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SUSITNA-WATANA HYDRO

Susitna-Watana Hydroelectric Project
(FERC No. 14241)

River Recreation Flow and Access Study
Study Plan Section 12.7

Final Study Plan

Alaska Energy Authority

SUSITNA-WATANA HYDRO

Clean, reliable energy for the next 100 years.

July 2013

12.7. River Recreation Flow and Access Study

On December 14, 2012, Alaska Energy Authority (AEA) filed with the Federal Energy Regulatory Commission (FERC or Commission) its Revised Study Plan (RSP), which included 58 individual study plans (AEA 2012). Included within the RSP was the River Recreation Flow and Access Study, Section 12.7. RSP Section 12.7 focuses on conducting a recreation flow analysis on mainstem reaches of the Susitna River that considers the relationship between river flows and ice conditions, and river recreation and transportation. RSP 12.7 provided goals, objectives, and proposed methods for river recreation flow and access data collection and analysis.

On February 1, 2013, FERC staff issued its study determination (February 1 SPD) for 44 of the 58 studies, approving 31 studies as filed and 13 with modifications. RSP Section 12.7 was one of the 13 approved with modifications. In its February 1 SPD, FERC recommended the following:

If the study is conducted during a "typical" flow year and winter season, the study results would likely provide adequate opportunities to observe and evaluate a range of flow and ice conditions that typically support or do not support recreation and transportation on the river. While a variety of factors may affect whether the study results are representative, the ILP provides a mechanism to require additional data if the study is conducted under anomalous conditions (e.g., severe flooding, fire, road closures, etc.). Similarly, if the initial results of instream flow, sediment transport, and ice processes studies suggest that project operation may affect flows downstream of Parks Highway Bridge, additional study may be warranted in the lower river. Requiring AEA to conduct multi-year field studies and flow-related studies in the lower Susitna River now would be premature and could cause AEA to expend resources needlessly. Therefore, we do not recommend modifying the study to include the lower river at this time.

Much of the flow-dependent information to be gathered for the study would be done remotely (e.g., interviews and online surveys), although the study would also utilize data collected during the recreation intercept surveys to be conducted in the field as part of the Recreation Resources Study (study 12.6). At little additional cost ($20,000), AEA could add focus group discussions, as suggested by the NPS, that would substantially add to the information base for, and the analysis of, flow preferences for whitewater boating and ice conditions needed for motorized and non-motorized travel.

Therefore, we recommend AEA modify the study plan to include at least one focus group discussion on whitewater boating and one on winter ice and snow travel in the river corridor for motorized and non-motorized users. Focus group participants would be identified by building on the executive interviews with commercial and noncommercial users of the river to include boating clubs, dogsled clubs, etc. Opportunities for online or teleconference participation should be provided for the focus group discussions.

In accordance with the February 1 SPD, AEA addressed the recommended modifications in the Final Study Plan for Section 12.7. These modifications are also included in this Final Study Plan.

12.7.1. General Description of the Proposed Study

This study incorporates and contributes to data and analysis conducted as part of the Recreation Resources Study (Section 12.5). In the overall recreation study, river recreation, boating uses, and river access points will be identified. Current and future use of the Susitna River by both motorized and non-motorized boat users will also be estimated. Because the Project will affect river flow regimes, including the inundation of about 39 miles of the river, and possible ice formation, and because changes in river flow regimes and ice formation may impact recreation activities on the river corridor, a specific methodology of recreational flow analysis is also proposed.

The goals and objectives of the River Recreation and Access Study are to contribute data to the Recreation Resource Study concerning the relationship between river flows and river recreation opportunities and uses, by:

- Documenting river recreation use and experience for the respective river recreation and transportation opportunities on three mainstem Susitna river reaches
- Describing the potential effects of altered river flows on existing and potential boating activity and other river recreational uses of the Susitna River
- Understanding river ice preferences for the respective river ice dependent winter recreation and transportation on the Susitna River
  Describing new boating or other flow-dependent recreational opportunities that may be created by Project construction and operation.

12.7.2. Existing Information and Need for Additional Information

Existing recreation resources information was compiled in the Recreation Data Gap Analysis (AEA 2011a) and recreation resource descriptions and inventory presented in AEA's PAD (AEA 2011b). A recreation study was conducted in 2012 to gather data to inform the 2013-2014 Study Plan, including the following elements:

- Interviews with key representatives of agencies and organizations knowledgeable about river recreation in the Project area and state recreation management
- Incidental Observation Survey Data (completed by field crews)
- Geo-referenced mapping
- Identification of future trends and issues
- Description of the management framework
- Compilation of existing baseline river recreation information and access
- Hydrology data review
- Field reconnaissance and photography
- Identification of future trends and issues
- Description of the management framework and special river designations

Information from 2012 data collection has been used to develop the Revised Study Plan. The FERC scoping process, Technical Workgroup meetings, and licensing participant recommendations have also been used in development of the 2013-2014 Study Plan.

12.7.3. Study Area

During the 2012 recreation study, three distinct river recreation reaches were identified on the Susitna River, shown in Figure 12.7-1, for gathering baseline river recreation information on the Susitna River. The three river recreation reach breaks are described as follows: River Recreation Reach 1) the section of river from the Susitna River bridge (RM 291) on the Denali Highway to Fog Creek (RM 177); River Recreation Reach 2) Fog Creek to the confluence with Portage Creek (RM 149) downstream of Devils Canyon; and River Recreation Reach 3) Portage Creek to the confluence with the George Parks Highway Bridge (aka Sunshine) downstream of the confluence with the Talkeetna and Chulitna Rivers (RM 83). The three river recreation reach designations overlap other reach breaks delineated for other resource studies. The pertinent information from these other disciplines will be summarized for the river recreation reaches as warranted.

River Recreation Reach 1—Denali Highway Susitna River Bridge (RM 291) to Fog Creek (RM 177): This section of the Susitna River contains 140 miles of remote Class I to II moving water with broad views of the surrounding mountain ranges. River Recreation Reach 1 includes the location of the proposed Watana Dam and reservoir.

This section of the river is suitable for motorized (jet boats and air boats) and non-motorized (rafts, canoes, kayaks and packrafts). This section of river offers single day (motorized users) or multi-day river trip opportunities. River campsites are available on islands and bars. User groups may include river recreationists, hunters, anglers, adventure racers, and adventure schools.

Motor vehicle access is generally limited to the Susitna River Bridge on the Denali Highway. The current site has an unimproved access that does not have a launch for trailered boats. Access to the river may also be gained through private or commercial air taxis. River users may also float into the mainstem Susitna via tributaries using float planes to headwater lakes and/or overland travel.

Non-motorized boaters lacking the expert skills to negotiate the Class V whitewater in Devils Canyon must arrange an exit from the Susitna River prior to entering this more difficult whitewater section. The exit options in this remote section of the Susitna River include air taxi, motorboat pick-up, overland routes or a combination thereof. One route using a 17B trail was described by Embick (1994) and Jettmar (2008) connecting the Susitna to the Talkeetna via Stephan Lake and Prairie Creek.

River Recreation Reach 2—Fog Creek (RM 177) to Portage Creek (RM 149): This section of the Susitna River contains Class III to V+ whitewater. Recreation use is primarily limited to a few expert whitewater boaters in kayaks although there are reports of users with other watercraft. Recreation users may use other watercraft such as packrafts on short stretches of the mainstem upstream of the Devils Canyon section to link up overland routes or tributaries.

River Recreation Reach 3—Portage Creek (RM 149) to the George Parks Highway Susitna River Bridge (RM 83): The Susitna River from Portage Creek to the George Parks Highway Bridge, near Sunshine, contains Class I-II water. This reach is suitable for a variety of motorized and non-motorized watercraft. Commercial and non-commercial users utilize various sections of River Recreation Reach 3. Commercial uses include jet boat tours, river rafting, and guided fishing trips. Non-commercial uses include motorized (jet boats and air boats) and non-motorized watercraft (canoes, kayaks, inflatable kayaks, rafts, and packrafts). River access is

available at multiple locations via the train to Gold Creek. For launching points further upstream, a motorized boat shuttle is required. Motorized and non-motorized trips range from single to multi-day with numerous river campsites on islands, tributary confluences and gravel bars. Some recreational boaters, particularly packrafters, may utilize tributaries such as Portage or Gold Creek to float into the main-stem Susitna.

If 2013 study results from other resource studies including ice processes, hydrology, and geomorphology, indicate that the Project may affect river flows in a way that changes the way recreationists currently use that reach of the river, the 2014 Project survey effort and impact analysis may extend further downstream of the confluence with the Talkeetna and Chulitna Rivers.

The flow preferences for respective river recreation opportunities observed in River Recreation Reach 3 will likely be applicable to river uses downstream. Recreation use data collected through intercept and resident surveys described in Section 12.5 for downstream locations will be used to analyze Project effects on recreation frequency, timing, and quality.

12.7.4. Study Methods

This Study is designed to document the range of flows for a variety of motorized and non-motorized watercraft using the Susitna River for recreation as well as a transportation corridor. Likewise, the Study is designed to document river ice dependent recreation and transportation activities during the winter period. River ice variables likely include temporal and spatial extent for channel bridging, and longitudinal length for transportation. The methods and analysis will use practices and survey techniques for recreational flow study design, as described in Whittaker et al. (1993) and Whittaker et al. (2005).

River Recreation Surveys

The River Recreation and Access Survey (Attachment 12-1) will be used to gather information on river recreation uses, location, frequency, seasonal patterns, primary trip purpose, secondary activities, access, campsites and river recreation quality relative to trip flow evaluation. The survey will be posted on the internet and will serve as the primary means for gathering information from river users. Utilizing the internet for the survey tool will help geographically expand the collection of responses on dispersed river recreation use. The expansive study area, remote location, dispersed access points, and anticipated low number of annual user days would normally be cost prohibitive for an on-site intercept survey. Furthermore, the electronic survey provides a means for capturing both past and current recreation use.

Survey participation will be solicited by advertising the river recreation survey electronically through a multitude of forums including but not limited to national and regional whitewater groups, forums for outdoor recreation including adventure races, fishing, hunting, motorized and non-motorized user groups, message boards, commercial outfitters and guides, adventure schools and transportation services to the study area. Posters will also be delivered at key locations such as outdoor retail shops, key convenience stores in the study area, and train station and commercial transportation service locations for the study area. Postcards will also be distributed at key access points and staging areas. Hardcopy surveys identical to the internet survey will be administered in the field for chance encounters. For the internet surveys, the platform allows for restriction of Internet Protocol (IP) addresses for entry, therefore unique responses can be identified.

Whitewater organizations at the national and regional level serve as a portal for disseminating information to the paddling community through websites, journal articles, and electronic communication. The internet link for the Susitna whitewater survey will be forwarded to the national and regional paddling groups as well as whitewater message boards in Alaska. In addition, efforts will be made to identify boaters known to have paddled Devils Canyon about the whitewater survey available on the internet. A fairly comprehensive list of paddlers that have attempted or completed runs on the Devils Canyon stretch dating back to the 1970s was assembled as part of the 2012 field reconnaissance efforts. Individuals on this list will be contacted for interviews and directed to the internet survey. Formal and informal interviews will be conducted to supplement the internet survey data as well as gather additional information about user groups, trip purposes, use patterns, access, flows and other recreation information. A set of pre-established executive interview questions (Attachment 12-2) will be asked in each interview. A form will be completed for each interview including the name of the interviewee, date, name of individual being interviewed, responses to interview questions and additional comments and discussion in the interview.

Recreation use information obtained through the interviews will be summarized for respective recreation opportunities including primary purpose, secondary activities, flow preferences, seasonal use patterns, frequency of use, access points, campsites, trip length, comparisons with recreation opportunities on other Alaska rivers, and recreation quality on the Susitna.

Identifying and contacting individuals that have recreated on the Susitna River will be challenging for some of the recreational users that tend not to be part of organized groups such as trappers, hunters, and cabin owners. Recreation contact lists will be generated through outreach to recreation groups, resource agency land managers, and commercial providers such as air taxis, lodges, hunting outfitters, rental shops, rafting companies, jet boat companies, tourism services, and adventure schools. Although the commercial operators currently utilize the Susitna River, resource agency staff as well as owners and employees of commercial companies may have personal experience on this reach of the Susitna or provide names of individuals that have recreated. Non-commercial contacts will include paddling clubs, university recreation centers, adventure racers, outdoor clubs, as well as area residents potentially using the river corridor for recreation and/or transportation purposes.

River recreation use information obtained through the interviews will be summarized for respective recreation opportunities including primary trip purpose, secondary activities, flow levels necessary for navigation, transportation and recreation for respective watercraft types, seasonal use patterns, frequency of use, access points, campsites, trip length, comparisons with recreation opportunities on other Alaska rivers, and recreation quality on the Susitna.

Data analysis and reporting will include summaries of the internet survey data and interviews. River recreation use information obtained through the electronic internet survey and interviews will be summarized for respective recreation opportunities including primary purpose, secondary activities, demographics of the respective recreational user groups, flow preferences, seasonal use patterns, frequency of use, access points, campsites, trip length, comparisons with recreation opportunities on other Alaska rivers and quality of experience. The intercept survey and incidental observations described in Section 12.5 will be used to supplement data obtained through the internet survey and interviews. Likewise, information gathered through the River Recreation and Access Survey will supplement the analysis of recreation activities described in Section 12.5.

The report will include an analysis of the potential effects of Project construction and operation on existing river recreation opportunities, attributes, and access. The annual number of days under the baseline hydrologic record will be summarized by month for respective river recreation opportunities based on the range of flows during which use was observed and compared to the annual days available under the proposed Project operations.

The analysis will include changes in the area of the proposed reservoir from a riverine to lacustrine system. The report will also include an inventory of the reservoir recreation opportunities for various operating alternatives.

River Ice Dependent Winter Recreation

The Susitna River during the winter ice period provides motorized and non-motorized winter recreation opportunities and serves as a transportation corridor for residents along the Susitna. Construction and operation of the Project could alter the timing and longitudinal extent of ice formation, and impact such uses. The study area for the River Ice Dependent Winter Recreation investigation will be partitioned using the same reach breaks as described for the River Recreation and Access Study. The three reaches are described as follows: River Recreation Reach 1) the section of river from the Susitna River bridge (RM 291) on the Denali Highway to Fog Creek (RM 177); River Recreation Reach 2) Fog Creek to the confluence with Portage Creek (RM 149) downstream of Devils Canyon; and River Recreation Reach 3) Portage Creek to the confluence with the George Parks Highway Bridge (aka Sunshine) downstream of the confluence with the Talkeetna and Chulitna Rivers (RM 83).

Information on winter recreation activities and transportation on the ice covered Susitna River will be obtained through interviews with regional officials, winter recreation users, event organizers, event participants, and other knowledgeable area residents. Contact lists will also be initiated in a similar fashion to that described for river recreation. Commercial providers such as lodges, snowmobile service and rental shops, and winter recreation vendors will be contacted. If possible, trappers using the river corridor will be interviewed. A few winter residents in cabins upstream of Talkeetna will be queried relative to their use patterns on the river corridor. Periodic aerial flights during periods of ice cover as part of the ice processes study will be used, in part to map areas of winter recreation and transportation activity through aerial observations of tracks on the snow. Winter recreation activities will be documented during monthly winter site visits. Efforts will be made to time visits with winter festival events that may occur in the area.

A set of pre-established winter recreation and transportation questions will be asked in each interview. Interview questions will be tailored specifically to activities associated with winter ice conditions on the Susitna. Questions will focus on timing, frequency and location of activities, type of activity, ice thickness, trip lengths, trip purpose, crossing river channel vs. using river corridor as a route, alternative transportation routes, and alternative winter recreation locations. The draft interview questions will be circulated for review and comment by agencies prior to finalizing in early 2013.

A form will be completed for each interview including the name of the interviewer, date, name of individual being interviewed, responses to interview questions and additional comments and discussion in the interview.

River ice dependent winter recreation and transportation information obtained through the interviews will be summarized for respective recreation opportunities including primary purpose,

secondary activities, ice thickness required, need for ice bridges verses longitudinal ice cover, seasonal use patterns, frequency of use, access points, duration of trip (days), campsites, trip length, comparisons with winter recreation opportunities on other frozen Alaska rivers and winter recreation quality on the Susitna.

Information obtained from interviews will be supplemented with data obtained from the intercept survey described in section 12.5.

Focus Group Discussions

The River Recreation and Flow Access Study will include two focus group discussions: (1) whitewater boating and (2) winter ice and snow travel in the river corridor for motorized and non-motorized users. Focus group participants will be identified by building on the executive interviews with commercial and noncommercial users of the river (for example, to include boating clubs and dogsled clubs). Opportunities for online or teleconference participation will be provided for the focus group discussions.

Desired outcomes of this study process include the following:

- A physical description of each River Recreation Reach including length, put-ins and take-outs (i.e., access points), river difficulty, character, portage requirements, river campsites, and type of experiences
- Summary of motorized and non-motorized boating opportunities and associated attributes including distinctions between commercial and non-commercial uses for the three river reaches
- Summary of river recreation opportunities on Susitna tributaries in the three study reaches
- Summary of existing river access points, modes of transportation to the river and costs for the three study reaches under existing conditions as well as project alternatives allowing public access to the reservoir and project transportation corridor
- Flow ranges observed for respective river recreation opportunities on the three river reaches
- Annual frequency and timing (number of days per month) for respective recreation opportunities under baseline flow conditions and potential alternative flow regimes

12.7.5. Consistency with Generally Accepted Scientific Practice

The methods and work efforts outlined in this Study Plan are the same or consistent with analyses used by applicants and licensees and relied upon by FERC in other hydroelectric licensing proceedings. The proposed methodology is often used in analysis for development of hydroelectric License Applications to fulfill the FERC's Exhibit E requirements for documentation and development of mitigation measures for flow dependent recreation. The methods and analysis will use survey techniques and practices for recreational flow study design, as described in Whittaker et al. (1993) and Whittaker et al. (2005).

12.7.6. Schedule

Upon implementation, the term of the River Recreation and Access Study, including the River Ice Dependent Winter Recreation component, will be two years. Table 12-7.1 lists the schedule for the River Recreation Flow and Access Study. In 2014 and 2015, licensing participants will

have opportunities to review and comment on the study reports (Initial Study Report in early February 2014 and Updated Study Report in early 2015). Updates on the study progress will be provided during Technical Workgroup meetings which will be held quarterly in 2013 and 2014.

12.7.7. Relationship with Other Studies

Interdisciplinary coordination will be an essential component of the Recreation River Flow Study across all seasons and will result in efficient collection and analyses of data common between studies for the Susitna-Watana Hydroelectric Project. Coordination will occur with other Project studies focused on instream flow (Section 8.6), hydrology (Section 7.0) (including ice processes) (Section 7.6), geomorphology (Section 6.5), recreation (Section 12.5), and project engineering feasibility studies. Data collected by other studies will inform the approach to and eventual development of the Initial Study Report (early February 2014) and Updated Study Report (early 2015).

Information collected on river recreation use and experience will be coordinated with hydrologic data including flows, water quality, and ice formation timing and extent collected through other studies to refine current river use characteristics. As described in Section 12.5.4, the Hydrology study will provide data on potential changes to the hydrologic regime, including water timing, quantity, and quality (Section 7.0). Data will be used to understand aquatic reservoir conditions and potential water-dependent recreation uses, and will inform eventual development of a Recreation Management Plan. The Fish and Aquatics Instream Flow Study will provide hydraulic routing model data to estimate water surface elevations and average water velocity under alternative operational scenarios. This information will provide data on potential changes in channel, sandbar and floodplain formation that may result from operation of the proposed project, and will be used to asses potential changes in river-based recreation access and use (Q4 2014).

Additional data inputs will be gathered from the geomorphology study (Section 6.0). This study will provide data describing the extent to which geomorphological processes of the river could change under operational flows. Coordination will focus on those attributes most relevant to river-based recreation, such as beaches, sandbars, and islands (Q1 2013 – Q4 2014).

Coordination with the ice processes study (Section 7.6) will provide information about expected changes in the type, distribution, and seasonality of ice cover on the Susitna River, downriver of the proposed dam (Q4 2013). These data will provide baseline data, and inform the impact assessment for ice dependent river recreation (Section 12.7.4). Results from the ice processes modeling will also be used to determine the longitudinal extent of downriver impacts to winter recreation, and inform the decision of whether to expand winter river ice-dependent recreation studies to areas located downriver of the Parks Highway Bridge (Q1 2014). Anticipated coordination is graphically depicted in Figure 12.7-2.

12.7.8. Level of Effort and Cost

The estimated cost of the two-year River Recreation and Access Study is $643,000.

12.7.9. Literature Cited

AEA (Alaska Energy Authority). 2011a. Susitna-Watana Hydroelectric Project, Socioeconomic, Recreation, Air Quality and Transportation Data Gap Analysis. Prepared by HDR, Inc., Anchorage.

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12.7.10. Tables

Table 12.7-1. Recreational Boating / River Access Study Schedule.

Activity	2012				2013				2014				2015
	1 Q	2 Q	3 Q	4 Q	1 Q	2 Q	3 Q	4 Q	1 Q	2 Q	3 Q	4 Q	1 Q
Baseline Data Collection					—	—	—	—					
Field Studies						—	—	—					
Analysis						—	—	.....	.....	—			
Impact Analysis								—	—	—	—		
Initial Study Report								—	Δ				
Updated Study Report										—	—	—	▲

Legend:

— Planned Activity
..... Follow up activity (as needed)
Δ Initial Study Report (February 2014)
▲ Updated Study Report (February 2015)

12.7.11. Figures

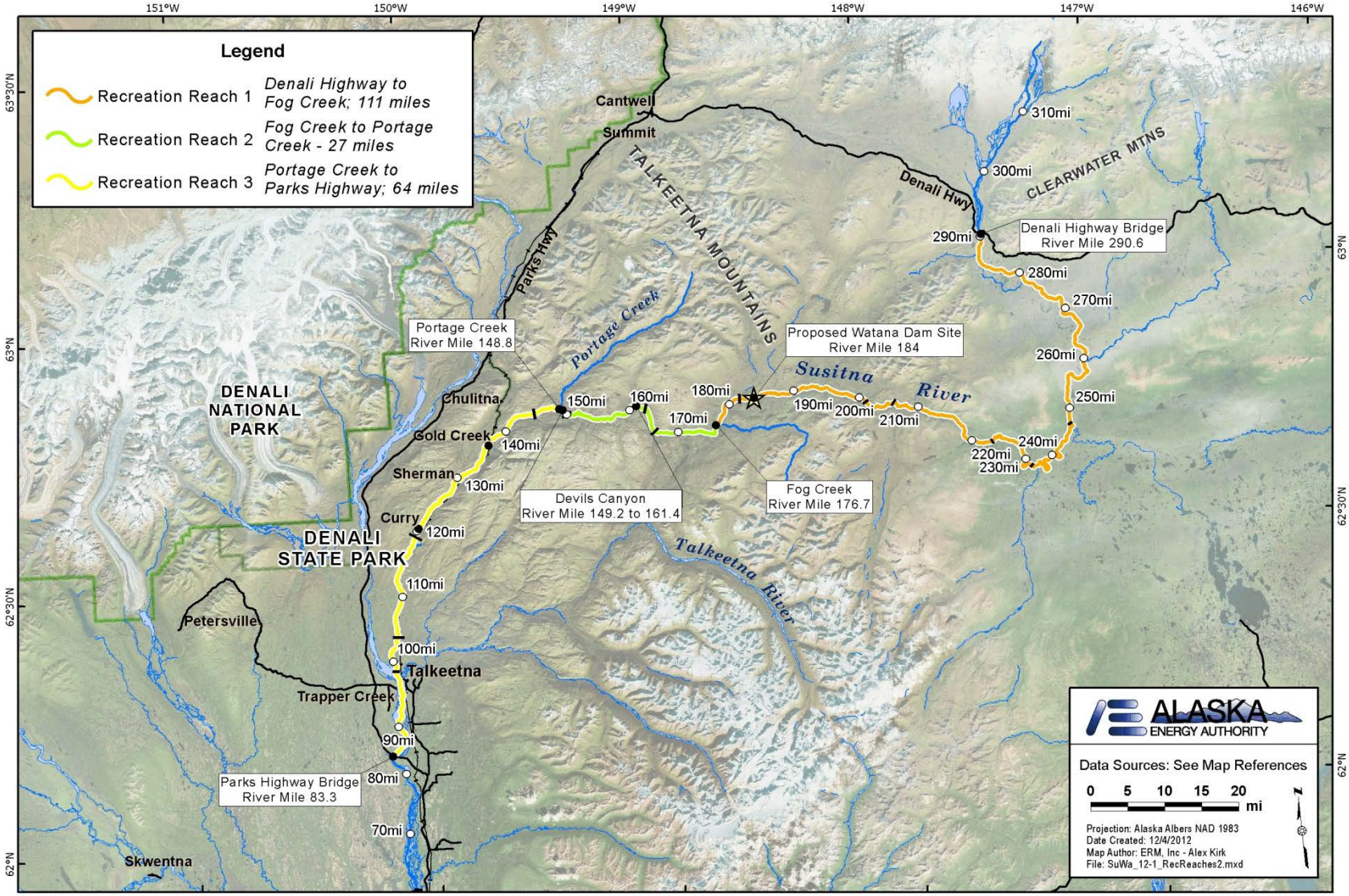


Figure 12.7-1 River Recreation - Reaches Study Area.

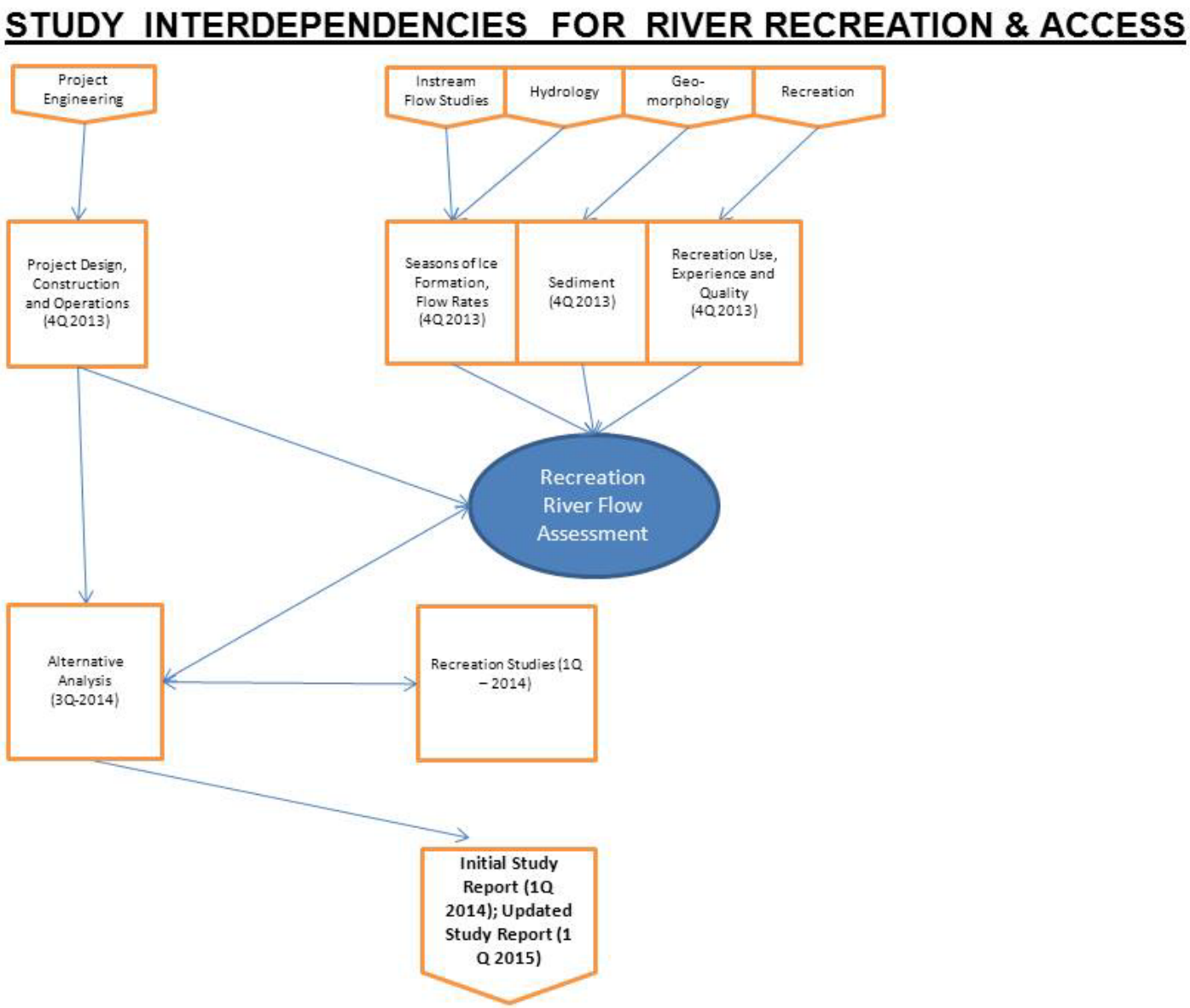


Figure 12.7-2 Recreation River Flow Study Interdependencies

ATTACHMENT 12-1
RIVER RECREATION AND ACCESS SURVEY INSTRUMENT (DRAFT)

Susitna-Watana Hydroelectric Project
River Recreation and Access Survey Instrument (DRAFT)

Please read this introductory section before starting the survey.

This survey is part of a study to determine river recreation opportunities, use patterns, access and quality of experiences for three river reaches on the Susitna River. The Alaska Energy Authority is studying the feasibility of building the Susitna-Watana Hydroelectric Project. The proposed Project would be located on the Susitna River roughly 86 river miles upstream from Talkeetna and approximately 34 miles upstream of the Devils Canyon rapids. As currently envisioned, the project would include a roughly 750-foot tall dam located below Watana Creek and would result in a 23,500 acre, 42-mile long reservoir. The proposed project would have an installed capacity of 600MW. Project construction and operation will alter river flows in the Susitna downstream. The dam and reservoir will alter downstream navigation and access. When completed, the project would produce nearly 50 percent of the Railbelt's electrical demand, or an annual average of 2,800,000 megawatt hours (MWh) of renewable energy generation.

This survey is designed to collect information on existing motorized and non-motorized river recreation opportunities using a variety of watercraft. Please complete this form if you are using the Susitna for recreation or for transportation purposes.

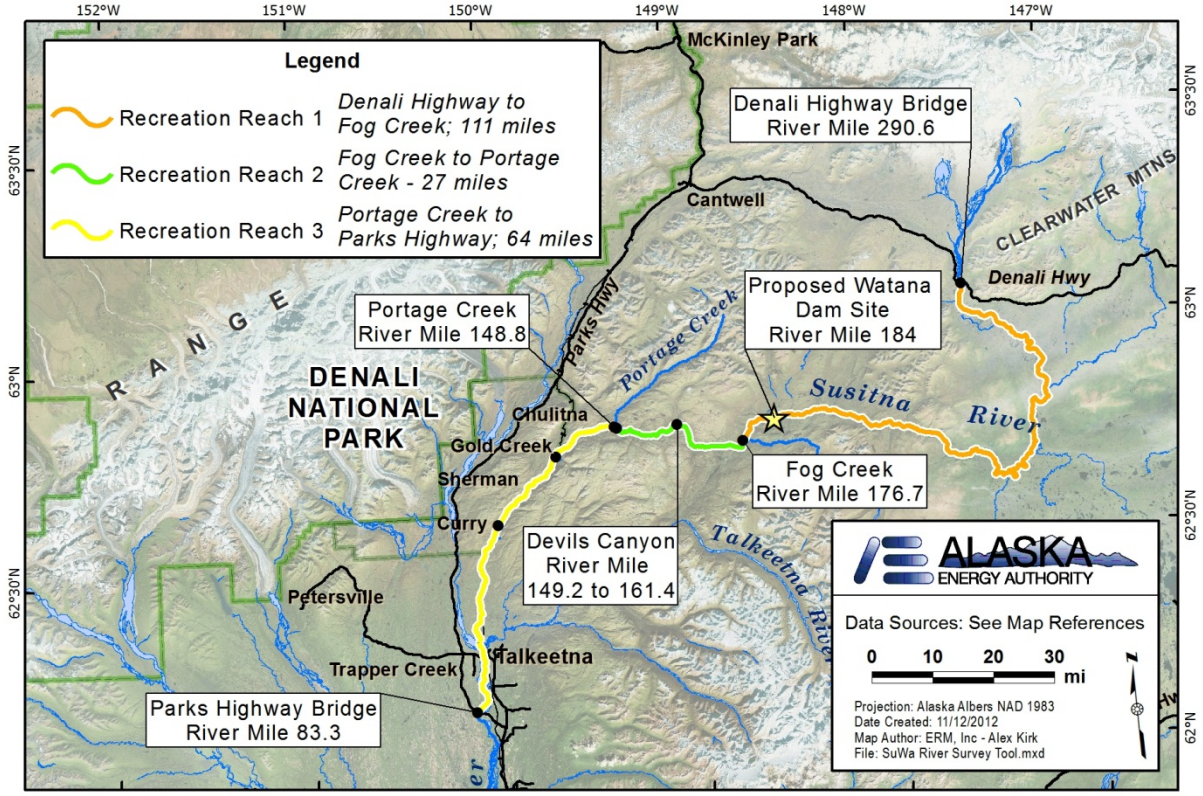
The river has been divided into three distinct reaches (see map below). The survey will direct you to questions specific to reaches 1, 2 and 3. If you have completed multiple trips using different watercraft and/or river reaches please complete a new survey for each trip and reach.

Your participation in this survey is important to the study's success. Please base responses on your direct experience from your trip rather than guidebooks, group opinions or historic flow preferences. Advances in boat design have expanded the range of suitable flows on many rivers.

Lastly, please encourage fellow boaters to participate in this study. If you have friends that recreate on the Susitna, please refer them to this webpage. The more responses we get the more useful our results will be. Alaska Energy Authority will publish the results of this study.

Click "Next" to view map of the **Susitna River Recreation Reaches** for the survey.

River Recreation Reaches 1, 2 and 3 on the Susitna River



Susitna River Recreation and Access Study
Section 1: Background Information

1. As part of this study, we are interviewing recreational users to gain additional information about recreation opportunities on the Susitna. Would you like to participate in an interview?
   ___Yes
   ___No
2. If you answered yes to Question 1, please provide contact information for a phone interview.
   Phone Number: ___-___-____
3. Please specify your gender.
   ___Female ___ Male
4. What is your age?
   _____yrs
5. Are you an Alaska resident?
   ___Yes
   ___No
6. Are you using the Susitna as a member of a commercial (guided) trip or a non-commercial (private) trip?
   ____Commercial trip
   ____Non-Commercial trip
7. Please provide the start and end date for this trip on the Susitna River (MM/DD/YYYY):
   Start Date: ____/____/_____
   End Date: ____/____/_____
8. Do you typically check flow conditions prior to doing a trip?
   ___Yes
   ___No

   8a. If yes to the previous question, how do you obtain flow information prior to doing a trip?
      1. Internet gage for the river where I'll be recreating
      2. Internet gage for representative river
         a. Visually check a river staff gage
         b. Observe the river firsthand
         c. Contact friends with local knowledge
         d. Rely on weather patterns to predict flows
         e. Other (name) _____

9. Rank in numerical order (1 through 5) the importance of the following factors for determining if you do a river trip?

___suitable river flow conditions

___weather

___vacation time scheduled

___hunting/fishing season

___time with family/friends

10. Is this the first time you have participated in the Susitna River Recreation survey?

___Yes

___No

11. Prior to this trip, how many times have you recreated on the Susitna River (select one)?

___0 times

___1 time

___2 to 5 times

___6 to 10 times

___11 to 20 times

___More than 20 times

12. What type of craft did you use for this trip?

Non-Motorized

___Hardshell kayak

___Cataraft

___Inflatable kayak

___Raft

___Open canoe

___Closed-deck canoe

___Packraft

Motorized

___Jetboat

___Airboat

___Prop boat

___Aircraft (floats) on Susitna

___Aircraft (wheeled) on Susitna gravel bar

___Other (specify) _____ —

13. How many years have you been using this type of craft?

_____yrs

14. How would you rate your skill level with this type of craft?

___Novice

___ Intermediate

___ Advanced

___Expert

15. In general, how many days a year do you spend using this craft?

___1 day

___2-5 days

___6-10 days

___11-20 days

___21-30 days

___31-50 days

___>50 days

Susitna River Recreation and Access Study

Section 2: Information About this River Trip

16. What reach did you recreate on (select all that apply)?

___Reach 1 (Denali HWY Bridge to Fog Creek--RM 290 to 177)

___Reach 2 (Fog CK to Portage Ck including Devils Canyon--RM 177 to 149)

___Reach 3 (Portage CK to George Parks HWY--RM 149 to 86)

17. Some people come to the Susitna for recreation while others use it as a transportation corridor. What was the primary purpose of this trip on the Susitna? (select one)

___Scenic trip ___Camping

___Whitewater ___Transportation corridor

___Hunting ___Wilderness/solitude

___River floating ___Fishing

___Other (specify) _____

18. What were the secondary activities of this trip on the Susitna? (select all that apply)

___Scenic trip

___Whitewater

___Hunting

___River floating

___Fishing

___Camping

___Wilderness/solitude

___Transportation corridor

___Other (specify) _____

19. Did you use a commercial shuttle service to access the river at the put-in or the take-out?

Access	Yes	No
Put-in?		
Take-out?		

20. Please check the box that represents the transportation you used to reach the put-in.

Reach	Car/Truck	ATV	Motorized boat	Hike	Snowmobile	Train	Float Plane	Wheeled Plane	Helicopter
Reach 1									
Reach 2									
Reach 3									

21. Please check the box that represents the transportation used to exit the river at the take-out.

Reach	Car/Truck	ATV	Motorized boat	Hike	Snowmobile	Train	Float Plane	Wheeled Plane	Helicopter
Reach 1									
Reach 2									
Reach 3									

22. If you were on Reach 1, please place a check mark for the put-in and take-out location. Please identify approximate River Mile for put-in and take-out or Tributary floated or trail hiked to access mainstem Susitna.

Put-in	Take-out
___Float in from upstream of Denali Hwy	___Denali Highway Bridge
___Denali Highway Bridge	Pick-up by Air (specify RM_____)

Put-in	Take-out
Drop off by Air (specify RM_____)	___Wheeled Plane
___Wheeled Plane	___Float Plane
___Float Plane	___Helicopter
___Helicopter	___Hike out (specify RM_____)
___Hike in (specify RM_____)	___Float through to Reach 2
___Access via tributary float (specify stream name_____)	___Exit via tributary (specify stream name_____)

23. If you were on Reach 2, please place a check mark for the put-in and take-out location. Please identify approximate River Mile for put-in and take-out or Tributary floated or trail hiked to access mainstem Susitna.

Put-in	Take-out
___Float in from Reach 1	___Denali Highway Bridge
Drop off by Air (specify RM_____)	Pick-up by Air (specify RM_____)
___Wheeled Plane	___Wheeled Plane
___Float Plane	___Float Plane
___Helicopter	___Helicopter
___Hike in (specify RM_____)	___Hike out (specify RM_____)
___Access via tributary float (specify stream name_____)	___Float through to Reach 3
	___Exit via tributary (specify stream name_____)

24. If you were on Reach 3, please place a check mark for the put-in and take-out location. Please identify approximate River Mile for put-in and take-out or Tributary floated or trail hiked to access mainstem Susitna.

Put-in	**Take-out**
___Float in from Reach 2	___Float through to Reach to lower Susitna
Drop off by Air (specify RM_____)	Pick-up by Air (specify RM_____)
___Wheeled Plane	___Wheeled Plane
___Float Plane	___Float Plane
___Helicopter	___Helicopter
___Hike in (specify RM_____)	___Hike out (specify RM_____)
___Jet Boat or ___Train (specify location below)	___Jet Boat or ___Train (specify location below)
___Portage Creek	___Portage Creek
___Gold Creek	___Gold Creek
___Indian Creek	___Indian Creek
___Curry	___Curry
___Sherman	___Sherman
___Other (RM_____)	___Other (RM_____)
___Talkeetna	___Talkeetna
___Susitna Highway Bridge (aka Sunshine)	___Susitna Highway Bridge (aka Sunshine)
___Access via tributary float (specify stream name_____)	___Exit via tributary (specify stream name_____)

Susitna River Recreation and Access Study
Section 3: Evaluating this River Trip

25. Please rate the flows for this trip for each trip purpose that applies to your recreation activity. Consider your trip purpose, watercraft and skill level for each of the trip attributes. (check one for each row).

Trip purpose	1. Flow too low	2. Flow neither too low or too high	3. Flow too high	NA
River transportation corridor				
Motorized boating				
Non-motorized boating				
Multi-Day River Trip				
Whitewater boating				
Technical boating				
Powerful hydraulics				
Whitewater play areas				
Number of portages				
River Safety				
Flow Aesthetics				
Speed of travel				
River Camping				
Bank fishing				
River fishing				
Overall rating				

26. For the previous question, please identify the primary reach for which you were evaluating flows. (select all that apply)

___Reach 1 (Denali HWY Bridge to Fog Creek--RM 290 to 177)

___Reach 2 (Fog CK to Portage Ck including Devils Canyon--RM 177 to 149)

___Reach 3 (Portage CK to George Parks HWY--RM 149 to 86)

27. In general, would you prefer a flow that was lower, higher or about the same as this flow?

___Much lower flow

___Slightly lower flow

___About the same flow

___Higher flow

___Much higher flow

28. Would you return to boat the flow you just rated in the future?

___Yes

___No

29. Please estimate the number of hits, stops, boat drags and portages you had on this run.

Number of times I hit rocks and other obstacles (but did not stop):_____

Number of times I was stopped after hitting rocks or other obstacles (but did not have to get out of my boat to continue upstream or downstream):_____

Number of times I had to get out to drag or pull my boat off rocks or other obstacles:_____

I had to abandon trip due to boat running aground:_____

Number of times I had to portage around unnavigable sections, log jams, or other obstacles:_____

30. Was water clarity a contributing factor to the hits, stops, drags and boat running aground?

___Yes

___No

31. Was your trip length (upstream or downstream) reduced because flows were.....?

Flow	No	Yes	Not applicable
Flows too high			
Flows too low			

32. Reach 1 river recreation opportunities on the Susitna River are ....? Please respond for each row. Please respond "NA" if you don't know.

Region	NA	Below Average	Average	Above Average	Among the best
Compared to other rivers in a 200 mile radius					
Compared to other rivers in Alaska					
Compared to other rivers in the Pacific Northwest and Canada					
Compared to other rivers in the U.S.					

33. Reach 2 river recreation opportunities on the Susitna River are ....? Please respond for each row. Please respond "NA" if you don't know.

Region	NA	Below Average	Average	Above Average	Among the best
Compared to other rivers in a 200 mile radius					
Compared to other rivers in Alaska					
Compared to other rivers in the Pacific Northwest and Canada					
Compared to other rivers in the U.S.					

34. Reach 3 river recreation opportunities on the Susitna River are ....? Please respond for each row. Please respond "NA" if you don't know.

Region	NA	Below Average	Average	Above Average	Among the best
Compared to other rivers in a 200 mile radius					
Compared to other rivers in Alaska					
Compared to other rivers in the Pacific Northwest and Canada					
Compared to other rivers in the U.S.					

35. Are you likely to use the Susitna River more often if river recreation reaches are more accessible in the future? Please respond for each row.

Reach	Less	More	No Effect
Reach 1			
Reach 2			
Reach 3			

36. What is your opinion on Susitna River access? Please respond for each row.

Reach	No opinion	In favor of improvements to access river	Current access is sufficient	Oppose additional access
Reach 1				
Reach 2				
Reach 3				

37. Do you have other comments you would like to make about river recreation on the Susitna River?

Thank you for your participation! Please forward this survey link to individuals recreating on the Susitna River.

ATTACHMENT 12-2

RIVER RECREATION AND ACCESS 2013 EXECUTIVE INTERVIEW PROTOCOL (DRAFT)

Susitna-Watana Hydroelectric Project
River Recreation and Access 2013 Executive Interview Protocol (DRAFT)

(revised DRAFT 10/10/2012)

Introduction:

Hi I'm _____with OASIS ERM, a consulting firm located in Anchorage.

We are working for the Alaska Energy Authority on the Susitna-Watana Hydroelectric Project studying river recreation resources in the Susitna River area. We are contacting agencies, commercial providers, organizations, and individual users to get a better sense of river recreation use patterns on the Susitna River. We would like to conduct an interview with you. Is now a good time or can I schedule a time that is more convenient?

Before we start I would like to read you a brief description of the project.

This survey is part of a study to determine river recreation use patterns, access and flow preferences for three river reaches on the Susitna River. The Alaska Energy Authority is studying the feasibility of building the Susitna-Watana Hydroelectric Project. The proposed Project would be located on the Susitna River roughly 86 river miles upstream from Talkeetna and approximately 34 miles upstream of the Devils Canyon rapids. As currently envisioned, the project would include a roughly 750-foot tall dam located below Watana Creek and would result in a 23,546 acre, 42.5-mile long reservoir. Project construction and operation will alter river flows in the Susitna downstream. The dam and reservoir could alter downstream navigation and access. When completed, the project would produce nearly 50 percent of the Railbelt's electrical demand, or an annual average of 2,800,000 Megawatt Hours (MWh) of renewable energy generation.

This survey is designed to collect information on existing motorized and non-motorized river recreation opportunities using a variety of watercraft. The river has been divided into three distinct reaches: Reach 1, Denali Highway bridge to Fog Creek (RM 290 to 177); Reach 2, Fog Creek to Portage including Devils Canyon (RM 177 to 149); and Reach 3, Portage Creek to the George Parks Highway Bridge (RM 149 to 86).

1. First of all, can you please describe your business/organization/agency or individual?
    a. Areas of operation/activity relative to the three river recreation reaches
    b. Years in business/doing activity
    c. Services/tours provided
    d. Client / membership base – Anchorage? Fairbanks? Non-residents? Local area residents?
    e. Other information

2) Do you or your [organization/business/agency] have any [knowledge/or use] of river recreation activities on the three river recreation reaches on the Susitna River? Can you please provide me with some background on the following?

a) Types of river recreation use by river reach/location
b) Type of watercraft
c) Time of year the river is used
d) Frequency of use
e) Level of use (ex. heavy, light, etc.) –[look for hard numbers]
f) Any other information?

3) For your river recreation trips on the Susitna River what is the….?

a) Primary trip purpose
b) Secondary activities associated with trip
c) Type of watercraft
d) Trip length (days and miles)
e) Time of year the river is used
f) Frequency of use
g) For commercial providers--Client / membership base – Anchorage? Fairbanks? Non-residents? Local area residents?
h) Any other information?

4) Please describe the flow levels when you participate or observe river use for:

a) Transportation
b) Recreation
c) Whitewater

5) Relative to river flows, what flow related factors most influence your decision to initiate a trip on the Susitna River? Please elaborate for each factor that applies and identify high and low flow levels that trigger you to initiate vs. cancel a trip.

a) river safety
b) speed of travel
c) navigation
d) access to river camps
e) portages (lack thereof or access to river-level portages around difficult rapids)
f) whitewater opportunities: challenging rapids, powerful hydraulics, play spots
g) access for fixed wing aircraft on floats or wheels (specify)
h) Other

6) How do you estimate the flow levels in the River?

a) Internet
b) Direct observation
c) Communication with other river users
d) Other
e) Do not check flow levels

7) How and where do you access the river?

a) Access locations for respective river reaches
b) Modes of transportation to access each location
c) Approximate cost for each mode of transportation to the river

8) Are you noticing any trends in recreational use of the area?
   a) Seasonal Changes?
   b) Is use and interest growing?
   c) Lessening?
   d) About the same?
   e) Is the mix of recreational use changing?

9) What types of new infrastructure might help improve river access? Would you prefer river access not be improved? [If yes] Why?

10) Are there any other issues regarding river recreation use or access that we should be aware of?

11) Would you consider this area a unique setting for river recreation use in Alaska? Why or why not?