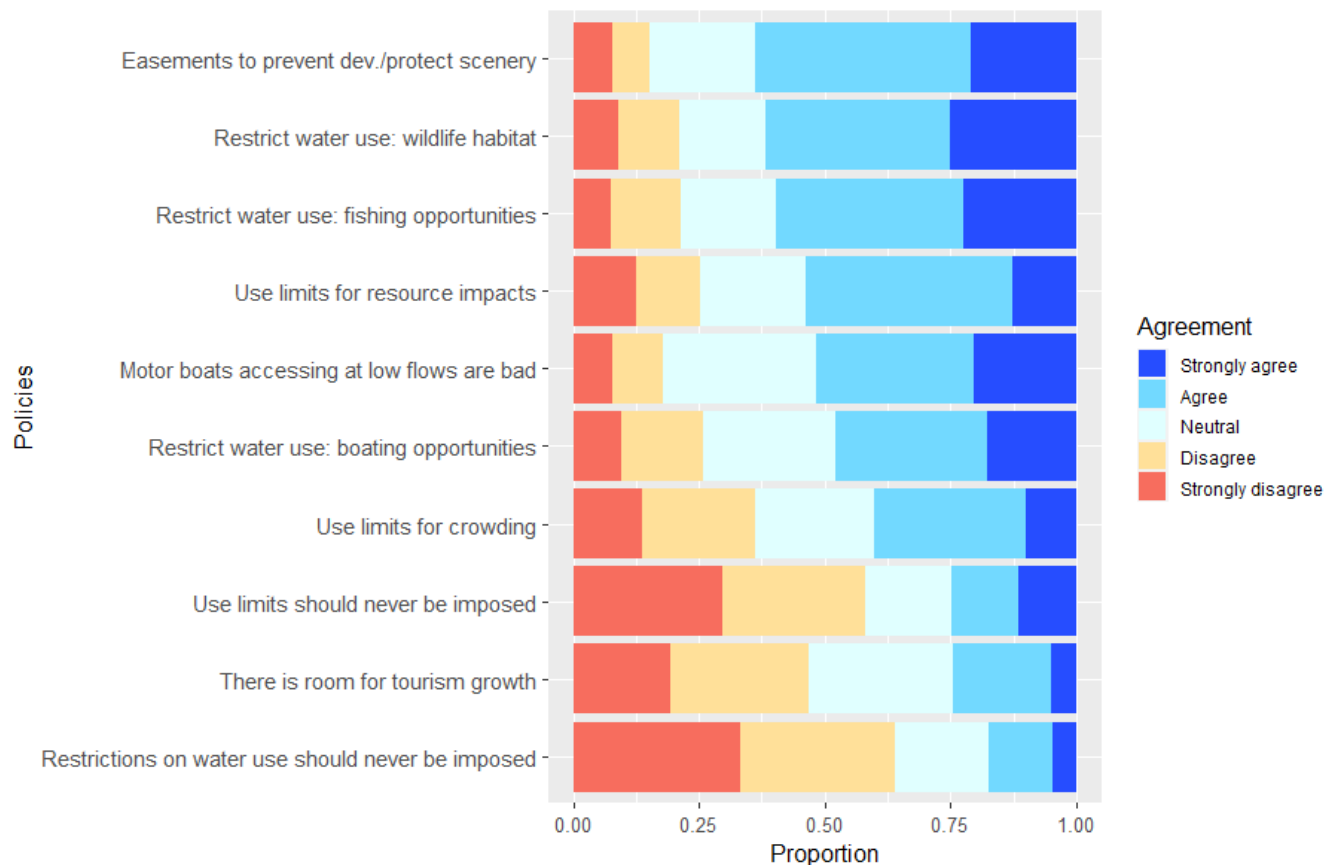
Figure 9. Perceptions of facility quality along the Salmon River



4.9. Opinions on policies and management actions

Respondents were asked about their opinions of potential management actions or policies (e.g., “if people feel crowded, use limits should be imposed”) (Q16). Figure 10 overviews how respondents replied, and when combining “strongly agree” and “agree” responses, there is over 50% agreement to the following statements: (1) “To protect scenery, easements that prevent more human development should be negotiated”; (2) “if needed to protect river flows and wildlife habitat, restrictions on irrigation and water consumption should be imposed”; (3) “If needed to protect river flows and fishing opportunities, restrictions on irrigation and water consumption should be imposed”; (4) “If visitor-caused resource impacts are high, use limits should be imposed” and; (5) “changes in technology that allow motor boats to access the river at lower flows are problematic”. Conversely, when combining “strongly disagree” and “disagree”, less than 25% of respondents disagree with these five statements, which highlights, on average, some level of acceptance in water restrictions for protecting river flows, wildlife habitat, and fishing opportunities; further, there is general acceptance for imposing use limits *if* resource impacts from recreation are high. The two statements that had the highest level of disagreement were “restrictions on water use should never be imposed”, and “use limits should never be imposed”, which reinforces the top five most agreed upon statements.

Figure 10. Perceptions of potential policies and management actions



While the aggregate (averages across the whole sample) results highlight some level of acceptance of water use restrictions and use limits, greater detail on opinions of management actions can be gleaned when splitting the sample into primary and secondary users.

T-tests indicated significant differences in responses between user type (Table 12) for all statements except “I believe there is room for tourism growth in the river corridor”. In general, secondary users were more accepting of restricting water use and imposing use limits, which is perhaps due to many of those users being non-local, and those users recreating mostly within the wild segments of the Salmon WSR. The wild segments of the WSR system require more planning, and is already regulated via a permit system. Section 5 provides additional nuance related to respondents perceptions of management actions.

Table 12. Perceptions of policies and management actions by user type

Statement	Primary users' mean	Secondary users' mean	Overall mean
Negotiate easements to protect scenery**	3.5	3.9	3.6
Restrict water use for wildlife habitat protection**	3.4	4.0	3.6
Restrict water use for fishing opportunities*	3.5	3.8	3.5
Use limits for resource protection**	3.1	3.9	3.3
Changes in tech. that allow motorboats to access at lower flows are bad**	3.3	3.9	3.5
Restrict water use for boating opportunities**	3.2	3.8	3.3
Use limits for crowding**	2.8	3.7	3.0
Use limits should never be imposed**	2.7	1.9	2.5
Water restrictions should never be imposed**	2.4	1.7	2.3

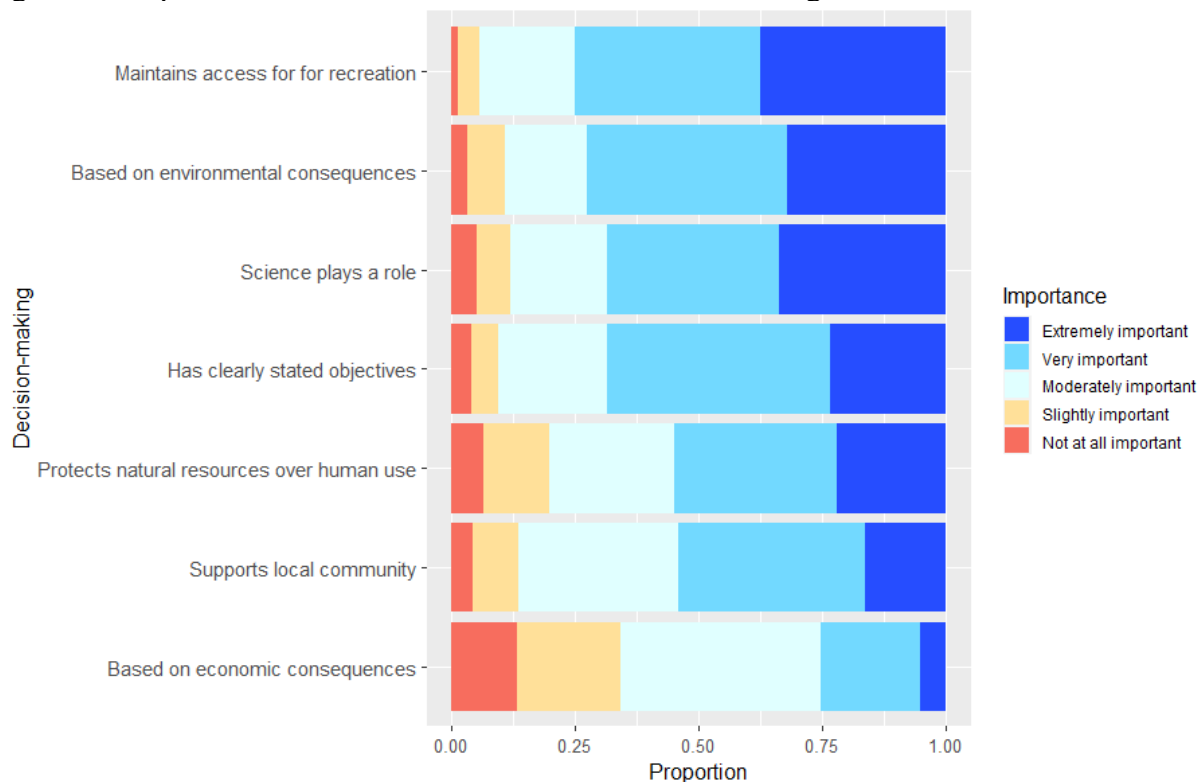
Notes: Means were calculated where 1=Strongly disagree and 5=Strongly agree. Only statistically significant differences are presented, and levels of statistical significance for differences between user types denoted as:

*p<0.05, **p<0.01

4.10. Accepted rationales for management decisions

Management decisions (e.g., limit use, increase facilities, approve mining operations) and the reasons for such decisions (e.g., protect natural resources, support economic development) are interrelated, and understanding how river users perceive different decision-making reasoning (i.e., rationales) can support communication with the public. Respondents were presented with seven statements related to management decisions and decision-making and were asked to rate how important the statement was to their acceptance of management decisions (Q17). Figure 11 provides an overview of how river users responded, with the most important decision-making rationale being “maintains access for recreation”. The decision-making rationale that was seen as “moderately important” or less (i.e., “slightly important” or “not at all important”) was that the “decision is based on economic consequences”.

Figure 11. Importance of different rationales for decision-making



There were significant differences in views of decision-making rationales by user type (Table 13). Primary users answered “not at all important” more frequently to each statement compared to secondary users, whereas secondary users answered “extremely important” more frequently to each statement compared to primary users. This difference potentially highlights a view by primary users that the situation within the Salmon WSR corridor where the status quo is acceptable; in other words, in comparison to secondary (and often distant) users, primary users may be more resistant to change.

Table 13. Views on decision-making rationale by user type

Decision-making	Primary users' means	Secondary users' means	Overall mean
Based on environmental consequences**	3.8	4.3	3.9
Science plays a role in the management decisions**	3.7	4.3	3.9
Has clearly stated objectives*	3.7	4.0	3.8
Protects natural resources over human use**	3.4	3.9	3.5

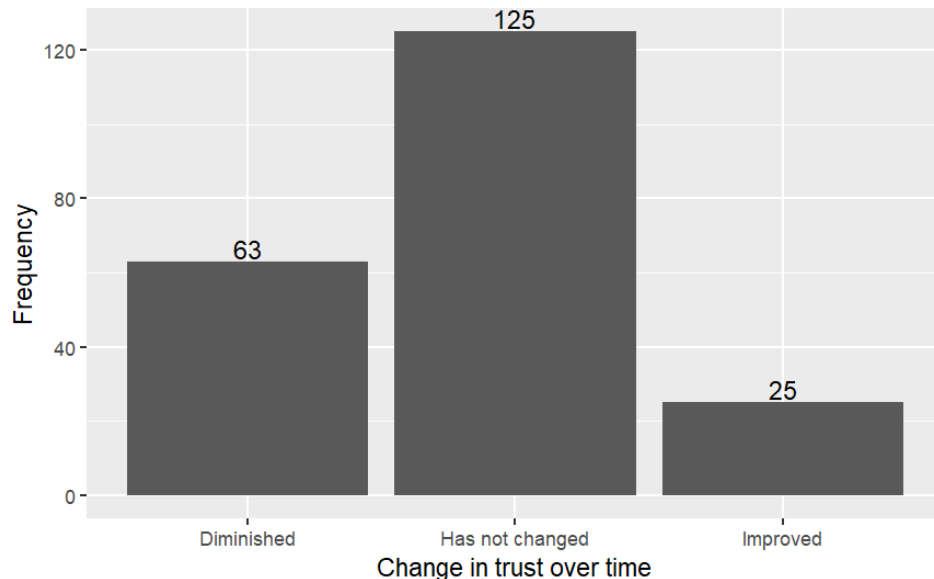
Notes: ‡Means were calculated where 1=Strongly disagree and 5=Strongly agree

Levels of statistical significance for differences between user types denoted as: * $p < 0.05$, ** $p < 0.01$

4.11. River users change in trust toward the managing federal agency over time

Respondents were asked to indicate how their trust in the federal agency managing the Salmon River has changed over time (Q18). Figure 12 highlights the frequency of responses, with the most frequent response being “has not changed” (59%, n=125).

Figure 12. Reported change in trust over time (n=213)



Note: There were no respondents who chose “don’t know” or “not applicable”.

When considering the different types of river users, primary users more frequently reported no trust change or diminished trust compared to secondary users (Table 14). This may be due to primary users being more local or regionally based, and their relationship with managers of the Salmon WSR is both longer-term and potentially more likely to be characterized by conflict or disagreement.

Table 14. Changes in trust by user type (n=207)

Trust	Primary users' frequency (percentage)	Secondary users' frequency (percentage)
Diminished	55 (32.0%)	5 (14.3%)
Has not changed	101 (58.7%)	21 (60.0%)
Improved	16 (9.3%)	9 (25.7%)

4.11.1. The reasons that trust has diminished

After asking respondents how their trust may have changed over time, there was an opportunity for respondents to provide additional details in an open-ended question as to why the trust had changed or not changed (Q18a). 43 of the 63 respondents who reported diminished trust in the federal managing agency provided specific information about the cause of that change. These open-ended responses were categorized into 52 total individual codes or ideas, which yielded 13 themes (Table 15). The most common theme, or most frequently reported reason for diminished trust (26%, n=11), was politics. The second most frequent reason was management decisions

(23%, n=10). Several respondents were unhappy with the agency's decisions regarding campgrounds, the existence and application of rules and regulations, and river access.

Table 15. Categorized responses regarding diminished trust (n=43)

Theme	Frequency	Examples
Politics	11	"natural resource professionals have shifted from being outdoorsmen and conservationists to environmentalist [sic] in the negative sense"
Management decisions	10	"the USFS has closed campgrounds and access points"
Fire & resource management	8	"Unable to put out fires, manage timber"
Funding issues	4	"The management has diminished [sic] mainly due to the lack of help due to lack of funding"
Slow to adapt	3	"Regulations, goals, rules etc have not kept up with the changes/increase of use of river corridor"
Preference to commercial use	3	"I've learned that the USFS favors commercial use (for example, outfitters) + industrial use (logging, mining, agriculture, grazing) over private/public use"
Lack of enforcement	2	"Law enforcement what a joke"
Land conflict	2	"Violation of property rights for property holders along the river", "Agency acts like its their own and not public land"
Poor communication	2	"There are no public comments directed to users of this section of river"
More development	2	"Need more logging & mining"
Less agency control over area	1	"Less agency control. I do not want it to be like Stanley area"
Not providing enough access	1	"They need to provide more public access along the Salmon River corridor"
Lack of consistency	1	"Changes with managers interpretation, no consistency"

4.11.2. The reasons that trust has not changed

60 of the 125 respondents who indicated their trust in the federal agency had not changed provided specific reasons. These text responses were coded into 61 individual codes that were categorized into 9 themes (Table 16). The most frequent reason (30%, n=18) was a belief in the agency's capability, and the second most frequent response (26%, n=16) was consistency. The other themes highlight a combination of suggestions for managers (e.g., slow down drivers on the river road), feedback for managers (e.g., toilets have improved), and a lack of opinion overall.

Table 16. Categorized responses regarding no change in trust (n=60)

Theme	Frequency	Examples
Agency capability	18	“Always seemed to be capable and diligent”
Consistency	16	“Decision making is consistent”, “Been coming to this area for 10 years area has remained stable”
Concern	10	“Nervous of federal agencies in charge of anything”, “Need road people to get drivers to slow down”
No opinion	9	“I don’t know enough about it”, “Don’t have an opinion”
Call for management action	3	“More restrictions should be limited”, “The SCNF spends way too much money on wildland fire and not enough on...other resources like road maintenance”
Maintenance of facilities	3	“the forest service has improved with toilets & minimal road up keep. However the agency is tough to work with at times”
Communication	1	“I stay engaged w/ the USFS’ activities and feel they present what they are doing rather well when scoping activities”
Still don’t trust	1	“DO NOT TRUST...FOREST SERVICE”

4.11.3. The reasons that trust has improved

Only 12 of the 25 respondents who indicated their trust in the agency improved provided further information (Table 17). 50% of respondents wrote that the agency’s credibility and effectiveness was the reason for their improved trust.

Table 17. Categorized responses regarding improved trust (n=12)

Theme	Frequency	Example
Credibility	6	“management has worked hard on access, resources, limit of human impact”
Facilities	4	“Roads are much better”
Specific management decisions		“The decision to lapse forest land leases & return cabin grounds to natural-use prioritizes the land & its natural use & function”
Academic knowledge	1	“I have taken several classes that have educated me on the methods of preservation that dictate policy”

4.12. Management recommendations from river users

The final question asked respondents if they had any recommendations for planning or managing the recreational segment of the Salmon River. 143 respondents provided recommendations; these text responses were separated into 173 individual codes and categorized into 20 themes (Table 18). The most frequent code related to facilities improvements (24%, n=34), such as improving boat ramps, expanding parking areas, or repairing interpretive signs. The second most frequent code focused on road maintenance and traffic issues (18%, n=26); many respondents wrote about the need to continuously maintain and improve the condition of the road. The third most frequent code, management (17%, n=25), included recommendations about different management practices.

Table 18. Categorized responses regarding management recommendations (n=143)

Theme	Frequency	Examples
Facilities improvement	34	“Larger boat ramp at Spring Creek please”, “More bathrooms at camping areas. Improve parking at Corn Creek and Cache Bar”
Road maintenance	26	“Continued road maintenance”, “Raft drivers need to slow down”, “Have people drive the speed limit”
Management	25	“Keep the transplant people out”, “April-Oct ban on campfires”, “Allow certain areas to be logged for a fire break instead of burned landscape from Darby to Salmon”
Preservation	19	“Keep as natural as possible”, “I would like to see this area maintain its current use rate and natural state for generations to come, including the fish and wildlife”
Don’t change	13	“Leave it alone. There’s not a problem- don’t create one”, “The river areas are beautiful, the grounds are well maintained and staff assigned the management are doing a good job!”
Fisheries	11	“I work with anadromous fish and I worry about the affects of all the mining on them”, “... netting for fish, no killing non species in river...”
Limit commercial use	10	“Seriously cut back the number of outfitting and guiding permits for big game”, “Do not promote additional tourism and commercial operations to preserve area and minimize traffic”
No development	5	“Keep new development out...”, “The river...would be improved if residential development is stopped and existing residences are reduced or eliminated”
Regulate boats	5	“...terminate all motorized boat use”, “Ban motorized boats for recreation”
Dams	4	“Take out some of the dams so fish can come up again”
Keep Cache Bar	4	“Do not change Cache Bar”
More development	3	“They need to provide more public access along the...corridor and for more development of tourism, resorts, mining to be less restrictive and of shorter review time”
Mining	3	“I hope there is not mining!”, “Carefully managed commercial use and mining”
Lotteries	3	“Permit issued to users with lottery method”, “Extend lottery permit season while limiting # boats per permit”
Communication	2	“Have meeting with locals before decision made”
Keep Shoup	2	“Keep the Shoup store open”
More access		“please keep it free and open for spontaneous trips for floating, camping 4x4 and fishing”
Limit access	1	“Please limit activity”
More funding		“Expand their budget so they can do their job”
Privatize everything	1	“Privatize the entire corridor”

5. GROUPING QUESTIONS INTO CONCEPTS AND SEGMENTING THE RIVER USER POPULATION

Section 4, apart from parsing perceptions of primary users and secondary users, highlights **aggregate** perceptions, question by question, of visitors to the recreation segment of the Salmon WSR. However, there may be differences within the river user population that, for instance, adds nuance to the aggregate view that social and environmental conditions are generally “not a problem.” In this section, using factor analysis, cluster analysis, and other statistical approaches, we explore different visitor perspectives related to Salmon River values, potential management actions, decision-making criteria, and social and environmental conditions. Specifically, we:

1. Use factor analysis to:
 - a. Distill views on WSR purposes and potential policies or management actions.
 - b. Distill views on social and ecological conditions.
2. Use cluster analysis to highlight three different groups of visitors, who have similarities and differences related to the range of issues explored in the survey.

5.1. Condensing most of the survey into nine WSR concepts

When considering the variety, and number, of questions we asked visitors during the survey, it may be helpful to lump individual variables together into broader concepts (factors) that can facilitate WSR management decision-making and communication. For example, considering question eight on river values/purposes or question sixteen on potential management actions (see Appendix A), we can explore whether individual items in the questions relate to one another in a way that suggests a broader, underlying factor. For instance, when respondents indicate that “solitude” (Q8 – seventh listed purpose) is an important river purpose or value, do they also assign a similar importance to “quiet and natural sounds” (Q8 – sixth listed purpose). Or alternatively, when respondents agree with the policy statement that “restrictions on irrigation and water consumption should never be imposed” (Q16 – ninth policy statement), are there other policy statements (e.g., “if needed to protect river flows and wildlife habitat, restrictions on irrigation and water consumption should be imposed” (Q16 – sixth policy statement)) where they express disagreement?

Factor analysis essentially starts by assessing whether the survey questions, and individual items within each question, correlate with one another. Then, we can explore, and extract, groupings of variables (i.e., items within individual questions) that relate to one another. The result, in our case, is a limited number of broader, underlying ideas (i.e., “factors”) that explain much of the variance in responses to survey questions across multiple variables. Practically, factor analysis can facilitate a simplified view of the data, which can support both researchers and practitioners in the process of applying the findings of research. We performed two different factor analyses, discussed in turn.

5.1.1. Visitor perceptions on WSR purpose and policies

Question eight (WSR river values and purposes) and question sixteen (potential policies and management actions) highlight visitors’ perceptions regarding high-level beliefs about what should be prioritized within the recreation segment of the Salmon WSR system. That is, as decision-makers consider whether ORVs potentially conflict with one another, or whether the ‘protect and enhance’ mandate of ORVs are potentially threatened by adjacent land uses (e.g., irrigation), we can explore question eight and sixteen to understand visitor views on these topics.

Prior to proceeding with a factor analysis on question eight and sixteen, we performed the requisite statistical tests and determined that the survey data were suitable for factor analysis⁷. Exploratory factor analysis using oblique rotation suggested a five-factor solution⁸. In other words, visitor perspectives about WSR values and purposes (Q8), as well as potential policies and management actions (Q16), were grouped into five dimensions that represent views about WSR management and priorities. Table 19 details each dimension, where: (1) the corresponding factor loadings indicate the strength of the relationship between individual variables (i.e., items within a question) and the underlying factor and; (2) the sign (i.e., positive value or negative value) indicate the direction of the relationship between each variable and the underlying concept. For instance, for the “instream flow and undeveloped landscapes” factor, the three variables related to policies restricting water consumption for the corresponding protection of river flows, wildlife habitat, boating opportunities, and fishing opportunities with loadings near 0.90 suggest that those three variables are most influenced by the underlying concept. The potential policy of protecting scenery via easements has a weaker, though significant, relationship (with a loading of 0.48) with the underlying idea related to instream flow and developments. A simple interpretation of the positive and negative values of factor loadings is as follows: if a survey respondent was supportive of instream flows and undeveloped landscapes (as defined by their level of agreement on the policy statements in Table 19), then we would expect them to agree with the statements with corresponding positive factor loadings, while disagreeing with the statement with a negative loading.

Briefly described, the five underlying factors related to management actions, values, and purposes of the Salmon WSR corridor and surrounding area are:

Instream flow and undeveloped landscapes: The prioritization of river flows and undeveloped landscapes over human development and consumptive uses of water. Specifically, this idea is defined by a strong adherence to the protection of river flows, wildlife habitat, boating opportunities, and fishing opportunities via the restriction of irrigation and water consumption. Additionally, albeit less influentially, is the idea that human development should be limited via easements to protect scenery, and that restrictions on irrigation and water consumption should be imposed if deemed necessary.

Landscapes production and free recreation access: The view that it is important to use, produce, and provide easy access to natural resources to support economic and cultural well-being. Specifically, this idea is defined by support for economic value for mineral extraction, agricultural livelihoods, and subsistence activities. Regarding recreation, there is support for limited regulations to support spontaneous experiences.

⁷ We performed two standard statistical tests on the data to understand the suitability of these data for factor analysis. First, we performed the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy to understand if there is enough common variance among different groupings of variables. The measure yielded was 0.82. According to Kaiser (1974), a KMO score: greater than 0.9 is “marvelous”; in the 0.80s is “meritorious”; in the 0.70s is “middling”; in the 0.50s is “miserable”; less than 0.50 is “unacceptable”. Second, we performed Bartlett’s test to understand if the variance among grouping of variables is equal, and thus the potential factors are not correlated with one another; the Bartlett’s test has a significant p-value <0.001 (Bartlett 1951).

⁸ A five-factor solution was selected based on a Scree plot (a statistical criteria used for understanding the most appropriate factor solution), in addition to our understanding of the issues surrounding WSR management on the Salmon River.

Reconnection and interpretation: The view that it is important to reconnect with, and interpret, observe, and learn about the landscape through the lens of colonial and pre-colonial times. Specifically, this view expresses support for Native American use of the WSR corridor, which can be conceptualized as use that is apart from the general public, given considerations related to Tribal Sovereignty and potential treaty rights. This factor also highlights the Salmon WSR as important for interpretive opportunities, such as the exploration of both Native American and European history and culture. Potentially interrelated with these interpretive opportunities are scenic landscapes, geologic features, and the economic value from tourism and guiding.

Restraining recreation: The prioritization of limiting impacts to both the resource and the social experience over free or unconfined recreation access. Specifically, there is support for limiting use, should perceptions of crowding and resource impacts be deemed unacceptable.

Fewer people for the experience and the resource: The view that fewer people within the river corridor is good for both the river experience and the river resource. Specifically, there is a strong adherence to the importance of solitude and quiet soundscapes, which appears to relate to the importance of wildlife habitat and animal diversity and water quality, as well as the idea that there may not be room for tourism grown in the river corridor.

Table 19. Five-factor solution related to WSR values, purposes, and policies

Instream flow and undeveloped landscapes	
If needed to <u>protect river flows and wildlife habitat</u> , restrictions on irrigation and water consumption should be imposed*	0.89
If needed to <u>protect river flows and boating opportunities</u> , restrictions on irrigation and water consumption should be imposed*	0.89
If needed to <u>protect river flows and fishing opportunities</u> , restrictions on irrigation and water consumption should be imposed*	0.88
To protect scenery, easements that prevent more human development should be negotiated*	0.48
Restrictions on irrigation and water consumption should never be imposed*	-0.42
Landscape production and free river access	
economic value for mineral extraction #	0.62
agricultural livelihoods and lifestyles #	0.62
a visitor experience free from rules and regulations #	0.60
subsistence activities (for example – hunting and fishing for food) #	0.53
a spontaneous trip that does not require much planning #	0.47
Reconnection and interpretation	
Native American use (for example – religious activities, fishing, gathering) #	0.67
exploration of Native American history and culture (for example – pictographs) #	0.65
geologic features #	0.57
economic value for tourism and guiding #	0.54
exploration of European history and cultural heritage (for example – homesteading and mining) #	0.44
scenery/scenic landscapes #	0.43
Restraining recreation	
If people feel crowded, use limits should be imposed*	0.79
If visitor-caused resource impacts are high, use limits should be imposed*	0.78
Use limits should never be imposed, even if use is high*	-0.53
Fewer people for the experience and the resource	
solitude #	0.77
quiet and natural sounds #	0.61
wildlife habitat and a diversity of animal species #	0.49
watershed protection & water quality #	0.43
I believe there is room for tourism growth in the river corridor*	-0.30

Notes: #Statements from Q8, which asked respondents: “How important do you believe each of the following is as a purpose of the Salmon River between North Fork and Corn Creek.” Respondents could indicate: “not at all important”; “slightly important”; “moderately important”; “very important”

*Statements from Q16, which asked respondents: “We would like to find out your opinions on policies and management related to the Salmon River and the social experience. Please indicate your level of agreement or disagreement with each statement.” Respondents could indicate: “strongly disagree”; “disagree”; “neutral”; “agree”; “strongly agree”.

Three items did not load significantly onto any factor: (1) changes in technology that allow motor boats to access the river at lower flows are problematic (#10 policy statement in Q16); (2) outdoor recreation (#1 purpose statement in Q8); (3) Fisheries and diversity of fish species (#2 purpose statement in Q8).

5.1.2. *Visitor perceptions on social and environmental conditions of the river corridor*

Question ten (social experience conditions) and question thirteen (environmental conditions) highlight visitor perceptions regarding the existence (or lack thereof) of problems associated with the conditions of the day-to-day visitor experience. We found factor analysis on the questions related to environmental and social conditions to be appropriate⁹. Exploratory factor analysis using oblique rotation yielded a four-factor solution¹⁰, and Table 20 details each factor. Briefly described, the four underlying factors related to social and environmental conditions potentially encountered during a visitor's experience are:

Resource impacts: The element of the experience related to bio-physical impacts to the natural resources within the river corridor. Specifically, there is a primary concern with impacts to vegetation, followed by soil erosion, water pollution, non-native plants, and evidence from pets or other humans (litter) on the landscape.

On-river experience: The element of the experience related to the social conditions that are noticeable while on the river, including interactions with others on the river as well as the adjacent road activity. Specifically, there is a primary concern with the noise and visible traffic of the river-adjacent road, as well as noise made from motorboats. While still significant, there is a relatively smaller relationship with seeing non-motorized boats on the river and/or commercial groups on the river.

Experience from shore: The element of the experience related to preparing to get on the river, or related to time spent on-shore when not participating in river activities. For those preparing to get on the river, or perhaps camping or using river accesses irrespective of their river plans, there is a potential concern with parking congestion, the behavior of other visitors, and the availability of camping. The potential wait time to get on the river had a weaker relationship with the shore-based experience.

Backdrop of the experience: The element of the experience related to the river corridor scenery and river-adjacent land uses. As visitors enjoy the river corridor, there may be concerns with seeing commercial tourism developments or mining activities and development. Though significant, the relationship between private residential development and the experience appears weaker.

⁹ The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy yielded 0.85. According to Kaiser (1974), a KMO score: greater than 0.9 is "marvelous"; in the 0.80s is "meritorious"; in the 0.70s is "middling"; in the 0.50s is "miserable"; less than 0.50 is "unacceptable". Bartlett's test had a significant p-value <0.001 (Bartlett 1951).

¹⁰ A four-factor solution was selected based on a Scree plot (a statistical criteria used for understanding the most appropriate factor solution), in addition to our understanding of the issues surrounding WSR management on the Salmon River.

Table 20. Four-factor solution related to social and environmental conditions

Resource impacts	
impacts to vegetation	0.71
soil erosion	0.63
water pollution	0.61
non-native plants	0.61
evidence from pets/animals	0.57
amount of litter/trash	0.55
On-river experience	
the noise made from road traffic	0.71
seeing traffic on the road next to the river	0.62
the noise made from motor boats	0.60
seeing large groups (6+) on the river	0.53
seeing people on the river, regardless of their activity	0.48
seeing motor boats on the river	0.47
seeing commercial groups on the river	0.44
seeing non-motorized boats on the river	0.33
Experience from shore	
parking congestion	0.65
the behavior of visitors	0.60
availability of campsites	0.55
the amount of time that you had to wait to get on the river	0.37
Backdrop of the experience	
seeing commercial tourism development such as resorts	0.73
seeing mining activity and development	0.63
seeing private residential development	0.39

Notes: Statements from Q10 and Q13 asked respondents how various social and environmental conditions, if encountered, affected the quality of their visitor experience. Respondents were asked to rate each condition on a scale related to the level of the problem: “Not a problem”; “Slight problem”; “Moderate problem”; “Serious problem”; “Did not observe/Not applicable”.

5.2. Three clusters of river users

In Section 4, we presented the aggregate views across the entire survey sample, highlighting findings such as wildlife habitat as being, on average, “very important” (3.9 on a 4-point scale), and economic support from mineral extraction as the least important (relative to other values) as only “slightly important” (2.0 on a 4-point scale). As another example, almost all social and environmental conditions were reported as “not a problem” by at least 50 percent of respondents, with often less than 10 percent indicating that social and environmental conditions were a “serious problem”. These aggregate viewpoints may convey a false sense of agreement among respondents, or suggest that respondents see little to no managerial concerns that require attention. Therefore, we apply cluster analysis to understand if there are different groups of respondents with shared views that may add nuance to the survey data potentially obscured by aggregate analysis. We performed cluster analysis on factor scores, which are composite variables that provide information about how each respondent to the survey is positioned, or

relates to, a factor (DiStefano et al. 2009). The solution selected included three clusters¹¹; that is, there were three groupings of respondents that can be distinguished based on their sentiments related to the nine factors explored above.

5.2.1. Demographics, trip characteristics, trust with USFS by cluster

Prior to highlighting how each cluster aligned with the nine factors above, we summarize the demographic characteristics (Table 21), as well as the trip characteristics, reported changes in trust with the USFS, and the potential that a respondent would change their trip due to presence of people (Table 22) for each cluster.

Regarding demographics, cluster 3 (the largest cluster) had respondents that were more likely to be woman, be younger, and be coming from a distant zip code. Cluster 2 is perhaps most distinguished by a tendency to be over 65 years old.

Table 21. Demographic characteristics of each cluster⁺

	Cluster 1	Cluster 2	Cluster 3
Number of respondents	83	94	155
<i>Age</i>			
18 – 24	3%	3%	5%
25 – 44	19%	10%	29%
45 – 54	25%	19%	18%
55 – 64	19%	19%	24%
65 or older	35%	49%	25%
<i>Gender</i>			
Woman	27%	25%	40%
Man	72%	74%	60%
Other	1%	1%	0%
<i>Income</i>			
Less than \$49,999	17%	28%	16%
\$50,000 to \$99,999	36%	30%	40%
\$100,000 to \$149,999	19%	20%	24%
\$150,000 to \$199,999	16%	17%	15%
\$200,000 or more	12%	5%	6%
<i>Visiting from a...</i>			
Local location [†]	24%	24%	16%
Regional location [†]	52%	43%	37%
Distant location [†]	24%	33%	48%

Notes: ⁺Race and ethnicity is not included, as there was little variation to the response overall (see Table 2 for full sample demographics), thus breaking the demographic characteristic down by cluster was uninformative.

[†]*Local*: Defined as visitors with Salmon, Challis, Carmen, and North Fork, ID ZIP codes; *Regional*: All remaining ID ZIP codes, plus 15 MT ZIP codes that border Highway 93 north of Salmon, ID to Missoula, MT; *Distant*: All remaining ZIP codes.

Regarding other trip characteristics, respondents in cluster 1 and cluster 2 tended to have been visiting the Salmon WSR for a longer amount of time, whereas cluster 3 had more respondents that were experiencing their first visit; these dynamics are understandable when considering that cluster 3 was more likely to include respondents who were both secondary users and from distant locations. With regard to trust with the USFS, respondents in cluster 1 tended to

¹¹ We applied the elbow method and the silhouette method for selecting an optimal number of clusters, in addition to our understanding of the study area and the topic of WSR management.

report diminished trust, relative to cluster 2 and 3. Further, cluster 1 has respondents that were less likely to change their trip if they perceived too many people in the river corridor, whereas cluster 3 had a higher percentage of respondents that were quite or extremely likely to change their trip due to the presence of too many people. This finding underscores, as shown below, that cluster 1 perceives fewer problems with the conditions (both ecological and social); whereas cluster 2 perceives conditions as more problematic.

Table 22. Trip characteristics, changes in trust, and likelihood to change trip

	Cluster 1	Cluster 2	Cluster 3
<i>Length of time visiting Salmon WSR</i>			
First visit	11%	9%	24%
Less than a year	1%	1%	1%
One to five years	10%	13%	15%
Six to ten years	5%	10%	9%
More than ten years	73%	67%	51%
Primary users (trip focused on recreation segment)	90%	81%	68%
Secondary users (trip focused on permit sections of Salmon WSR)	10%	19%	32%
Overnight users	71%	81%	76%
Day users	29%	19%	24%
<i>Trust with the USFS has...</i>			
Diminished	49%	33%	13%
Not changed	44%	55%	72%
Improved	7%	12%	15%
<i>How likely is it that the presence of too many people would cause you to change your next trip to the Salmon River corridor...</i>			
Not at all likely	73%	36%	42%
Slightly likely	10%	16%	19%
Somewhat likely	13%	16%	19%
Quite likely	4%	20%	12%
Extremely likely	0%	12%	8%

5.2.2. Views on WSR values, purposes, and policies by cluster

To aid interpretation of how each cluster was positioned on each factor, we do not present the factor scores for each cluster – as factor scores can be challenging to interpret. Instead, we present the average values that each cluster assigned to specific parts of the survey. Table 23 provides the values for each cluster regarding the five factors related to WSR values, purposes, and policies. Briefly summarized:

Cluster 1 – the coexistence of WSR values and adjacent land uses – Respondents in this cluster expressed either disagreement, or a neutrality, with regard to policies focused on maintaining instream flow and undeveloped landscapes; and consistently, they also assigned more importance to river values and purposes related to landscape production and free river access. The desire to see free river access, or a lack of recreation restraints, is clearly reinforced by the disagreement related to recreation use limits. Cluster 1 supports the river purposes and values related to reconnection and interpretation but, different from cluster 2 and cluster 3, there is a relatively higher level of importance assigned to economic value for tourism and guiding and the exploration of European history and cultural heritage.

Cluster 2 and Cluster 3 – Prioritizing a WSR view where restricting both access and adjacent land uses may be appropriate – We present these clusters together, as their views around WSR values, purposes, and policies are similar (with cluster 3 having relatively stronger stances). Both clusters show support for policies that facilitate instream flow and undeveloped landscapes, even if it comes with a tradeoff around adjacent land uses. Both clusters of respondents also supported policies that limit recreation use, if deemed necessary, and there was a lack of agreement around the ability of the river corridor to handle more tourism growth. In alignment with their views on potential management actions, cluster 2 and cluster 3 assigned a high level of importance to river purposes that support reconnection and interpretation. Lastly, river purposes that support landscape production and free river access were relatively less important for these two clusters, which is consistent with their support for the factor facilitated by fewer people in the river corridor.

Table 23. Cluster viewpoints related to WSR values, purposes, and policies (averages with 95% confidence intervals)

	Cluster 1	Cluster 2	Cluster 3
Instream flow and undeveloped landscapes	2.56	3.44	3.52
If needed to <u>protect river flows and wildlife habitat</u> , restrictions on irrigation and water consumption should be imposed*	2.2 (2.0, 2.4)	3.9 (3.7, 4.2)	4.1 (4.0, 4.3)
If needed to <u>protect river flows and boating opportunities</u> , restrictions on irrigation and water consumption should be imposed*	2.2 (1.9, 2.4)	3.6 (3.4, 3.9)	3.7 (3.6, 3.9)
If needed to <u>protect river flows and fishing opportunities</u> , restrictions on irrigation and water consumption should be imposed*	2.4 (2.1, 2.6)	3.9 (3.6, 4.1)	4.0 (3.8, 4.1)
To protect scenery, easements that prevent more human development should be negotiated*	2.7 (2.4, 2.9)	3.8 (3.6, 4.0)	4.0 (3.9, 4.2)
Restrictions on irrigation and water consumption should never be imposed*	3.3 (3.0, 3.5)	2.0 (1.8, 2.2)	1.8 (1.7, 1.9)
Landscape production and free river access	3.26	2.44	2.48
economic value for mineral extraction #	2.8 (2.5, 3.0)	1.8 (1.6, 2.0)	1.7 (1.6, 1.9)
agricultural livelihoods and lifestyles #	3.1 (2.9, 3.4)	2.5 (2.3, 2.7)	2.6 (2.5, 2.8)
a visitor experience free from rules and regulations #	3.4 (3.2, 3.6)	2.4 (2.1, 2.6)	2.3 (2.1, 2.4)
subsistence activities (for example – hunting and fishing for food) #	3.5 (3.3, 3.7)	2.7 (2.5, 2.9)	3.1 (2.9, 3.2)
a spontaneous trip that does not require much planning #	3.5 (3.3, 3.7)	2.8 (2.6, 3.1)	2.7 (2.5, 2.9)
Reconnection and interpretation	3.18	3.15	3.42
Native American use (for example – religious activities, fishing, gathering) #	2.7 (2.4, 2.9)	2.9 (2.7, 3.2)	3.4 (3.2, 3.5)
exploration of Native American history and culture (for example – pictographs) #	3.0 (2.8, 3.2)	3.1 (3.0, 3.3)	3.5 (3.4, 3.6)
geologic features #	3.3 (3.1, 3.5)	3.5 (3.3, 3.7)	3.8 (3.7, 3.9)
economic value for tourism and guiding #	3.4 (3.2, 3.5)	3.1 (2.9, 3.3)	3.0 (2.9, 3.2)
exploration of European history and cultural heritage (for example – homesteading and mining) #	3.0 (2.8, 3.2)	2.6 (2.5, 2.8)	2.9 (2.7, 3.0)
scenery/scenic landscapes #	3.7 (3.5, 3.8)	3.7 (3.6, 3.9)	3.9 (3.9, 4.0)
Restraining recreation	2.20	3.57	3.67
If people feel crowded, use limits should be imposed*	1.9 (1.7, 2.1)	3.4 (3.1, 3.6)	3.4 (3.2, 3.6)
If visitor-caused resource impacts are high, use limits should be imposed*	2.1 (1.9, 2.3)	3.6 (3.4, 3.9)	3.7 (3.6, 3.9)
Use limits should never be imposed, even if use is high*&	2.6 (2.2, 2.9)	3.7 (3.4, 4.0)	3.9 (3.8, 4.1)
Fewer people for the experience and the resource	3.30	3.68	3.76
solitude #	3.1 (2.9, 3.3)	3.6 (3.5, 3.8)	3.7 (3.6, 3.8)
quiet and natural sounds #	3.2 (3.0, 3.4)	3.6 (3.5, 3.8)	3.7 (3.6, 3.8)
wildlife habitat and a diversity of animal species #	3.7 (3.6, 3.8)	3.9 (3.8, 3.9)	4.0 (3.9, 4.0)
watershed protection & water quality #	3.5 (3.3, 3.6)	3.8 (3.7, 3.9)	3.9 (3.9, 4.0)
I believe there is room for tourism growth in the river corridor*&	3.0 (2.7, 3.2)	3.5 (3.3, 3.7)	3.5 (3.3, 3.7)

Notes: * - Statements from Q16, which asked respondents: “We would like to find out your opinions on policies and management related to the Salmon River and the social experience. Please indicate your level of agreement or disagreement with each statement.” Respondents could indicate: “strongly disagree” = 1; “disagree” = 2; “neutral” = 3; “agree” = 4; “strongly agree” = 5.

- Statements from Q8, which asked respondents: “How important do you believe each of the following is as a purpose of the Salmon River between North Fork and Corn Creek.” Respondents could indicate: “not at all important” = 1; “slightly important” = 2; “moderately important” = 3; “very important” = 4

& - Reverse coded statements, to align the ideas within the same factor.

5.2.3. *Views on social and environmental conditions by cluster*

Table 24 provides the values for each cluster regarding the four factors related to social and environmental conditions during their experience within the Salmon WSR corridor. Briefly summarized:

Cluster 1 and Cluster 3 – a mostly unproblematic visitor experience – we present these clusters together because they are generally aligned on the lack of problematic conditions experienced within the Salmon WSR corridor. While cluster 3, relative to cluster 1, views the on-river experience and the backdrop of the experience as being more problematic, both clusters still report values between 1 (“not at all a problem”) and 2 (“slight problem”) for all social and ecological conditions. In many cases, the values for cluster 1 are close to “not at all a problem”.

Cluster 2 – some concern about the conditions of the visitor experience – Respondents in cluster two can be distinguished from those in cluster 3 when it comes to perceptions of the visitor experience. Indeed, while cluster 2 and 3 aligned around WSR values and purposes, cluster 2 considered most social and ecological conditions to be somewhere between “slight problems” and “moderate problems”. In particular, the experience from shore, and the backdrop to the experience, had several components that were approaching moderately problematic for cluster 2. One potential explanation for this view is that respondents in cluster 2 have both been coming to the Salmon River for a long time (67% more than ten years), and tended to be older (49% over the age of 65). It is possible that the extended time spent in the area, in addition to being older, provides a basis for remembering recreation experiences decades ago when, in general, use was lower.

Table 24. Cluster viewpoints related to social and environmental conditions (averages with 95% confidence intervals)

	Cluster 1	Cluster 2	Cluster 3
Resource impacts	1.42	2.32	1.52
impacts to vegetation	1.3 (1.1, 1.4)	2.4 (2.2, 2.6)	1.5 (1.4, 1.6)
soil erosion	1.4 (1.2, 1.5)	2.4 (2.2, 2.6)	1.6 (1.5, 1.7)
water pollution	1.2 (1.1, 1.3)	2.2 (2.0, 2.4)	1.4 (1.2, 1.5)
non-native plants	1.8 (1.6, 2.1)	2.6 (2.4, 2.8)	1.8 (1.6, 2.0)
evidence from pets/animals	1.4 (1.2, 1.6)	2.1 (1.9, 2.3)	1.3 (1.2, 1.4)
amount of litter/trash	1.4 (1.2, 1.6)	2.2 (2.0, 2.4)	1.5 (1.4, 1.7)
On-river experience	1.20	2.10	1.45
the noise made from road traffic	1.3 (1.2, 1.4)	2.3 (2.2, 2.5)	1.7 (1.5, 1.8)
seeing traffic on the road next to the river	1.3 (1.2, 1.4)	2.4 (2.2, 2.6)	1.5 (1.4, 1.7)
the noise made from motor boats	1.2 (1.1, 1.4)	2.4 (2.2, 2.7)	1.9 (1.7, 2.1)
seeing large groups (6+) on the river	1.1 (1.0, 1.1)	2.0 (1.8, 2.2)	1.2 (1.1, 1.3)
seeing people on the river, regardless of their activity	1.1 (1.0, 1.1)	1.6 (1.4, 1.8)	1.1 (1.0, 1.2)
seeing motor boats on the river	1.2 (1.1, 1.3)	2.5 (2.3, 2.8)	1.8 (1.6, 2.0)
seeing commercial groups on the river	1.4 (1.2, 1.6)	2.2 (2.0, 2.4)	1.4 (1.3, 1.5)
seeing non-motorized boats on the river	1.0 (1.0, 1.1)	1.3 (1.2, 1.4)	1.0 (1.0, 1.1)
Experience from shore	1.50	2.30	1.38
parking congestion	1.7 (1.5, 1.9)	2.6 (2.4, 2.8)	1.5 (1.4, 1.6)
the behavior of visitors	1.6 (1.4, 1.8)	2.5 (2.3, 2.7)	1.5 (1.4, 1.7)
availability of campsites	1.6 (1.4, 1.8)	2.4 (2.2, 2.7)	1.4 (1.3, 1.6)
the amount of time that you had to wait to get on the river	1.1 (1.0, 1.2)	1.7 (1.5, 1.9)	1.1 (1.1, 1.2)
Backdrop of the experience	1.40	2.77	1.77
seeing commercial tourism development such as resorts	1.5 (1.3, 1.7)	2.7 (2.5, 3.0)	1.7 (1.6, 1.9)
seeing mining activity and development	1.4 (1.2, 1.7)	2.9 (2.7, 3.2)	1.9 (1.6, 2.1)
seeing private residential development	1.3 (1.2, 1.5)	2.7 (2.5, 2.9)	1.7 (1.5, 1.9)

Notes: Statements from Q10 and Q13 asked respondents how various social and environmental conditions, if encountered, affected the quality of their visitor experience. Respondents were asked to rate each condition on a scale related to the level of the problem: “Not a problem” = 1; “Slight problem” = 2; “Moderate problem” = 3; “Serious problem” = 4. For this table, we removed “no applicable” from the analysis.

5.2.4. Views related to decision-making criteria

We conclude our analysis of the three clusters by highlighting how different decision-making criteria were viewed on a scale of importance. Table 25 shows the mean level of importance for each cluster around each decision-making criteria. The findings in Table 25 reinforces the previous findings for each cluster. For instance, cluster 1 puts the highest level of importance on decisions that maintain recreation access, and puts less importance on making decisions that are justified by protecting natural resources over human use. Cluster 2 and cluster 3 are aligned in their views on decision-making criteria in a similar way to their alignment on the factors related to values and purposes.

Table 25. Average importance of decision-making criteria by cluster

	Cluster 1	Cluster 2	Cluster 3
the decision helps support the local community	3.5	3.5	3.6
the decision has clearly stated objectives	3.4	3.8	4.0
science plays a role in the management decisions	2.9	4.0	4.3
the decision is based on economic consequences	3.0	2.7	2.8
the decision is based on environmental consequences	3.0	4.0	4.3
the decision maintains access for recreation	4.1	3.9	4.1
the decision maintains protects natural resources over human use	2.5	3.8	3.9

Notes: Statements from Q asked respondents how important each criteria was to their acceptance of management decisions on the Salmon River between North Fork and Corn Creek, on a scale of importance: 1 = not at all important; 2 = slightly important; 3 = moderately important; 4 = very important; 5 = extremely important

6. IMPLICATIONS FOR SALMON WILD AND SCENIC RIVER PLANNING

As planners and managers on the Salmon-Challis NF aim to address the administrative needs of the recreation segment of the Salmon River WSR system, this report (in addition to the visitor monitoring report (Oppler et al. 2021)) can provide decision-making and communication support. In this section, we highlight several implications of this research when considering WSR management and planning.

6.1. Understanding visitor use and visitor perspectives to support CRMP needs

As stated at the outset of this report, the recreation segment of the Salmon WSR system does not currently have an established user capacity, monitoring strategy, or explicit plans for developing lands and facilities. Both the monitoring study (i.e., Oppler et al. 2021) and the visitor survey study (i.e., outlined herein) can potentially support these WSR planning needs. Both phases of research highlight a baseline of current use, and associated visitor perceptions; findings suggest a situation that is generally unproblematic. For instance, in the summer of 2020, the highest use stretch of the recreation segment was the three miles of river between the confluence of the Middle Fork of the Salmon River and the Main Salmon River, where on average, 38 boats floated per day (Oppler et al. 2021). This use largely represents the end of a permitted trip by secondary users (i.e., those who did not focus their trip on the recreation segment of the Salmon WSR). The second highest use stretch of the recreation segment, which can be attributed to primary users floating activity, is the Spring Creek to Cove Creek section with approximately 10 craft per day, as of 2020 (Oppler et al. 2021).

While labeling the amount of river use as ‘high’, ‘low’, or something in between is both subjective and arbitrary, the visitor survey can help us understand how visitors perceive this amount of use. As shown in Section 4.6, both social and environmental conditions were considered unproblematic by river users; though, in Section 5.2.3 we highlighted a cluster of respondents who perceived environmental and social conditions as relatively more problematic (these respondents tended to be older and tended to have been visiting the river corridor for over ten years). Combining both the monitoring and the visitor survey phase of research highlights an opportunity to embrace a wait-and-see approach for managers regarding use limitations, whereby both use and river user perceptions are monitored going forward to better understand potential changes in recreation experiences. In addition to limited concerns about the social and ecological conditions, visitor perceptions of the conditions of facilities (Section 4.8) were largely positive. However, when prompted at the end of the survey to provide comments regarding management (Section 4.12), there were several comments calling for facility improvements (e.g., expanded boat ramps, more bathrooms) and road maintenance – providing management with opportunities to proactively enhance the experience in the corridor. The call for road maintenance may be particularly salient, considering road noise and visibility was the most influential element of the on-river experience (see Table 20).

For determining a user capacity, it appears that the amount of use outlined in Oppler et al. (2021) is not currently threatening the recreation ORV. However, it is an open question as to whether other ORVs, such as fisheries and wildlife, are being threatened by recreation use. Such an understanding would require additional research or knowledge related to how recreation is impacting natural resources; but, to reiterate, river users who responded to the survey did not generally perceive problems related to environmental conditions. Understanding how recreational use is impacting (or not impacting) natural resources can not only support assessment of how use impacts non-recreation related ORVs, it can also support decision-making

rationale that resonates more with users. In this survey, similar to other river-related research (Armatas et al. 2020), we found that there was higher agreement with the prospect of limiting recreational use if it was determined that impacts to natural resources were high, relative to the prospect of limiting use due to potential negative impacts to the social experience. In other words, Salmon WSR visitors may be more amenable to a decision rationale for limiting use that emphasizes the protection of non-recreation ORVs, perhaps in part because a desirable recreation experience varies depending on the visitor. The variability in perceptions of the recreation experience are evident when considering the three clusters, particularly with regard to cluster 1, which includes visitors that generally view unproblematic conditions within the corridor and includes 73% of respondents who stated that they would not change their trip if there were “too many people” in the corridor. This perspective underscores existing research related to the adaptable recreationist, a potential positive view of recreation alongside other people, and a preference for a recreation experience with limited regulation. Therefore, as managers and planners consider future management actions and setting a user capacity, there may be an opportunity to consider the three clusters of visitors highlighting herein, and the different niches filled by the Salmon WSR system.

6.2. Considering the niche being filled by the recreation segment

Providing diverse recreation opportunities is the foundation of the influential and long-established recreation opportunity spectrum (Clark and Stankey 1979), and more recently Rice and Phillips (2023) suggested the potential benefit of providing a diversity of recreation rationing mechanisms within the context of use limitations. Fundamental to these perspectives related to recreation management is that visitors have different perspectives, preferences, and abilities to access and participate in recreation; indeed, recreation research has long realized that the average recreationist does not exist (Shafer 1969). Underpinning the recognition of varying recreation preferences is that variation in management (and thus recreation opportunities) across space and time will increase the potential that a broader swath of recreationists could connect with public lands. Given the various preferences for recreation experiences, including underpinning views on how public lands and recreation should be managed, WSR planners face the complex task of navigating visitor use decisions that will inevitably be supported by some and opposed by others. Further, there are likely a variety of WSR planning and management approaches that could be implemented that honor policy mandates such as the protect and enhance mandate. Given there is no singular, “correct” option available to WSR planners on the recreation segment of the Salmon, there is potential value in addressing the three clusters of visitors outlined in Section 5.2 through the decision-making and communication process.

There may be an opportunity to vary recreation experiences across the WSR system by recognizing the different niches filled by different WSRs. This variation can occur both at the regional scale and the scale of a specific WSR system such as the Salmon River. Regionally, the Salmon WSR system provides an opportunity for perhaps the longest multi-day river trip through roadless terrain, with an ecosystem that is distinct from other regionally proximate multiday trips such as the Selway River. Additionally, within the Salmon WSR system itself, there are a range of river experiences, including multi-day whitewater adventures (on the Wild segments) to single day whitewater or scenic floating (on the recreation segment). This regional variation within the Salmon WSR system, to be clear, largely aligns with the current state of management within the Salmon WSR system, whereby the wild segments (i.e., Middle and Main Fork permitted sections) are managed differently from the recreation segment, with correspondingly different

recreation experiences. To reiterate, the original River Management Plan (USDA Forest Service 1982:5) for the recreation segment offers four ‘management objectives’:

- Maximize a wide range of river-oriented recreation activities consistent with the overall objectives of designated Recreation Rivers and the specific provisions of the Central Idaho Wilderness Act;
- Develop those facilities necessary to fulfill the above objective with minimum adverse impact on the river resource;
- Manage this river section with as little regulatory control as possible;
- Monitor user demands to determine use levels at which conflicts arise which are unresolvable without regulation.

More than 40 years later, our research suggests that these management objectives continue to fill a niche within the broader Salmon WSR system. Specifically, our research highlights a segment of visitors (cluster 1) that are supported by a river section with little regulatory control. Further, 90% of this cluster are primary users. While both types of users’ (primary and secondary) experience and enjoy the recreation segment, and thus are important to consider, emphasizing management decisions within the context of primary users’ experience may be justified. In a similar vein, given it is federally administered land and water, managers and planners of the recreation segment are required to consider all of the American public; however, because decisions may be most visible and influential to the local and regional community, it may be helpful to recognize the views of visitors across different geographic origins. As discussed in Section 4.1.1, primary users, when compared to secondary users, tended to be coming from local or regional zip codes (or up to an approximately 3-hour drive).

7. CONCLUSION

Planners and managers of the recreation segment of the Salmon WSR continue to consider future planning activities, including developing a user capacity, a monitoring plan, and a lands and facilities plan. To address these needs, it can be helpful to have a baseline understanding of river use and river user's perspectives on the experience and potential management actions. This report briefly highlights (and provides direct access) to the first phase of research around river use monitoring (Oppler et al. 2021; Oppler et al. 2025). Primarily, this report presents the results of a river user survey administered in the high-use season of 2021 and 2022. Overall, river users conveyed the high importance of river recreation, a lack of problematic social and environmental conditions, and positive views on facilities along the river corridor. When considering different facets of the river user population, however, a nuanced view of the recreation segment of Salmon WSR system emerges. The river user population can be considered in terms of primary and secondary users, with the former focusing its trip within the recreation segment, and living within a 3-hour drive of the river. The river population can also be considered in terms of three different clusters of users, with varying levels of importance and agreement assigned to river values, purposes, and potential management actions, as well as varying perceptions of whether ecological and social conditions are problematic. Our findings suggest that there may be value in a wait-and-see approach to considering use limits, as perceived problems and levels of use are currently generally not concerning to visitors. However, in the face of future management challenges, there may be value in explicitly recognizing and communicating those with different perspectives, including the segment of the user population that perceives a higher level of social and ecological issues, and the segment of users that maintain a preference for limited river recreation regulation. Considering the broader Salmon WSR system, and the niche that the recreation segment fills, could support decision-making rationale that resonates with a broad swath of Salmon river users.

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APPENDIX A. Full questionnaire/survey distributed



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Expiration Date: 03/31/2024

**SALMON RIVER SURVEY: NORTH FORK TO
CORN CREEK**

VISITOR SURVEY



PRIVACY ACT STATEMENT - Your participation in this survey is voluntary. There are no penalties for not answering some or all of the questions, but since each response will represent many others who will not be surveyed, your cooperation is extremely important. Your answers will not be associated with you. Our results will be summarized so that the answers you provide cannot be associated with you or anyone in your group or household.

1. **How long have you been visiting the Salmon River between North Fork and Corn Creek?**
 - ☐ This is my first visit
 - ☐ Less than 1 year
 - ☐ The past 1 to 5 years
 - ☐ The past 6 to 10 years
 - ☐ More than 10 years

2. **My primary activity during this visit to the Salmon River was...(select only one, please)**

☐ Fishing (motorized watercraft)	☐ Swimming
☐ Fishing (non-motorized watercraft)	☐ Camping
☐ Fishing (from shore)	☐ Hunting
☐ Floating (motorized watercraft)	☐ Driving for pleasure
☐ Floating (non-motorized watercraft)	☐ Other (specify _____)

3. **The type and duration of this visit to the Salmon River was... (choose one)**

☐ Day-use (# _____ hrs.)	OR	☐ Overnight (# _____ nights)
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4. **How many vehicles did you/your group take to travel to the Salmon River on this visit?**
Number of vehicles _____

5. **Did you go boating on the Salmon River during this visit?**
 - ☐ Yes
 - ☐ No (go to Question #6)

- 5a. **If yes, where did you start and end this trip on the Salmon River?**
Put in point (choose one):

☐ Deadwater	☐ Cove Creek
☐ Squaw Creek	☐ Cache Bar
☐ Spring Creek	☐ Other (specify _____)

Take out point (choose one):

☐ Squaw Creek	☐ Cache Bar
☐ Spring Creek	☐ Corn Creek
☐ Cove Creek	☐ Other (specify _____)

- 5b. **If yes, what type of boat(s) did your party use on the Salmon River? (select all that apply)**

☐ Non-motorized raft or drift boat	☐ Stand-up paddle board
☐ Motorized boat	☐ Canoe, kayak, or single-person raft
☐ Other (specify _____)	

- 5c. **If yes, how many different boats/crafts did your party use on the Salmon River?**
Number of craft _____

6. **The section of the Salmon River from North Fork to Corn Creek is designated as "Wild and Scenic". Are you aware of this fact?**
 - ☐ Yes
 - ☐ No

7. **Did you know that the National Wild & Scenic River Act strives to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations?**
 - ☐ Yes
 - ☐ No

RIVER VALUES

8. **How important do you believe each of the following is as a purpose of the Salmon River between North Fork and Corn Creek.** *(select one answer for each statement)*

	Not at all important	Slightly important	Moderately important	Very important
Outdoor recreation	()	()	()	()
Fisheries and a diversity of fish species	()	()	()	()
Economic value for tourism and guiding	()	()	()	()
Native American use (for example – religious activities, fishing, gathering)	()	()	()	()
Economic value for mineral extraction	()	()	()	()
Quiet and natural sounds	()	()	()	()
Solitude	()	()	()	()
Agricultural livelihoods and lifestyles	()	()	()	()
Watershed protection & water quality	()	()	()	()
Wildlife habitat and a diversity of animal species	()	()	()	()
Exploration of Native American history and culture (for example – pictographs)	()	()	()	()
Scenery / scenic landscapes	()	()	()	()
Geologic features	()	()	()	()
Exploration of European history and cultural heritage (for example – homesteading and mining)	()	()	()	()
A visitor experience free from rules and regulations	()	()	()	()
Subsistence activities (for example - hunting and fishing for food)	()	()	()	()
A spontaneous trip that does not require much planning	()	()	()	()

9. **Have you noticed any positive or negative changes on the Salmon River between North Fork and Corn Creek in the last five years? If you have, please describe the changes below.**

☐ Cannot answer, this is my first visit (or it has been over five years since my last visit)

Please describe any effects below.

Positive: _____

Negative: _____

SOCIAL PERCEPTIONS

10. **We would like to find out what human-related factors affected the quality of your visitor experience. Please rate each social aspect of this trip:** *(select one answer for each statement)*

Items	Not A Problem	Slight Problem	Moderate Problem	Serious Problem	Did Not Observe/Not Applicable
Seeing non-motorized boats on the river	()	()	()	()	()
Seeing motor boats on the river	()	()	()	()	()
Seeing people on the river, regardless of their activity	()	()	()	()	()
Seeing large groups (6+) on the river	()	()	()	()	()
Seeing commercial groups on the river	()	()	()	()	()
Seeing traffic on the road next to the river	()	()	()	()	()
The noise made from motor boats	()	()	()	()	()
The noise made from road traffic	()	()	()	()	()
The behavior of visitors	()	()	()	()	()
Availability of campsites	()	()	()	()	()
Parking congestion	()	()	()	()	()
The amount of time that you had to wait to get on the river	()	()	()	()	()

11. **How did your experience with these social aspects during your visit compare with what you expected?** *(select one answer for each statement)*

	I had no expectations	Far less than expected	Somewhat less than expected	As expected	Somewhat more than expected	Far More than expected
Number of non-motorized boats seen	()	()	()	()	()	()
Number of motor boats seen	()	()	()	()	()	()
Number of people seen	()	()	()	()	()	()
Number of large groups seen	()	()	()	()	()	()
Number of commercial groups seen	()	()	()	()	()	()
Amount of road traffic	()	()	()	()	()	()
Noise from motor boats	()	()	()	()	()	()
Noise from road traffic	()	()	()	()	()	()
Behavior of visitors	()	()	()	()	()	()
Availability of campsites	()	()	()	()	()	()
Parking congestion	()	()	()	()	()	()
Amount of wait time to get on the river	()	()	()	()	()	()

12. **How likely is it that the presence of too many people would cause you to change your next trip to the Salmon River corridor between North Fork and Corn Creek?** (*select one*)

- ☐ Not at all likely (skip to question #13)
☐ Slightly likely
☐ Somewhat likely
☐ Quite likely
☐ Extremely likely

- 12a. **If the number of people would cause you to change your next trip, what do you intend to change on your next visit?** (*select all that apply*)

- ☐ Select a different starting time
☐ Switch days of the week
☐ Pick a different season of the year
☐ Choose another river - which one: _____
☐ Other action - please explain: _____

ENVIRONMENTAL PERCEPTIONS

13. **We would like to find out what environmental conditions affect the quality of your visitor experience. Please rate each aspect that you encountered on this trip:** (*select one answer for each statement*)

Items	Not A Problem	Slight Problem	Moderate Problem	Serious Problem	Did Not Observe
Amount of litter / trash	()	()	()	()	()
Evidence from pets / animals	()	()	()	()	()
Impacts to vegetation	()	()	()	()	()
Soil erosion	()	()	()	()	()
Non-native plants	()	()	()	()	()
Water pollution	()	()	()	()	()
Seeing private residential development	()	()	()	()	()
Seeing commercial tourism development such as resorts	()	()	()	()	()
Seeing mining activity and development	()	()	()	()	()

14. **How did your experience with these environmental aspects during your visit compare with what you expected?** *(select one answer for each statement)*

Items	I had no expectations	Far less than expected	Somewhat less than expected	As expected	Somewhat more than expected	Far More than expected
Amount of litter / trash	()	()	()	()	()	()
Evidence from pets / animals	()	()	()	()	()	()
Impacts to vegetation	()	()	()	()	()	()
Soil erosion	()	()	()	()	()	()
Non-native plants	()	()	()	()	()	()
Water pollution	()	()	()	()	()	()
The amount of private residential development	()	()	()	()	()	()
The amount of commercial tourism development such as resorts	()	()	()	()	()	()
The amount of mining activity and development	()	()	()	()	()	()

FACILITIES, POLICIES, & MANAGEMENT ISSUES

15. **We would like to find out your opinions on facilities related to the Salmon River. Please rate the quality of each of the following:** *(select one answer for each statement)*

Statements	Excellent	Good	Fair	Poor	Not applicable
The number of educational programs and services	()	()	()	()	()
The number of interpretive signs	()	()	()	()	()
The amount of recreation facilities such as restrooms and parking spaces	()	()	()	()	()
Restroom cleanliness	()	()	()	()	()
Parking availability at the access sites	()	()	()	()	()
Condition of launch ramps at access sites	()	()	()	()	()
Condition of picnic tables and campgrounds	()	()	()	()	()
Condition of road along the river.	()	()	()	()	()

16. **We would like to find out your opinions on policies and management related to the Salmon River and the social experience. Please indicate your level of agreement or disagreement with each statement: (select one answer for each statement)**

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I believe there is room for tourism growth in the river corridor	()	()	()	()	()
If people feel crowded, use limits should be imposed	()	()	()	()	()
If visitor-caused resource impacts are high, use limits should be imposed	()	()	()	()	()
Use limits should never be imposed, even if use is high	()	()	()	()	()
To protect scenery, easements that prevent more human development should be negotiated	()	()	()	()	()
If needed to <u>protect river flows and wildlife habitat</u> , restrictions on irrigation and water consumption should be imposed	()	()	()	()	()
If needed to <u>protect river flows and boating opportunities</u> , restrictions on irrigation and water consumption should be imposed	()	()	()	()	()
If needed to <u>protect river flows and fishing opportunities</u> , restrictions on irrigation and water consumption should be imposed	()	()	()	()	()
Restrictions on irrigation and water consumption should never be imposed	()	()	()	()	()
Changes in technology that allow motor boats to access the river at lower flows are problematic	()	()	()	()	()

17. **How important is each of these statements to your acceptance of management decisions on the Salmon River between North Fork and Corn Creek? (select one answer for each statement)**

Statements	Not at all important	Slightly important	Moderately important	Very important	Extremely important
The decision helps support the local community	()	()	()	()	()
The decision has clearly stated objectives	()	()	()	()	()
Science plays a role in the management decisions	()	()	()	()	()
The decision is based on economic consequences	()	()	()	()	()
The decision is based on environmental consequences	()	()	()	()	()
The decision maintains access for recreation	()	()	()	()	()
The decision maintains protects natural resources over human use	()	()	()	()	()

18. **Over time, how has your trust in the federal agency managing the Salmon River between North Fork and Corn Creek changed? (choose one)**

- ☐ Diminished
- ☐ Has not changed
- ☐ Improved
- ☐ Don't know
- ☐ Not applicable

18a. Please describe why your trust of the management agency has or has not changed:

DEMOGRAPHICS

19. **Your gender:**

- ☐ Man ☐ Woman ☐ Other

20. **What is your age?**

- ☐ 18-24 ☐ 55-64
☐ 25-44 ☐ 65+
☐ 45-54

21. **How many people are in your group today, including yourself?**

Adults (18 and older): _____

Children (under 18): _____

22. **Your ZIP code:** _____

23. **Please indicate which ethnic / racial group you most closely identify with: (check all that apply)**

- ☐ American Indian or Alaskan native ☐ Native Hawaiian / Pacific Islander
☐ Asian ☐ White
☐ Black or African American ☐ Other (specify) _____

24. **Are you Hispanic or Latino?**

- ☐ Yes ☐ No

25. **Which category best represents your annual household income (before taxes) last year?**

- ☐ Less than \$49,999 ☐ \$100,000 to \$149,999
☐ \$50,000 to \$99,999 ☐ \$150,000 to \$199,999
☐ \$200,000 or more

26. **Do you have any recommendations for planning or managing the Salmon River between North Fork and Corn Creek? If so, please explain in the space below:**