Weber Hydroelectric Project
FERC Project No. 1744

Preliminary Study Plan
Recreation

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For Public Review

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1.0 INTRODUCTION

PacifiCorp, a subsidiary of Berkshire Hathaway Energy, plans to file a new application for relicense of a major project, the Weber Hydroelectric Project (Project), Federal Energy Regulatory Commission (FERC or Commission) Project No. 1744, on the Weber River in Weber, Morgan, and Davis counties in Utah. The current license will expire on May 31, 2020. The Project has a generation capacity of 3.85 megawatts (MW) and is located partially on federal lands managed by the Wasatch-Cache National Forest, and partially on lands owned by the Union Pacific Railroad Company. PacifiCorp filed a Notice of Intent to File Application for New License (NOI) and a Pre-Application Document (PAD) to initiate FERC's Alternative Licensing Process (ALP) for the Project on May 29, 2015.

PacifiCorp proposes to conduct a Recreation Resource Study to meet FERC licensing requirements and address study requests from American Whitewater (AW), Trout Unlimited (TU), and the Utah Division of Wildlife Resources (UDWR). The study will include the following four phased components: 1) an inventory of existing recreation facilities and opportunities in the Project vicinity, 2) a recreation use and demand study, 3) a whitewater boating feasibility study, and 4) a recreation needs assessment.

2.0 PROJECT AREA

For the purposes of this document, the FERC Project Boundary (or Project Boundary) is defined as all lands and waters within the existing FERC Project Boundary for the Weber Hydroelectric Project No. 1744, as denoted on the project's Exhibit G. The **Project Area** is the area which contains all project features (encompassing the FERC Project Boundary as defined above), and which extends out for the purposes of characterization and analysis from the furthest edge of the Project Boundary, and across the river to the far riverbank (including the river regardless of which side of the river the project features are found), as shown in Figure 1.

The existing Project consists of:

(1) a 27-foot-high, 79-foot-long concrete diversion dam, having two radial gates approximately 29 feet wide, and a 35-foot-wide intake structure, for a total width of 114 feet, on the Weber River;

(2) a 9,107-foot-long, 5-foot to 6.3-foot diameter steel pipeline partially encased in concrete beginning at the intake and terminating at the powerhouse on the Weber River;

(3) a 3-foot by 18-foot non-operative fish passage structure (used however to pass the minimum flow through the calibrated slide gate opening);

(4) a powerhouse containing a generating unit with a rated capacity of 3,850 kilowatt (kW) operating under a head of 185 feet producing a 30-year average annual energy output of 16,932 megawatt-hours (MWh);

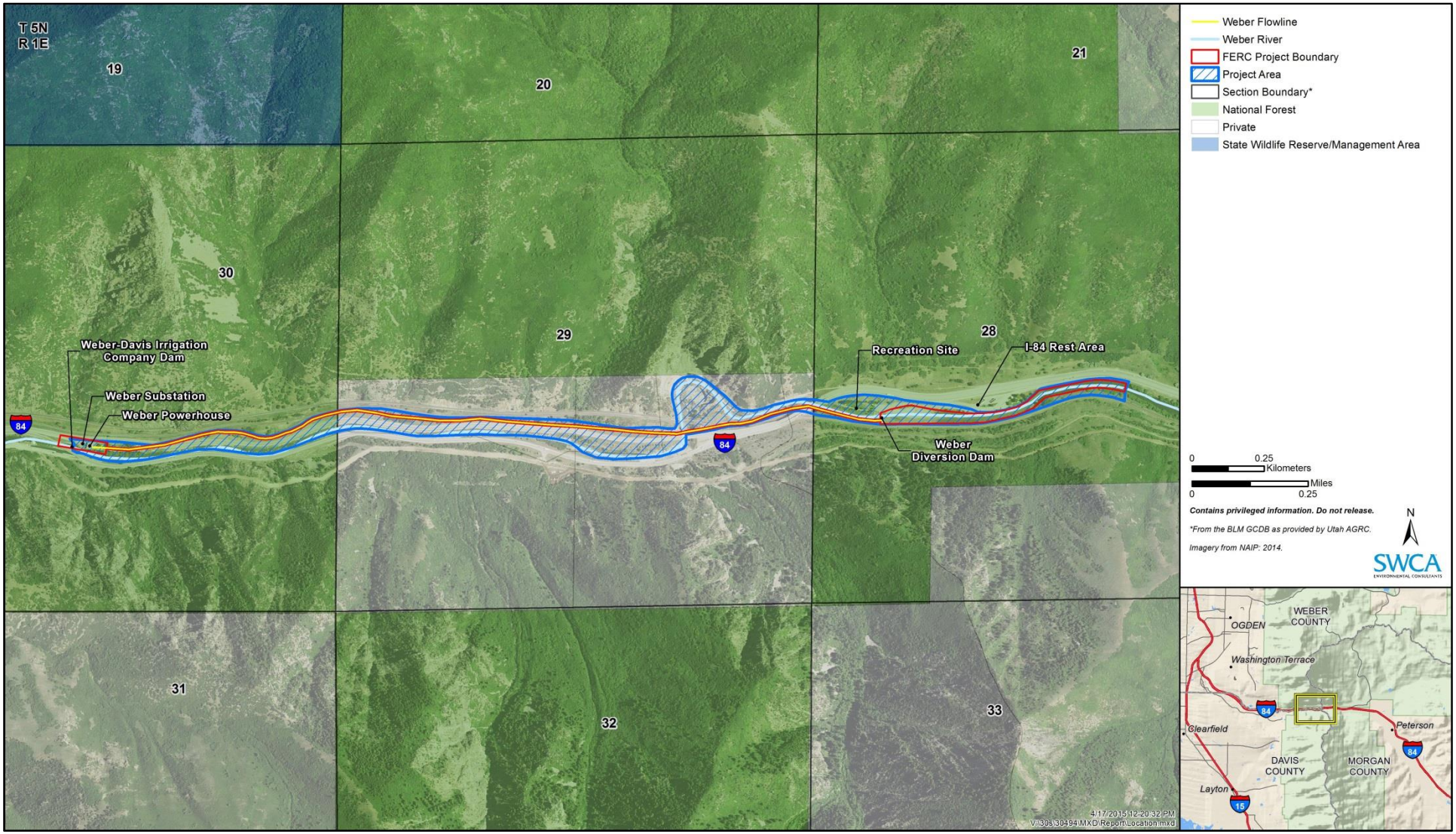

Figure 1: Weber Hydro Relicensing Project Location

(5) a discharging pipe returning turbine flows into the Weber River at the powerhouse; and,

(6) a 77-foot-long, 46-kilovolt (kV) transmission line which connects to the Weber substation.

3.0 PROPOSED RECREATION STUDY

FERC guidelines identify the requirement to assess recreation needs as part of a license application. The goal of this study is to compile existing data and develop additional information to support a new FERC license application for continued future operation of the Project. PacifiCorp proposes to conduct a Recreation Resource Study to meet FERC licensing requirements and address study requests received from stakeholders, specifically, AW, TU, and UDWR. The study will include the following three components: 1) an inventory of existing recreation facilities and opportunities in the Project vicinity, 2) a recreation use and demand study, 3) a discussion of whitewater boating use and opportunities in the Project area, and 4) a recreation needs assessment.

The study has two principal objectives:

- Characterize existing recreation opportunities and use levels (including those for whitewater boating) in the Project vicinity. Existing recreation facilities and opportunities (recreation resource supply) in the Project vicinity will be identified and mapped. Use of recreation facilities in and near the Project Study Area (recreation resource demand) including the existing day-use Weber Recreation Site will be summarized based on use data, if available, or estimates.

- Identify both existing and future recreation needs (including those for whitewater boating) related to the Project over the term of the new license. Existing needs will be identified based on current use data and agency consultation. An estimate of future demand for recreation opportunities at the Project will be made.

3.1 Existing Information

As stated in the PAD, The Project Area is located within Weber Canyon and is surrounded by the Uinta-Wasatch-Cache National Forest and Union Pacific Railroad (UPR) lands. The Uinta-Wasatch-Cache National Forest is adjacent to the highly populated and urbanized Wasatch Front, which stretches from Nephi to Brigham City and includes the state capital of Salt Lake City. The western mouth of Weber Canyon is approximately 8 miles from the Ogden city center and 30 miles north of Salt Lake City. The western edge of the Project Area is approximately 9 miles from the Ogden city center. Recreation is the dominant land use in the National Forest and includes activities such as camping, hiking, fishing, picnicking, biking, snowmobiling, and cross-country and downhill skiing.

Weber Canyon offers opportunities for fishing along the Weber River and limited (due to the lack of safe and legal access) hiking along the canyon slopes. Approximately 1,500 feet east

of the Weber Hydroelectric Project's diversion dam, on Interstate 84, the Utah Department of Transportation (UDOT) maintains a rest stop. The rest stop has restrooms, water, picnic tables, river access for handicapped persons, viewpoints, and irrigated landscaping. UDOT maintains another rest stop approximately 2 miles east of the Project Area. There is also an existing recreation site located on U.S. Forest Service (USFS) lands and operated by PacifiCorp in the Project Area immediately northwest of the Weber diversion dam that includes a small parking area, five picnic tables, a grassy area, fishing access to the river below the dam, fishing access to the forebay with a platform for disabled persons, and a portable toilet that is available on a seasonal basis. Using raw vehicle count data and the National Park Service's vehicle occupancy multiplier (2.4 during off-season and 2.7 during peak season) on a counter located for a year at the entrance road to the Weber diversion dam and associated recreation site, PacifiCorp estimated that approximately 19,454 people visited the recreation site in the Project Area during 2014, with 13,687 visitors during the off season and 5,767 visitors during the peak season (the Friday before Memorial Day through Labor Day). No information exists regarding specific uses of the area by the visitors noted above during 2014, although some may have just been curious as to where the entrance road led.

Extensive angling use occurs in the bypass reach downstream of the recreation site located at the Weber project dam. UDWR completed a creel survey in the Weber River from the mouth of Weber Canyon upstream to the confluence with Lost Creek. An estimated 66,606 angler trips were made during 2013 to this reach of the Weber River (Nadolski and Penne, 2013, in draft). While the creel survey did not quantify the number of anglers specifically using the bypass reach, it would be safe to assume that many of the estimated 19,454 visitors to the recreation site in 2014 were anglers.

While not designated as a Scenic Highway, Interstate 84 is popular for scenic driving, and at least one recreational loop drive crosses the Project Area. One of these recreational loop drives is popular for Ogden residents and involves taking Interstate 84 through Weber Canyon, past the Project Area at its east end, continuing north on Trappers Loop Road for 8 miles to Pineview Reservoir, and then returning to Ogden through Ogden Canyon via State Highway 39 along the Ogden River.

Although the Weber River overall offers some of the closest paddling to Wasatch Front communities, currently there are limited whitewater boating opportunities within the Project Area. In fact, the existing Class III-IV boatable section is relatively short and has limited safe and legal access due to the constraints on the Project Area of Interstate 84 and a non-Project irrigation diversion dam located immediately below the powerhouse. When water is available (generally when there is at least 650-700 cfs in the river above the diversion dam, assuming 320-365 cfs is being diverted into the project flowline), boaters can easily access to put in on the boatable reach immediately downstream of the existing Weber recreation site. However, after boating the 'Horseshoe', aka., 'Scrambled Eggs' section of the bypassed reach, boaters must either carry their boats back upstream along the old highway and back to the put-in, or continue downstream and portage the non-Project diversion located immediately below the powerhouse. This diversion is owned by the Weber-Davis Irrigation Company, and it commonly takes most or all of the flow in the Weber River at that point, limiting options to continue downstream. This reach of the river is further constrained by being located between the two lanes of I-84, and the only access route to this area is the road to the Weber-Davis

irrigation diversion dam, which is gated and locked downstream of the potential portage area. Thus, although there is a short desirable boatable reach in the Project Area, accessing this section safely is problematic, and in fact the only other access to the only boatable reach (via the old highway) has been gated and locked by UDOT to prevent recreationists from using a freeway pullout that is considered unsafe due to the lack of acceleration and deceleration lanes. Further, due to geomorphology constraints, there is no room for acceleration or deceleration lanes in the Project Area. As a result of these factors, existing whitewater boating opportunities within the Project Area are constrained by the limited safe or legal egress routes (carrying back up to the put-in) for anyone putting in on the river at the recreation site.

Other than those opportunities described above, other recreation opportunities are limited in the Project Area due to the existence of Interstate 84, the Union Pacific Railroad, two pipelines, a fiber optic line, steep terrain, and limited safe and legal access. The potential for trails is limited due both to safe access limitations and because users would have to traverse either the channelized river (and cross under the existing I-84 bridge) or steep canyon walls on either National Forest or private UPR lands.

3.2 Nexus to Project

The Project has potential direct and indirect effects on recreation resources within and adjacent to the Project boundary and in the affected reach of the river downstream of the dam. These effects include providing public access to natural open space areas within and surrounding the Project for a variety of recreation activities, and access to and use of the river, forebay and tailrace for recreation purposes. PacifiCorp has developed and operates the existing Weber Recreation Site. User-defined trails from the Weber Recreation Site to the old highway to the west (crossing under I-84) allow unrecorded use of National Forest lands during all seasons, most commonly for anglers. The forebay access road is used in all seasons to access the river both above and below the recreation site, again, most commonly for angling. The existing site is used for picknicking, most commonly in late spring and summer, as the low sun angle (due to the narrow canyon walls) creates relatively cold and windy winter-like conditions that tend to discourage many but the most cold-hardy users.

Study results will help inform PacifiCorp, USFS, AW, TU, and other stakeholders by synthesizing the information collected during the recreation studies and defining existing and future recreation needs that can reasonably be addressed by the Project and that may be considered for implementation during a new license term.

3.3 Study Area

The Study Area will include the Project Area as described above and shown on Figure 1 along the Weber River from the diversion dam to the powerhouse, including lands owned by the USFS or Union Pacific Railroad, as described in the PAD. Note that the Study Area as defined includes the riverbank across from the powerhouse that will be looked at as a potential boater take-out site (this area is within the existing FERC Project Boundary and is covered by PacifiCorp's USFS Special Use Permit for the Project, but is also located at the

terminus of the access road leading to the Weber-Davis Canal Company's intake gates and related infrastructure).

3.4 Methods

This section provides a description of the proposed study methodology, including data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate field season(s) and the duration.

The study methods involve the following four subtasks described below:

- Recreation Supply Analysis that will inventory recreation facilities and use areas in the Project Area and their condition;

- Recreation Use and Demand Analysis that will identify existing recreational demand in the Project area and estimate future demand for various activities of interest;

- Whitewater boating feasibility study that will evaluate whitewater boating use on the Weber River and possible enhancement measures for whitewater boating opportunities within the Project's bypassed reach;

- Recreation Needs Analysis that will synthesize, compile and analyze the results of all of the above analyses into one synthesis study report. This analysis will identify existing and future recreation needs over the potential term of the new license (30 to 50 years).

The study will look at Project-specific recreation supply and capacity, demand, and current and future needs in the context of the local supply and projected demand to determine if the existing Project recreation facilities are fulfilling their intended purpose and meeting recreation needs at the Project. The results of this analysis will be directly used in the development of recreation resource enhancement measures that will be proposed in the license application.

3.4.1 Recreation Supply Analysis

In this subtask, existing recreation inventory information will be reviewed, compiled and updated as needed. This analysis will describe the inventory (i.e., number of picnic sites, parking capacity, etc.) and condition status of existing Project recreation facilities, including compliance with current and proposed Americans with Disabilities Act (ADA) Accessibility Guidelines, as amended. Project recreation facilities will be observed in the field to determine their current condition. Maintenance practices of the facilities will be identified and evaluated. Points of public access and trails in the Project area will be identified. Existing maps and features will be updated as necessary. To provide additional local context, inventory information for recreation facilities in the vicinity will be summarized based on information obtained from the USFS and other entities such as state parks, Bureau of Reclamation, and county facilities.

This subtask will also inventory Project lands for sites that are used for dispersed recreational activities. The presence of user-defined trails and fire-rings, compacted or eroded soil, trampled vegetation, and litter/sanitary problems on Project lands will be used to help identify the occurrence of dispersed recreational use. These features will be mapped and described.

3.4.2 Recreation Use and Demand Analysis

This subtask will identify the visitor demand for recreation activities that are pertinent to the Project and how this demand will be anticipated to change in the future over the term of the new license. Information will be obtained from various sources, such as the State Comprehensive Outdoor Recreation Plan (SCORP) and USFS, to help determine predicted changes in anticipated demand for outdoor recreation activities associated with the Project. This information will be combined with updated national and regional demand forecasts from other recent publications.

Recreation use data for the Project will be derived from the *2015 FERC form-80 data*. To provide additional local context, use of other local recreation areas will be summarized based on use data if available or estimates. Recreation use will be estimated in recreation visits, recreation visitor days (RVDs), and site occupancy rate as appropriate. A recreation visit is defined as a visit by one person to a recreation area for any portion of a single day. An RVD is defined as 12 hours of use by any combination of users to a recreation area. Site occupancy rate will be reported as a percentage of total sites occupied at a facility for a particular period of time.

A recreation visitor survey may be conducted at the Weber Recreation Site through the use of a questionnaire to assess the attitudes, preferences and characteristics of the primary user group. The survey will potentially be distributed to site users via direct contact. Weber Site users will be asked to fill out the questionnaire either on-site or after their visit and return it to PacifiCorp via email. The following topics could be addressed on the survey form:

- Socio-demographic characteristics (age, gender, etc);
- Visitor activities (general and primary);
- Trip characteristics (group size, length of trip and other sites visited, etc);
- Crowding and capacity issues;
- Opinion of adequacy/condition of facilities;
- Location of primary residence (zip code);•

The visitor survey will be patterned after surveys routinely administered by researchers for similar hydroelectric projects. Additional questions may be added or modified to address Project-specific needs and issues. However, the number of questions asked will need to be limited so that the questionnaire does not become too long therefore reducing the response rate.

Use (by unrecorded National Forest visitors) of user-defined trails leading from the developed Weber Site to the user-defined trail west to the old highway may also be estimated from Memorial Day through Labor Day (late May-early September). A beam traffic counter

could be hidden and placed near the intersection of the developed Weber Site path and the user defined trail. The beam counter will be calibrated for pedestrian recording and the beam set to minimize triggering by wildlife and moving vegetation. Data would be downloaded monthly and the counter reset. The monthly total of counter hits would be divided by two to eliminate double counting due to users coming and going.

Year-round use of the forebay access road just beyond its intersection with the UDOT rest area was estimated using a traffic counter and standard occupancy estimates in 2015. This information may be further refined and categorized for this Study Plan.

3.4.3 Whitewater Boating Feasibility Study

To conduct the study, PacifiCorp proposes to follow the Level 1 methodologies summarized in "Flows and Recreation: A Guide to Studies for River Professionals" (Whittaker, Shelby and Gangemi 2005).

The study methods involve the following three subtasks described below.

(1) Whitewater Boating Hydrology Analysis that will study the effects of flow-dependent recreational boating opportunities on the river segments within the Project Study Area.

(2) Whitewater Boating Use and Demand Analysis that will identify existing recreational demand in the Project Study Area and estimate future demand for whitewater boating activity.

(3) Whitewater Boating Needs Analysis that will compile, synthesize, and analyze the results of the above analyses into one synthesis study report. This analysis will identify existing and future whitewater boating needs over the potential term of the new license (30 to 50 years).

3.4.3.1 Whitewater Boating Hydrology Analysis

PacifiCorp will describe the existing hydrology of the Project Study Area and analyze the influence of fluctuating river flows on boating opportunities within the bypass reach. PacifiCorp will use relevant hydrology data provided by the U.S. Geological Survey (USGS) database from USGS gauging station 10136500, located at the Gateway Weber River site approximely one mile upstream of the Project diversion, as well as PacifiCorp and irrigation/ water conservancy district operations records, as appropriate, to characterize the flows in the Project Area. PacifiCorp will describe how Project operations affect the hourly, daily, and monthly flows and potential recreation opportunities within the bypassed reach. This summary of information may also include interviews with people knowledgeable about the river system and boating opportunities in the reach.

This subtask will also summarize recreation-relevant hydrology, describe the Project Study Area reach and its usability based on topographic analysis, and evaluate any existing and

potential operational constraints on existing or alternative flow regimes. These features will be mapped and/or described.

3.4.3.2 Whitewater Boating Use and Demand Analysis

This subtask will focus on identifying and surveying stakeholders and focus groups with an interest in whitewater resources affected by the Project. A stakeholder and focus group meeting will be conducted in March of 2016. The purpose of this meeting is to gain first-hand information regarding recreation flows, boating access, and potential boating needs within the bypassed reach. The meeting will include a presentation on the results of the hydrology analysis and existing information on recreation access and known boatable flows. This discussion will provide an opportunity for stakeholders to gain a deeper understanding of the operational dynamics of the Project and how the Project impacts Weber River flows. PacifiCorp will query attendees regarding their desire for a site visit. PacifiCorp will schedule a subsequent site visit, if desired by attendees.

PacifiCorp will conduct the following activities to complete this subtask.

- Conduct a formal survey of whitewater boaters, user groups and others to determine the types and locations of whitewater boating activity occurring within the bypassed reach of the Weber River and a range of conditions (including flows) generally acceptable to whitewater boaters with various skill levels (see Appendix A for a sample survey). The survey will include interviews with whitewater boaters and experts familiar with whitewater resources in the Project Area. American Whitewater will be asked to review and comment on the survey questionnaire.

- Based on surveys/interviews with whitewater boaters, identify a range of flows that are acceptable or optimal for whitewater boating in the Study Area and indicate what level of challenge these flows offer based on the International Scale of River Difficulty (Class I – Class VI). Additionally, assess the Project's bypassed reach including commercial and non-commercial use, trip length, and seasonal considerations.

- Identify, map, and describe any existing and potential sites for access (put-in and take-out sites) and portage along the Study Area, as well as confirm USFS land ownership of the areas that could be used to access the river.

- For the study reach, briefly describe the river environment and existing and potential boating activity that could occur at a range of flows. To the extent practical, estimate current and future use that might be expected for the whitewater boating season.

- Identify and describe any present whitewater boating use in nearby waterways.

- If study results warrant, develop recommendations for enhancing whitewater boating opportunities at the Project.

3.4.3.3 Whitewater Boating Needs Analysis

This subtask will provide a synthesis of the previous two study components. The synthesis report will summarize the description of the optimum hydrologic recreational boating flows, and Project effects on recreation flows, recreation access to the Project, and potential improvements and information needs to consider as part of the relicensing process. In addition, opportunities for meeting existing and future needs through the scheduling of boatable flows during the typical boating season (generally mid-March—June, when flows exceed 650 cfs at the Gateway USGS gage) in the Project bypassed reach will be examined. The need to advance to Level 2 studies is predicated on answers to the following questions, which will be addressed in the analysis:

- Are there flow-dependent recreation opportunities, including safe and legal access and egress, available on the Weber River?

- Are flow-dependent opportunities affected by Project operations?

- Are flow-dependent recreation opportunities "important" relative to other resources or foregone generation?

- Does Level 1 information precisely define flow ranges?

3.4.4 Recreation Needs Analysis

This subtask will provide a synthesis of the previous study results and analysis of Project-related recreation needs and opportunities over the term of the new license. In this analysis, existing recreation needs will be identified and future needs will be projected for increments of time (e.g., 10-year periods) over a 50-year timeframe. Recreation needs will be assessed in terms of how existing facilities meet those needs and projected future needs. In addition, opportunities for meeting existing and future needs through the development of future recreation facilities in the Project Area will be examined. Recreation needs identified in the Project Area will be coordinated with other resource specialists to help identify and minimize potential resource conflicts. Specific components of this analysis will include:

- An analysis of recreation needs at the Project over time (i.e., estimate of the number of total picnic sites, parking spaces, access points, trails, etc. needed in the future based on demand); and

- An identification of developed and dispersed recreation needs at the Project, both existing and future (in 10-year increments). These needs will be put in the context of local opportunities available and what can reasonably be addressed by the Project.

3.4.5 Reporting

The initial study report will be made available for 30-day stakeholder review and comment by fall of 2016. The initial study report will describe the study methods and findings, field survey methods, schedule, and results. Maps will include the Study Area, major Project

features (e.g. powerhouse, roads, dam etc), survey routes, and recreation feature locations, with unique identification labels for each. The report will present the results of the recreation supply, use and demand analysis, discuss any potential Project effects on recreation opportunities, and provide possible mitigation measures. The study report will also include initial information regarding whether an additional year of phased study (Level 2, as described above) is warranted.

3.5 Level of Effort and Cost

The anticipated level of effort and estimated cost of the work as proposed in this Study Plan is $75,000 to $150,000, depending on the phased level of required studies. The cost estimate covers time to review existing data sources, obtain required new data, interview knowledgeable boaters, evaluate current and future use, describe any enhancement opportunities, and prepare maps and reports.

4.0 REFERENCES

Whittaker, D., Shelby, B., & Gangemi, J. (2005). Flows and Recreation: A Guide to Studies for River Professionals.

Appendix A

Sample Whitewater Boating Interview Survey – South Fork Rogue River

South Fork Rogue River
Whitewater Boating Interview Survey

South Fork Rogue River from Prospect No. 3 Diversion Dam at River Mile (RM) 10.5 to Lost Creek Lake (Confluence with North Fork Rogue River) RM 0.0.

Introductory Narrative

"This survey is part of a study to collect and organize information about whitewater recreation opportunities on the South Fork Rogue River from RM 10.5 (Prospect No. 3 diversion dam) through the known "put-in" at RM 7.0 (Butte Falls Prospect Bridge) to RM 0.0 (confluence of the North Fork and South Fork Rogue Rivers).

PacifiCorp maintains a water right of 150 cubic feet per second (cfs) from the South Fork Rogue River for the purpose of power generation via the Prospect No.3 Hydroelectric Project (Project). This study focuses on the water available in the South Fork Rogue River downstream of the Project. Inflows of greater than 250 cfs to the Project occur approximately 18 percent of the time, or 66 days per year. Flows of this magnitude are likely to be encountered during the months of April, May, or June. In addition, inflows of greater than 400 cfs occur approximately six percent of the time, or 21 days per year, at which time flows would be at least 250 cfs in the bypassed reach even with the maximum Project diversion of 150 cfs.

Your participation in this survey is important to the study's success. As you complete the survey, base your responses on your direct experience with the South Fork Rogue rather than guidebooks, group opinions or historic flow preferences. Also, encourage fellow boaters to participate in this study. If you have friends that paddle the South Fork Rogue, refer them to Bob Roach (541-776-5433; robert.roach@pacificorp.com). The more responses we receive the more useful our results will be. Thank you for taking the time to complete this short survey, your input is greatly appreciated. PacifiCorp will publish the results of this study" in a technical report that will be filed with the Federal Energy Regulatory Commission.

1. Your First and Last Name (for data sorting purposes only):

_____

2. What is your gender?

___ Male ___ Female

3. What is your age?

Age: _____

4. How many times have you boated this section of the South Fork Rogue River to the North Fork Rogue River confluence?

___ 0 times

___ 1 to 5 times

___ 6 to 10 times

___ 11 to 20 times

___ More than 20 times

5. Where did you put in?

___ Butte-Falls Prospect Bridge

___ Other, Please list _____

6. What range of flows (cfs) were present on this run when you boated?

Flow (cfs): ____

Based on: ____ Boater Estimate

____ Gauge Reading, name of gauge _____

____ Other, explain _____

7. If you chose not to boat this run, what factors influenced your decision?

8. What type of craft did you use?

___ Hardshell Kayak ___ Cataraft

___Inflatable kayak ___ Raft

___Closed-deck canoe ___ Open canoe with flotation

___ Other, Please list _____

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

Years: ___

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

___ Novice (comfortable running Class II)

___ Intermediate (comfortable running Class III)

___ Advanced (comfortable running Class IV)

___ Expert (comfortable running Class V)

11. In general, how many days a year do you spend whitewater boating?

___ 1 ___ 21-30

___ 2-5 ___ 31-50

___ 6-10 ___>50

___ 11-20

12. In general, how would you rate the whitewater difficulty on this reach?

___ Class I ___ Class V

___ Class II ___ Class VI

___ Class III ___ Not sure

___ Class IV

13. On an average boating trip down this reach 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 downstream): _____

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

Number of times I had to **portage** around unrunnable rapids,

log jams, or other obstacles: _____

14. For comparative purposes, please estimate the quality of the following flows in this reach for your craft and skill level. In making your evaluations, consider all the flow dependent characteristics that contribute to a high quality trip (WW challenge, WW play, safety, aesthetics, and length of run). If you do not feel comfortable evaluating a flow you have not seen, leave that row blank.

	1.Totally unacceptable	2. Moderately unacceptable	3. Marginal	4. Moderately acceptable	5. Totally acceptable
85 cfs	___	___	___	___	___
100 cfs	___	___	___	___	___
150 cfs	___	___	___	___	___
200 cfs	___	___	___	___	___
250 cfs	___	___	___	___	___
300 cfs	___	___	___	___	___
350 cfs	___	___	___	___	___
400 cfs	___	___	___	___	___
450 cfs	___	___	___	___	___
500 cfs	___	___	___	___	___

From a recreational perspective what is the **minimum acceptable flow** for this run? The minimum acceptable is the lowest flow you would return to boat, not the minimum flow necessary to navigate. _____

For you, what is the **optimum flow** for this run? _____

15. Boating opportunities on the South Fork Rogue River are....? (choose one per row)

	1. Worse than average	2. Average	3. Better than average	4. Excellent	5. Among the very best
Compared to other rivers within a one-hour drive:	___	___	___	___	___
Compared to other rivers in Oregon:	___	___	___	___	___
Compared to other rivers in the Northwest:	___	___	___	___	___
Compared to other rivers in the USA:	___	___	___	___	___

16. Did you use the access area adjacent to the Butte-Falls Prospect Bridge as a...

___ Take-out

___ Put-in

17. For paddlers launching downstream of the Butte-Falls Prospect Bridge River section, please describe your put-in location, take-out location, approximate river mile, and river right or river left.

Put-in location: _____

Take-out location: _____

River Mile: _____

River Right: ___

River Left: ___

18. Do you have other comments you would like to make about the South Fork Rogue River or general comments about flows for paddlers launching downstream of the Butte-Falls Prospect Bridge River section, please describe your put-in location, take-out location, approximate river mile, and river right or river left?