

**RA-05 LOWER SKAGIT RIVER
RECREATION FLOW STUDY
INTERIM REPORT**

**SKAGIT RIVER HYDROELECTRIC PROJECT
FERC NO. 553**

Seattle City Light

**Prepared by:
River Science Institute, Inc.**

**March 2022
Initial Study Report**

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List of Acronyms and Abbreviations

cfs.....	cubic feet per second
City Light.....	Seattle City Light
FERC.....	Federal Energy Regulatory Commission
IK	inflatable kayak
ISR	Initial Study Report
LP.....	licensing participant
MP.....	milepost
NPS	National Park Service
PRM.....	Project River Mile
Project	Skagit River Hydroelectric Project
RLNRA.....	Ross Lake National Recreation Area
RSP	Revised Study Plan
SPD	Study Plan Determination
SR.....	State Route
SRBEIC.....	Skagit River Bald Eagle Interpretive Center
SUP	stand-up paddleboard
USFS	U.S. Forest Service
USR.....	Updated Study Report

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1.0 INTRODUCTION

The RA-05 Lower Skagit River Recreation Flow Study (Recreation Flow Study) is being conducted in support of the relicensing of the Skagit River Hydroelectric Project (Project), Federal Energy Regulatory Commission (FERC) No. 553, as identified in the Revised Study Plan (RSP) submitted by Seattle City Light (City Light) on April 7, 2021 (City Light 2021a). On June 9, 2021, City Light filed a “Notice of Certain Agreements on Study Plans for the Skagit Relicensing” (June 9, 2021 Notice)¹ that detailed additional modifications to the RSP agreed to between City Light and supporting licensing participants (LP) (which include the Swinomish Indian Tribal Community, Upper Skagit Indian Tribe, National Marine Fisheries Service, National Park Service [NPS], U.S. Fish and Wildlife Service, Washington State Department of Ecology, and Washington Department of Fish and Wildlife). The June 9, 2021 Notice proposed no changes to the Recreation Flow Study as described in the RSP.

In its July 16, 2021 Study Plan Determination (SPD), FERC approved the Recreation Flow Study without modification.

This interim report on the 2021 study efforts is being filed with FERC as part of City Light’s Initial Study Report (ISR). City Light will perform additional work for this study in 2022 and include a report in the Updated Study Report (USR) in March 2023.

¹ Referred to by FERC in its July 16, 2021 Study Plan Determination as the “updated RSP.”

2.0 STUDY GOALS AND OBJECTIVES

The goal of this study is to document the recreation flow needs in the Skagit River from Goodell Creek Boat Launch to the Howard Miller Steelhead Park near Rockport to understand how current Project conditions may influence recreation flow opportunities, to inform future operational scenarios that may include a range of instream flow measures in a future license, and to assess potential constraints such as fish and aquatic resource protection measures, Project operations, or safety concerns. The study is not intended to estimate commercial or non-commercial use numbers on the Skagit River.

The study has the following objectives:

- Describe the recreation boating opportunity in the Skagit River from Goodell Creek Boat Launch to the Howard Miller Steelhead Park near Rockport, including delineating the respective recreation segments, access locations, whitewater difficulty, character of rapids, number of portages, watercraft types, and uniqueness of opportunity;
- Determine the range of boatable flows for watercraft types for the distinct recreation segments; and
- Quantify the frequency, timing, duration, magnitude, and rate of change of flows downstream of the Gorge Powerhouse within the boating flow range.

3.0 STUDY AREA

The study area is the 25.2-mile reach of the Skagit River from Goodell Creek Boat Launch to Howard Miller Steelhead Park. The study area was divided into three distinct recreation segments: Goodell Creek to Copper Creek, Copper Creek to Marblemount Boat Launch, and Marblemount Boat Launch to Howard Miller Steelhead Park. Recreation boaters may combine segments or further divide segments using both formal and informal access points along the river.

A map of the study area is provided in Figure 3.0-1.

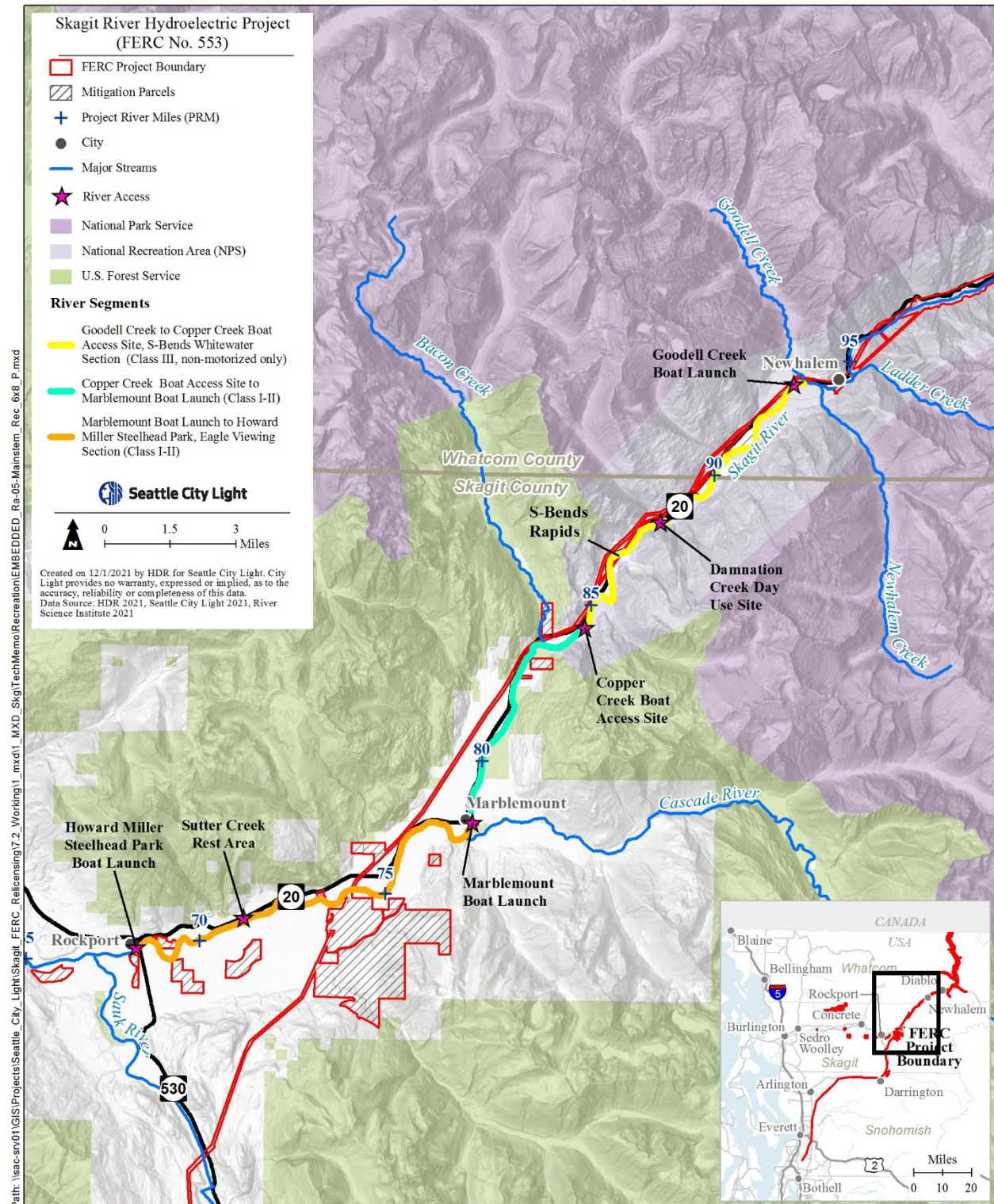


Figure 3.0-1. River segments for the Recreation Flow Study.

4.0 METHODS

The study methods consist of the following four tasks: (1) literature review; (2) boater survey and structured interviews; (3) hydrology analysis; and (4) portage trail assessment at S-Bends. Each of these tasks is described below.

4.1 Literature Review

Existing information sources were reviewed describing the river recreation opportunities and boatable recreation flows on this reach of the Skagit River. The literature review included whitewater guidebooks, magazine publications, electronic guidebooks available online, and internet searches for trip reports. A table summarizing the recreation segments on this reach of the Skagit River was compiled. The table includes the name of the recreation segment, put-in and take-out location, length, and gradient (feet per mile). Responses obtained from the recreation flow survey and structured interviews on typical watercraft, whitewater difficulty, and season(s) of use will be added to the table in the report to be included in the USR.

4.2 Boat Survey (Recreation Flow Survey) and Structured Interviews

This study included an internet-based survey focused on recreation flows as recommended by American Whitewater. The survey questions and format are similar to surveys implemented for other FERC relicensing proceedings and described in Whittaker et al. 1993 and Whittaker et al. 2005. The survey was designed to obtain boatable recreation flows for respective watercraft types for the three distinct river segments. In addition, the survey included questions specific to the designated river access sites and facilities, including Goodell Creek Boat Launch, Copper Creek Boat Access Site, Damnation Creek Boat-in Picnic Site, and Marblemount Boat Launch. The questions focused on visitor preferences and uses related to these river access sites and were consistent with similar questions in City Light's RA-01 Recreation Use and Facility Assessment survey instrument (City Light 2022).

The survey went live on November 9, 2021. Links to the survey were published on the Skagit River Hydroelectric Project relicensing website and forwarded to all LPs. The survey link will be forwarded to river recreation user groups. A list of groups receiving the link will be included in the report included in the USR. The survey will remain open until September 2022.

Information about the river recreation survey was posted at river access locations and other key locations. The information signs include a link to the electronic survey and a QR code for smart phone users to access the survey.

Structured interviews will be conducted with individuals in the recreation boating community with knowledge of the river segments on this reach of the Skagit River. The interviews will focus on watercraft types, opinions on whitewater difficulty, estimated range of boatable flows for respective watercraft types, commercial and non-commercial use patterns, and identifying other individuals with knowledge of whitewater boating on these river segments. The boating community will assist City Light in the selection of individuals for the structured interviews. The recreation flow survey will allow respondents to nominate themselves for a structured interview.

4.3 Hydrology Analysis

Analysis of the hydrology of the Skagit River downstream of Gorge Powerhouse will be conducted using the range of boatable recreation flows for respective watercraft documented through the internet survey and structured interviews. Analysis will include the annual frequency, timing, duration, magnitude, and rate of change. Tributary inputs will be considered in the analysis for respective recreation segments where discharge data is available.

4.4 S-Bends Portage Assessment

City Light evaluated the portage trail at the S Bends Rapid starting at Project River Mile (PRM) 87.2 in the river segment from the Goodell Creek Boat Launch to Copper Creek as requested by American Whitewater. The evaluation included an assessment of current conditions of the portage trail, trail width relative to watercraft being portaged, tread surface, and access to the portage trail from the river. Trail features were documented with photographs, including areas of potential resource degradation.

5.0 PRELIMINARY RESULTS

The study results include progress updates on the following: (1) description of the recreation boating opportunities based on literature review and direct observations of the three river segments; (2) description of the designated river access points in each river segment; (3) an evaluation of conditions and use patterns at the S-Bends portage trail; (4) recreation flow survey design and questions; (5) structured interview questions; and (6) approach for analyzing hydrology data relevant to recreation flow preferences.

5.1 Literature Review

A review of existing information sources describing the river recreation opportunities and boatable recreation flows on the three river segments of the Skagit River was initiated in the summer of 2021. Information sources included whitewater guidebooks, online guidebooks, and internet searches for trip reports. A site visit was conducted in July 2021 to supplement the literature review with direct observations of the river segments, facilities, and river recreation opportunities. Table 5.1-1 summarizes the initial results of the literature review and site visit for the river recreation opportunities on the three segments of the Skagit River. Information on watercraft types, season of use, and range of flows will be updated in Table 5.1-1 as new information becomes available through analysis of the recreation flow survey responses and structured interviews.

The three Skagit River segments included in this study have been identified in whole or part in whitewater guidebooks and maps. Wolf Bauer, founder of the Washington Kayak Club, included all three river segments in his 1965 map of Washington state whitewater opportunities (American Whitewater 2021a). Guidebook author Douglass North included a detailed map, flow recommendations, and description of the river segment from Goodell Creek to Copper Creek in his whitewater guidebook titled Washington Whitewater, the 34 Best Whitewater Rivers (1992). Jeff and Tonya Bennett's guidebook, A Guide to the Whitewater Rivers of Washington, Over 320 Trips for Raft, Kayak, and Canoe (Bennett, n.d.), includes a detailed description for the Goodell Creek to Copper Creek segment and the Marblemount to Rockport (aka Howard Miller Steelhead Park) river segment. American Whitewater provides a description, map, link to flow information, and trip reports for the river segments from Goodell Creek to Copper Creek (American Whitewater 2021b) and from Copper Creek to Howard Miller Steelhead Park (American Whitewater 2021c).

From October 2007 to March 2008, American Whitewater conducted an internet-based survey to assess the quality and popularity of rivers in the North Cascades (American Whitewater 2021d). The survey results included a list of the top 25 most popular rivers based on survey responses. The river segment from Goodell Creek Boat Launch to Copper Creek Boat Access Site was ranked the 12th most popular run in the North Cascades out of 150 river segments listed in the survey. The river segment from Copper Creek Boat Access Site to Howard Miller Steelhead Park, combining two of the river segments delineated in this study, was ranked 16th most popular.

5.1.1 Goodell Creek to Copper Creek River Segment

The 8.7-mile river segment from Goodell Creek to Copper Creek is described as an excellent river section for advanced beginners to practice paddling skills (American Whitewater 2021b). The wave train in S-Bends Rapid is the largest hydraulic feature and is rated Class III whitewater

difficulty (Figure 5.1-1). This segment of the river is suitable for inflatable and hard-sided watercraft.

Goodell Creek Boat Launch serves as the put-in location. Facilities at the put-in include parking, restrooms, an information sign, and picnic tables (Figure 5.1-2). The launch site does not include a ramp with direct access to the river for trailered vehicles. Boats must be carried to the river from the unloading zone (Figure 5.1-3). Goodell Creek Campground is adjacent to the boat launch.

Damnation Creek Boat-in Picnic Site is a day use site adjacent to the river 4.9-miles downstream from the Goodell Creek put-in. The site is accessible from the river only, providing an intimate experience in the shaded northwest forest buffering the sounds of the State Route (SR) 20 corridor. The site contains picnic tables (Figure 5.1-4) and restroom.

The Copper Creek Boat Access Site, 8.7-miles from the Goodell Creek put-in, is typically used as the take-out for this river segment. The site includes a restroom, gravel boat ramp, and circular drive for efficient traffic flow of trailered vehicles.

The Goodell Creek to Copper Creek river segment is located entirely within the Ross Lake National Recreation Area (RLNRA) boundary. All access and day use sites along with associated facilities are managed by the NPS. This area is designated as the Skagit River Zone in the RLNRA General Management Plan (NPS 2012). No overnight camping is allowed on the Skagit River between the Goodell Creek Boat Launch and the RLNRA downstream boundary. Management focus for this zone in the RLNRA is non-motorized river-based recreation. The public is not allowed to use motorized watercraft on this segment of the river.

Table 5.1-1. River recreation characteristics for three segments of Skagit River.

River Segment	Put-in	Take-out	Length (miles)	Gradient (feet/mile)	Whitewater Difficulty ¹	Watercraft Type ²	Typical Season of Use	Guidebook Flow Range ³ (cfs)	Information Source
Goodell Creek to Copper Creek	Goodell Creek Boat Launch	Copper Creek Boat Access Site	8.7	12	II-III	Non-motorized segment: kayaks, canoes, IKs, SUPs, rafts, dories	TBD based on survey results and interviews (refer to Section 4.2)	1,500-15,000	Bennett, ⁴ American Whitewater ⁵
Copper Creek to Marblemount	Copper Creek Boat Access Site	Marblemount Boat Launch	5.9	10	I-II	Kayaks, canoes, IKs, SUPs, rafts, dories		1,500-12,000	American Whitewater ⁶
Marblemount to Rockport	Marblemount Boat Launch	Howard Miller Steelhead Park	10.6	8	I-II	Kayaks, canoes, IKs, SUPs, rafts, dories, motorized boats		2,000-7,000	Bennett ⁴

1 International scale of whitewater difficulty.

2 IK = inflatable kayak; SUP = stand-up paddleboard.

3 Flow range based on literature review. Flow range will be reported in the USR using information collected in recreation flow survey and structured interviews.

4 Bennett and Bennett, n.d.

5 American Whitewater 2021b.

6 American Whitewater 2021c.



Figure 5.1-1. Rafters navigating the wave train in S-Bends Rapid.



Figure 5.1-2. Unloading zone, information sign, and picnic tables at Goodell Creek Boat Launch.



Figure 5.1-3. Goodell Creek Boat Launch ramp.



Figure 5.1-4. Damnation Creek Boat-in Picnic Site.

5.1.2 Copper Creek to Marblemount River Segment

The 5.9-mile river segment from Copper Creek to Marblemount is rated Class I-II whitewater difficulty. This low gradient river section offers opportunities to quietly float and observe the adjacent forest, meander bends, and gravel bars set against the broad landscape views of mountains

and glaciers to the east. SR 20 is visible from the river in some locations. The Marblemount Boat Launch can be used as the take-out, although some boaters combine this segment with the section downstream choosing to float to Howard Miller Steelhead Park (American Whitewater 2021c). Marblemount Boat Launch includes a gravel ramp for trailered boats (Figure 5.1-5), gravel parking lot for vehicles and trailers (Figure 5.1-6), restroom, and river trail (Figure 5.1-7). The Marblemount Boat Launch is managed by the Mt. Baker-Snoqualmie National Forest.



Figure 5.1-5. Marblemount Boat Launch.



Figure 5.1-6. Parking Area at Marblemount Boat Launch.



Figure 5.1-7. River Walk Trailhead at Marblemount Boat Launch.

5.1.3 Marblemount to Howard Miller Steelhead Park River Segment

The river segment from Marblemount to Howard Miller Steelhead Park is rated Class I-II whitewater difficulty. This 10.6-mile section is similar in character to the river segment from Copper Creek to Marblemount and offers opportunities to quietly float and observe the adjacent forest, meander bends, and gravel bars set against the broad landscape views of mountains and glaciers to the east (Figure 5.1-8). In addition, this section flows through the Skagit River Bald Eagle Natural Area (The Nature Conservancy 2021) where large populations of bald eagles spend the winter. This segment of the Skagit River is popular with floaters during the winter months to observe the bald eagles. Boaters are asked to launch after 11 AM during the winter season to avoid disturbing eagles in the morning hours when they typically feed on adjacent gravel bars.

Howard Miller Steelhead Park is managed by Skagit County Parks and Recreation Department (Skagit County Parks and Recreation 2021). Facilities at the 104-acre Howard Miller Steelhead Park include a paved boat ramp (Figure 5.1-9), restrooms, showers, playground, picnic area and shelter, trails for hiking, biking and horses, wildlife viewing, RV dump station, cabin rental, and camping. Skagit County charges a \$5 fee to use the boat ramp.

The Skagit River Bald Eagle Interpretive Center (SRBEIC) is co-located at the Howard Miller Steelhead Park. The SRBEIC hosts guided walks in December and January along the Skagit River and provides educational programs focused on the Skagit River ecosystem (SRBEIC Programs. 2021).

The Sutter Creek rest area at milepost (MP) 100 on SR 20 offers an alternative location to access the river. Older maps for the river corridor identify Sutter Creek as a boat ramp suitable for trailered boats. The boat ramp is no longer suitable for trailered boat access due to scour from Sutter Creek (Figure 5.1-10). This location is more suitable for smaller boats carried to the river down the bank. The site does not include parking and offers only a small turn-around not suited for trailered vehicles.



Figure 5.1-8. Landscape views of mountains and glaciers from Skagit River near Sutter Creek.



Figure 5.1-9. Boat ramp at Howard Miller Steelhead Park.



Figure 5.1-10. Sutter Creek boat launch eroded by Sutter Creek.

5.1.4 Special Use Permits for Commercial Uses on the Skagit River

Commercial use within the Mt. Baker-Snoqualmie National Forest and RLNRA for purposes such as filming, outfitter guides, or research requires a special use permit. Permits are not required for members of the public to float any segment of the river for non-commercial purposes.

The river segment from Goodell Creek to Copper Creek is located entirely within the RLNRA. As such, outfitters operating in this segment of the Skagit River must hold a commercial use authorization permit with the NPS to operate (NPS 2021). This includes outfitters launching at the Copper Creek Boat Access Site and traveling downstream outside the RLNRA boundary. Six commercial outfitters are authorized by the NPS to offer trips on the Skagit River within the RLNRA boundary.

In the river segment from Copper Creek to Marblemount, agency jurisdiction transitions from NPS to U.S. Forest Service (USFS) (Mt. Baker-Snoqualmie National Forest) at the boundary of the RLNRA. Land ownership downstream of the RLNRA boundary is a patchwork of federal, state, county, and private lands. The USFS is authorized under the Skagit River Wild and Scenic River designation to manage the 58.5-mile recreation segment of the Skagit River from the confluence with Bacon Creek to a point just east of Sedro-Woolley. Outfitters operating on the 58.5-mile recreation segment must be authorized to operate under a special use permit with the USFS. The 58.5-mile recreation segment overlaps with portions of the Copper Creek to Marblemount river segment (Bacon Creek confluence to Marblemount) and the entire river segment from Marblemount to Howard Miller Steelhead Park. Furthermore, the Marblemount Boat Launch is on lands managed by the USFS as part of the Mt. Baker-Snoqualmie National Forest. Outfitters utilizing the Marblemount Boat Launch must have a special use permit with the USFS.

5.1.5 Wild and Scenic Designation

The Skagit Wild and Scenic River was established in 1978. The system includes 158.5 miles of the Skagit River and its tributaries—the Sauk, Suiattle, and Cascade rivers. The 58.5-mile Skagit River segment of the Skagit Wild and Scenic River System is designated as recreational. The 58.5-mile recreation segment starts at the confluence of Bacon Creek with the Skagit River and extends downstream to a point just east of the town of Sedro-Woolley (USFS 2021).

The Skagit River Wild and Scenic River authorizing legislation designates the USFS (Mt. Baker-Snoqualmie National Forest) as the lead agency to manage the 58.5-mile recreation segment of the Skagit River. Under the recreation classification, the USFS oversees management of recreation opportunities, public access, aesthetics, and number of recreation users (USFS 1983). Land ownership on the 58.5-mile recreation segment is a patchwork of federal, state, county, and private lands with the majority in private ownership. Public access to the 58.5-mile recreation segment is restricted due to private land ownership limiting egress to and from the river.

The Skagit Wild and Scenic River System is managed by the USFS (Mt. Baker-Snoqualmie National Forest) to protect and enhance the free-flowing condition, water quality, and outstanding values for which the river was designated, while providing for public recreation and resource uses that do not adversely impact or degrade those values. (USFS 2021).

The NPS identified the Skagit River from Gorge Powerhouse to Bacon Creek as eligible and suitable for status as wild and scenic, with the “recreational” classification, but this segment of the river is not yet designated (NPS 2012). Designation as a Wild and Scenic River requires an act of Congress.

5.2 Recreation Flow Survey and Structured Interviews

The recreation flow survey and structured interview questions were developed in the fall of 2021. The extension for FERC’s SPD resulted in a shift in the study implementation schedule delaying development of the recreation flow survey and structured interview questions until the fall of 2021. Structured interviews will be conducted congruently with the recreation flow survey. Responses for the recreation flow survey will be analyzed in the USR. Similarly, information obtained from the structured interviews will be provided in the USR.

5.2.1 Recreation Flow Survey

The recreation flow survey was launched November 9, 2021 as an online survey. The extension for FERC’s SPD resulted in a shift in the study implementation schedule delaying development of the recreation flow survey until the fall of 2021 following completion of the literature review. The full recreation flow survey is provided in Attachment A.

The recreation flow survey launch was announced on the Skagit Relicensing website recreation work group page on November 10, 2021 (City Light 2021b). LPs were informed of the recreation flow survey launch in the weekly email newsletter (Skagit Relicensing Digest Volume 23, City Light 2021c). City Light informed national and regional river recreation organizations of the recreation flow survey (Table 5.2-1) requesting these organizations, in turn, inform their membership of the survey. City Light will share the recreation flow survey with river recreation groups and interested persons throughout the study period. Laminated signs describing the

recreation flow survey including the URL and a QR code were posted on signboards at the designated river access sites in the three river segments (Attachment B). The recreation flow survey will be available online for public responses through September 2022.

Table 5.2-1. Recreation flow survey outreach through November 16, 2021.

Entity	Website	Contact Person	Date Distributed
Skagit Relicensing Digest, Volume 23	https://triangleassociates.sharepoint.com/sites/SkagitRelicensingSharedLocationforLicensingParticipantandCit/Facilitator%20Digests/Forms/AllItems.aspx	Alex Sweetser	November 16, 2021
Skagit Relicensing Recreation Work Group	https://triangleassociates.sharepoint.com/sites/SkagitRelicensingSharedLocationforLicensingParticipantandCit/RecreationalWG	Jacob Hibbeln	November 10, 2021
American Whitewater	https://www.americanwhitewater.org	Tom O'Keefe, Pacific Northwest Stewardship Director	November 12, 2021
Mountaineers	www.mountaineers.org	Conor Marshall, Advocacy and Engagement Manager	November 12, 2021
Washington Kayak Club	https://wakayakclub.clubexpress.com/content.aspx?page_id=0&club_id=821680	Tomas Tabisola, President	November 12, 2021
Washington Recreational River Runners	https://wrrr.org	Nancy Douty, President	November 12, 2021
Paddle Trails Canoe Club	https://paddletrails.org/content.aspx?page_id=0&club_id=697352	Jesse Swedlund, President	November 12, 2021

5.2.2 Structured Interviews

Structured interviews will be scheduled in 2022 using a consistent set of interview questions (Attachment C). Structured interviews will largely occur via phone or computer except where opportunities present themselves for in-person interviews.

In the fall of 2021, NPS and USFS identified a list of resource agency staff with direct knowledge of the Skagit River for structured interviews. City Light will use this list to schedule structured interviews with resource agency staff. City Light will also use the list of commercial outfitters with special use permits to operate on these river segments to identify potential structured interview candidates with knowledge of river recreation on these river segments from a commercial as well as private use perspective. City Light will work with American Whitewater and other river recreation groups to further identify structured interview candidates covering a range of watercraft types and user groups. Additionally, the recreation flow survey allows survey respondents to nominate themselves as structured interview candidates. It may not be feasible to conduct structured interviews with all individuals self-identifying through the survey instrument. City Light will select candidates for structured interviews to encompass a broad spectrum of individuals and organizations representative of the river recreation user groups on the three river segments of the Skagit River.

5.3 Hydrology Analysis

Analysis of the hydrology of the Skagit River for the three river segments delineated in the Recreation Flow Study will be conducted using the range of boatable recreation flows for respective watercraft documented through the recreation flow survey and structured interviews. Analysis will include the annual frequency, timing, duration, and magnitude of flows in the respective river segments. The hydrology analysis will be included in the report to be included in the USR.

5.4 S-Bends Portage Assessment

The S-Bends, also referred to as Shovel Spur in the North guidebook (North 1992), contain the most difficult rapids on the Goodell Creek to Copper Creek river segment. The S-Bends are three rapids that occur in short succession. The S-Bends Rapids start 5.9 miles downstream from the Goodell Creek Boat Launch. North names the individual rapids from upstream to downstream: Youssarian (Class II), Dolly Parton (Class III), and Jack the Ripper (Class III).

More recent guidebooks, i.e., Bennett (n.d.) and the American Whitewater river information page (American Whitewater 2021b), refer only to the series of rapids at S-Bends and do not name the individual rapids. Bennett and American Whitewater rate the S-Bends Rapids Class III (III+ at flows greater than 6,000 cubic feet per second [cfs]).

In the description of the S-Bends Rapids, North notes in parenthesis “(the Portage....)” but provides no explanation beyond that single reference. Bennett and American Whitewater do not mention a portage in their respective descriptions. Both sources recommend scouting the rapid from SR 20 during the shuttle.

The potential S-Bends portage route was visited on July 27, 2021 and again on November 6, 2021. Two informal social trails were mapped, the upper trail and lower trail, which provide recreation users access from SR 20 to the Skagit River at the S-Bends Rapids (Figure 5.4-1). The upper trail at the upstream end of the S-Bends Rapids is located at approximately MP 114.1 on SR 20. The lower trail at the downstream end of the S-Bends Rapids is at approximately MP 113.6. These are informal trails that exist through repeated use by recreation users. No signage exists for either trail. Small, unmarked pull-outs exist at the upstream and downstream trails adjacent to SR 20 which are capable of fitting two to three cars only (Figures 5.4-2 and 5.4-3).

The upper trail is steep and narrow (2 to 3 feet wide) with an uneven dirt tread interspersed with tree roots and rocks obstructed from view by grasses and shrubs (Figure 5.4-4). Individuals floating from the Goodell Creek Boat Launch in smaller watercraft may use this as a take-out location, thereby avoiding the Class III rapids in the S-Bends. Individuals carrying a kayak or single person inflatable type of watercraft could climb the embankment to the pull-out on SR 20 without too much effort. Wider boats such as rafts would require considerable effort to reach the pull-out on SR 20 due to the steepness and narrow width of the trail.

The lower trail is slightly longer than the upper trail and not as steep at the start near SR 20 (Figure 5.4-5). The trail gets steeper and rockier closer to the river (Figure 5.4-6).

Individuals electing to use the informal upper and lower trails to portage around the S-Bends Rapids must walk along SR 20 for 0.6 miles (Figure 5.4-7). The shoulder of SR 20 is narrow and not suitable for carrying larger boats such as rafts. Individuals with single person watercraft could walk the riverside of the guardrail.

Based on the July 27, 2021 and November 6, 2021 site assessment, the informal trails to and from SR 20 are not likely the route used to portage around the S-Bends Rapids. Individuals electing to portage around the S-Bends Rapids would most likely do so on the river left below the ordinary high-water mark. The potential portage route on river left is much shorter and requires less effort compared to climbing the steep bank on the river right to SR 20. The river left portage option is visible at the top center of the image where kayaks are pulled up on shore in Figure 5.4-4. In fact, North recommends scouting the S-Bends Rapids on river left rather than river right for boaters already on the river.

The upper and lower trails may serve as an informal access to the whitewater rapids in the S-Bends rather than a portage route. Additional information on use patterns and access will be sought during the structured interviews with individuals knowledgeable of use patterns on this river segment. A structured interview question is designed to gather information about use patterns and access at the S-Bends.

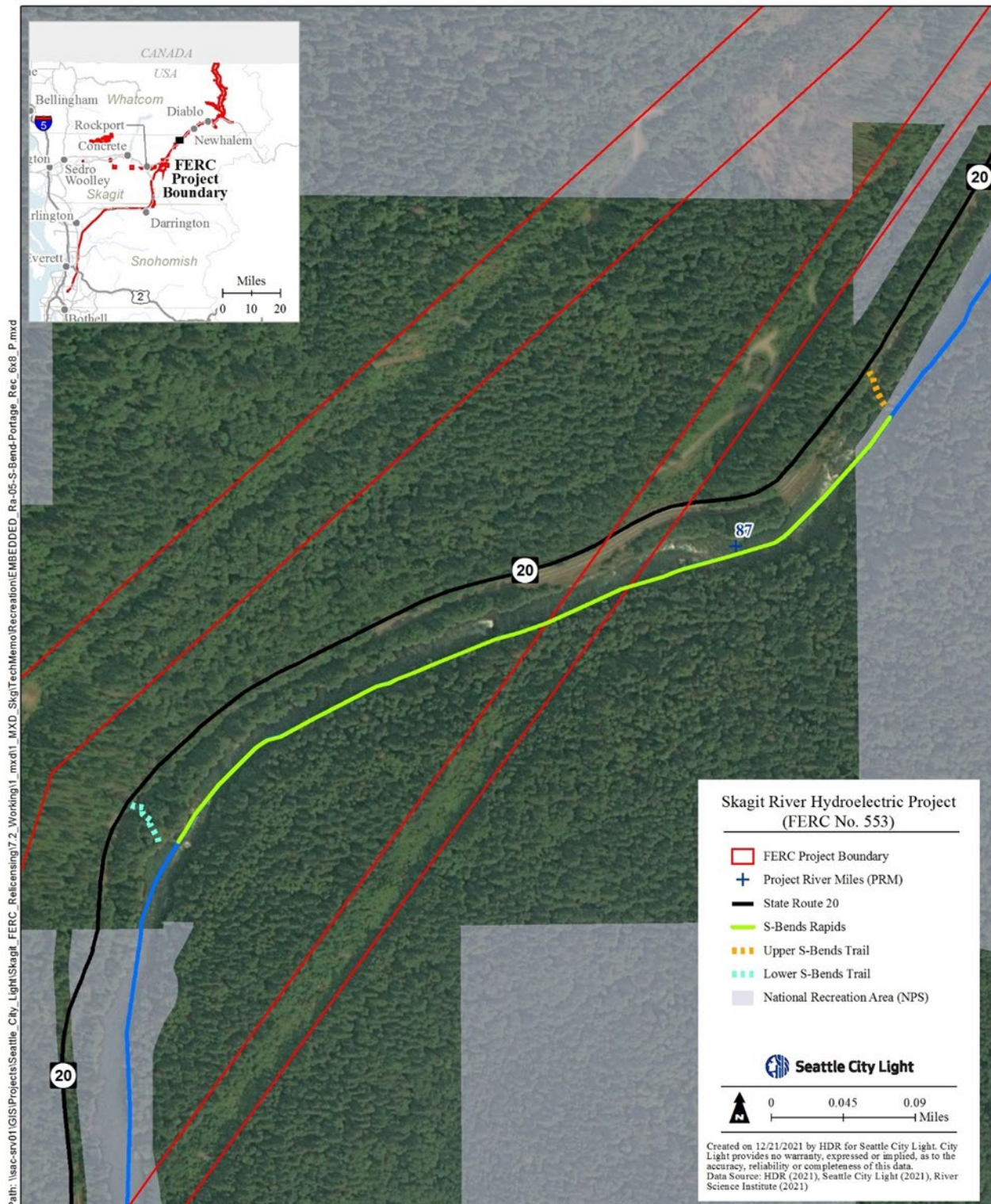


Figure 5.4-1. Informal upper and lower trails at S-Bends Rapids.



Figure 5.4-2. Small pull-out on SR 20 at upstream end of S-Bends Rapids.



Figure 5.4-3. Small pull-out on SR 20 at downstream end of S-Bends Rapids.



Figure 5.4-4. Informal upper trail from milepost 114.1 on SR 20 to Skagit River upstream of S-Bends Rapids.



Figure 5.4-5. Informal lower trail from milepost 113.6 on SR 20 to Skagit River downstream of S-Bends Rapids. (Photo: Tom O’Keefe)

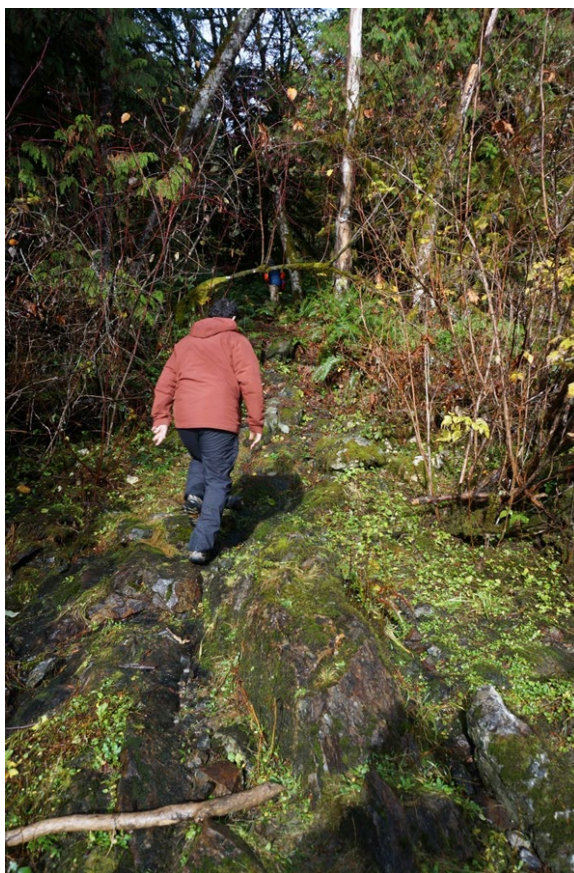


Figure 5.4-6. Informal lower trail viewed from Skagit River.



Figure 5.4-7. Portage path between guardrail and river along SR 20.

6.0 SUMMARY

This Recreation Flow Study Report includes progress updates on the following: (1) description of the recreation boating opportunities and whitewater difficulty based on literature review and direct observations of the three river segments in the study; (2) description of the designated river access points in each river segment; (3) an evaluation of conditions and use patterns at the S-Bends portage trail; (4) recreation flow survey design and questions; (5) structured interview questions; and (6) approach for analyzing hydrology data relevant to recreation flow preferences.

The recreation flow survey as described in Section 5.2 above will be available for public input through September 2022. The recreation flow survey responses will be analyzed upon closure of the survey in September 2022. Similarly, structured interviews will be conducted concurrent with the recreation flow survey. Analysis of the hydrology for the respective river segments in the Recreation Flow Study as described in Section 5.3 of this study report will be conducted following closure of the recreation flow survey and completion of the structured interviews in fall 2022.

7.0 VARIANCES FROM FERC-APPROVED STUDY PLAN AND PROPOSED MODIFICATIONS

There are no variances from or proposed modifications to the methods in the FERC-approved study plan for the Recreation Flow Study. The delay in issuance of FERC's SPD resulted in a delay in the study implementation schedule originally proposed in the RSP. The recreation flow survey was launched November 9, 2021 instead of July 2021 and will run through September 2022. Structured interviews will also occur in 2022. City Light will provide a report in the USR in March 2023.

8.0 REFERENCES

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**LOWER SKAGIT RIVER RECREATION FLOW STUDY
INTERIM REPORT**

ATTACHMENT A

RECREATION FLOW SURVEY



Skagit River Recreation Flow Survey

Welcome to the Skagit River Recreation Flow Survey.

The purpose of this recreation flow survey is to gather information about recreation flow preferences for three river segments on the Skagit River along a 25.2-mile length from Goodell Creek Boat Launch to the Howard Miller Steelhead Park near Rockport:

- Goodell Creek Boat Launch to Copper Creek Boat Access Site (the S-Bends whitewater section) (8.7 miles);
- Copper Creek Boat Access Site to Marblemount Boat Launch (5.9 miles); and
- Marblemount Boat Launch to Howard Miller Steelhead Park (the eagle viewing section) (10.6 miles).

A map of the Skagit River delineating these three river segments is provided below (Figure 1). However, on this stretch of the Skagit River, boaters may both combine or further divide these segments using both formal and informal access points along the river.

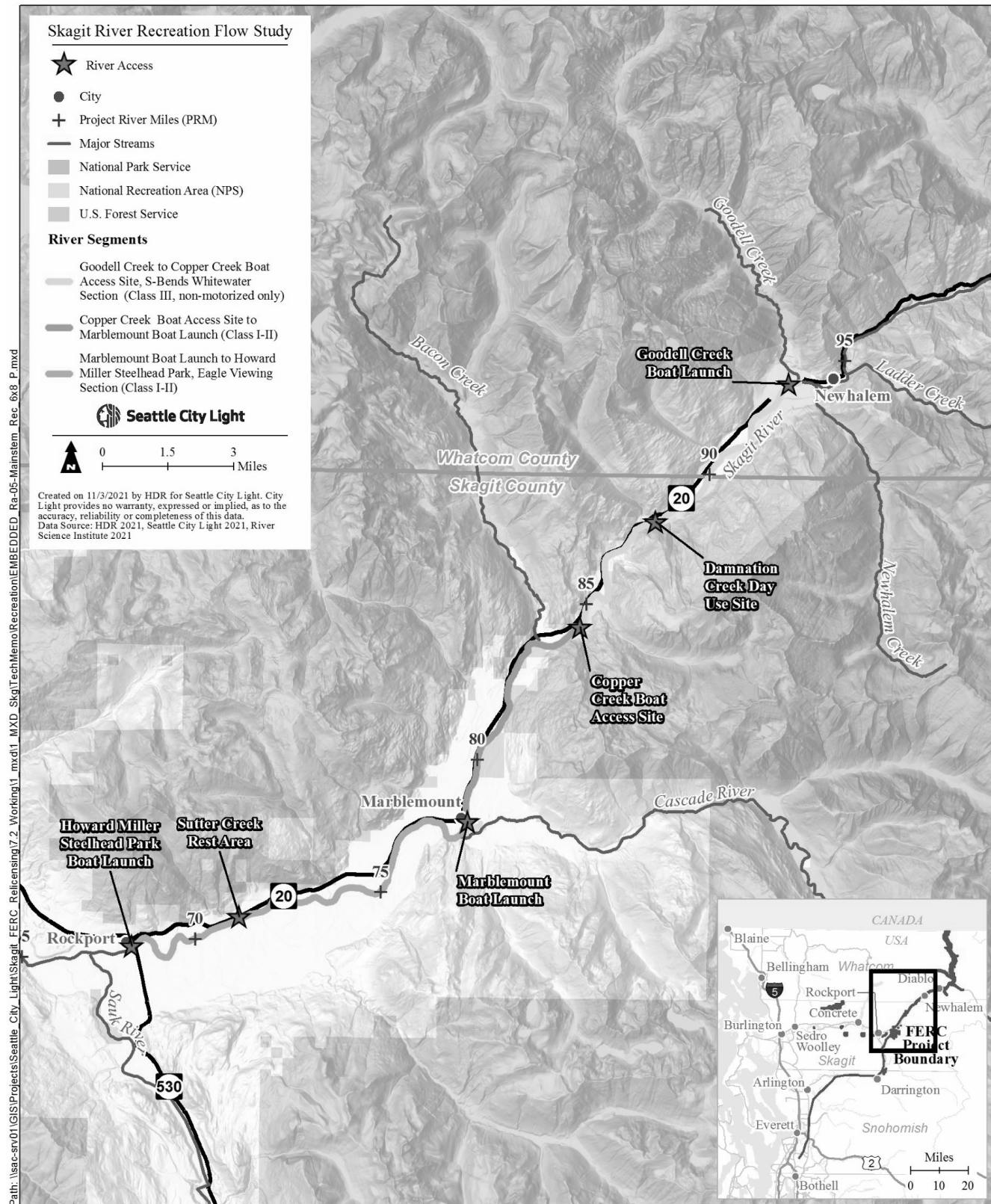
As you complete the survey, please base your responses on YOUR trips within these three river segments on the Skagit River. Limit your responses to the river segments where you have direct knowledge and experience. Survey results will be used in part to define the range of boatable flows for watercraft types for these three distinct river segments. The information gathered will help inform current and future opportunities for recreation flows in these segments of the Skagit River.

The recreation flow survey is part of a suite of studies associated with the relicensing process for the Skagit River Hydroelectric Project (Project). American Whitewater, Mt. Baker-Snoqualmie National Forest and North Cascades National Park participated in the development of this study plan. The Project is licensed to the City of Seattle, Washington, and operated through its publicly-owned electric power utility Seattle City Light (City Light). The Project is located in northern Washington state in the Cascade Mountains of the upper Skagit River watershed. Project operations release flows into the Skagit River downstream of Gorge Powerhouse.

This online survey is best viewed using a computer screen. Question formats are not ideal for smaller screens such as mobile devices.

Thank you for taking the time to complete this survey. Your input is greatly appreciated. Participation in this recreation flow survey is important to the success of the study. Please encourage others with knowledge of recreation flows in these three segments of the Skagit River to participate in the survey.

Figure 1: Skagit River Recreation Flow Survey River Segments



Skagit River Recreation Flow Survey

Background Information

1. Name: (for sorting purposes only):

2. Please enter the 5-digit zip code for your primary residence:

5-digit zip code

Country name for individuals whose primary residence is outside the United States

3. Please provide the age of the individual completing this survey using the ranges provided below:

- ☐ Under 18
- ☐ 18-24
- ☐ 25-34
- ☐ 35-44
- ☐ 45-54
- ☐ 55-64
- ☐ 65 and older

4. What is your Gender?

- ☐ Male
- ☐ Female
- ☐ Non-binary
- ☐ Prefer not to specify

* 5. Have you ever boated on the Skagit River between Goodell Creek Boat Launch and Howard Miller Steelhead Park in Rockport?

- ☐ Yes
- ☐ No



Seattle City Light

Skagit River Recreation Flow Survey

Frequency and Timing of Visits

6. Which of these three river segments (all or portions) have you boated? Check all that apply.

- ☐ Goodell Creek Boat Launch to Copper Creek Boat Access Site (S-Bends whitewater segment)
- ☐ Copper Creek Boat Access Site to Marblemount Boat Launch
- ☐ Marblemount Boat Launch to Howard Miller Steelhead Park Boat Launch (eagle viewing segment)

7. How many years have you been boating on these segments of the Skagit River?

Goodell Creek to Copper Creek (S-Bends whitewater segment)

Copper Creek to Marblemount

Marblemount to Howard Miller (eagle viewing segment)

8. How many times per year, on average, do you boat on these segments of the Skagit River?

Goodell Creek to Copper Creek (S-Bends whitewater segment)

Copper Creek to Marblemount

Marblemount to Howard Miller (eagle viewing segment)

9. What days of the week do you typically boat these segments of the Skagit River? Select all that apply per respective river segment.

	Weekdays	Weekends	Holidays
Goodell Creek to Copper Creek (S-Bends whitewater segment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Copper Creek to Marblemount	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marblemount to Howard Miller (eagle viewing segment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. What month(s) do you typically boat these segments of the Skagit River? Select all that apply per respective river segment.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Goodell Creek to Copper Creek (S-Bends whitewater segment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Copper Creek to Marblemount	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marblemount to Howard Miller (eagle viewing segment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Seattle City Light

Skagit River Recreation Flow Survey

River Recreation Activities

11. Why do you choose to boat on one or more of these three respective segments of the Skagit River? Check all that apply.

- ☐ Close proximity to work or home
- ☐ I like the river recreation on these river segments
- ☐ Level of whitewater difficulty is suitable for my skill/experience level
- ☐ Flows are typically suitable for my skill/experience level
- ☐ Late season flows
- ☐ Eagle viewing

Other (please specify)

12. In addition to boating, what other types of recreation activities do you participate in when on any of these three segments of the Skagit River? Check all that apply.

☐ Birding/Wildlife Viewing

☐ Swimming

☐ Angling

☐ Picnicking

☐ Photography

☐ Camp at Goodell Creek Campground

☐ Hiking/Walking

☐ Camp at Howard Miller Steelhead Park

Other (please specify)



Seattle City Light

Skagit River Recreation Flow Survey

Watercraft and Flow Preferences

13. What type of watercraft do you use on these segments on the Skagit River? Check all watercraft types you use on each respective river segment.

	Goodell Creek to Copper Creek	Copper Creek to Marblemount	Marblemount to Howard Miller
Closed Deck Hardshell (kayak, C1, or C2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Open Canoe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Small Inflatable (IK, pack raft, or SUP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Large Inflatable (raft or cataraft)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motor Boat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Watercraft	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please specify other watercraft type.

* 14. For the segment from **Goodell Creek Boat Launch to Copper Creek Boat Access Site (S-Bends whitewater segment)**, please identify your preferred watercraft type. Select only one watercraft type.

- ☐ I do not boat the segment from Goodell Creek Boat Launch to Copper Creek Boat Access Site
- ☐ Closed Deck Hardshell (kayak, C1, or C2)
- ☐ Open Canoe
- ☐ Small Inflatable (IK, pack raft, or SUP)
- ☐ Large Inflatable (raft or cataraft)
- ☐ Dory
- ☐ Other Watercraft

Please specify other watercraft type.



Seattle City Light

Skagit River Recreation Flow Survey

Goodell Creek to Copper Creek (S-Bends whitewater section)

15. For the segment from **Goodell Creek Boat Launch to Copper Creek Boat Access Site (S-Bends whitewater segment)**, please rate the quality of each flow for your skill level and watercraft. In your evaluation please consider the flow dependent characteristics that contribute to a high quality trip (e.g., travel time, challenge, safety, availability of whitewater play features, navigability, and aesthetics). If you have not boated this segment or do not feel comfortable evaluating a flow you have not observed, don't rate it.

Base your evaluation on the **preferred watercraft you selected for this river segment in question 14**. Please confirm your preferred watercraft for which you evaluated the range of flows at the bottom of this question.

The range of flows in the table are based on the **Newhalem gage** (USGS Gage 1218000).

	1 Totally Unacceptable	2 Moderately Unacceptable	3 Slightly Unacceptable	4 Marginal	5 Slightly Acceptable	6 Moderately Acceptable	7 Totally Acceptable
500 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1500 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2500 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3500 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4500 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5500 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
>5500 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Preferred watercraft type used for this rating

16. For the segment from **Goodell Creek Boat Launch to Copper Creek Boat Access Site (S-Bends whitewater segment)**, please specify the **minimum acceptable flow and optimum flow** in cubic feet per second (cfs) for your preferred watercraft. The minimum acceptable flow is the lowest flow you would return to boat, not the minimum flow necessary to navigate. The optimum flow is your preferred flow to boat this segment.

Base your flow recommendations on the **Newhalem gage** (USGS Gage 1218000).

Minimum Acceptable Flow (cfs)

Optimum Flow (cfs)



Skagit River Recreation Flow Survey

* 17. For the segment from **Copper Creek Boat Access Site to Marblemount Boat Launch** , please identify your preferred watercraft type. Select only one watercraft type.

- ☐ I do not boat the segment from Copper Creek Boat Access Site to Marblemount Boat Launch
- ☐ Closed Deck Hardshell (kayak, C1, or C2)
- ☐ Open Canoe
- ☐ Small Inflatable (IK, pack raft, or SUP)
- ☐ Large Inflatable (raft or cataraft)
- ☐ Dory
- ☐ Other Watercraft

Please specify other watercraft type.



Skagit River Recreation Flow Survey

Copper Creek to Marblemount

18. For the segment from **Copper Creek Boat Access Site to the Marblemount Boat Launch**, please rate the quality of each flow for your skill level and watercraft. In your evaluation please consider the flow dependent characteristics that contribute to a high quality trip (e.g., travel time, challenge, safety, availability of whitewater play features, navigability, and aesthetics). If you have not boated this segment or do not feel comfortable evaluating a flow you have not observed, don't rate it.

Base your evaluation on the **preferred watercraft you selected for this river segment in question**

17. Please confirm your preferred watercraft for which you evaluated the range of flows at the bottom of this question.

The range of flows in the table are based on the **Newhalem gage** (USGS Gage 1218000).

	1 Totally Unacceptable	2 Moderately Unacceptable	3 Slightly Unacceptable	4 Marginal	5 Slightly Acceptable	6 Moderately Acceptable	7 Totally Acceptable
500 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1500 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2500 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3500 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4500 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5500 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
>5500 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Preferred watercraft type used for this rating

19. For the segment from **Copper Creek Boat Access Site to Marblemount Boat Launch**, please specify the **minimum acceptable flow and optimum flow** in cubic feet per second (cfs) for your preferred watercraft. The minimum acceptable flow is the lowest flow you would return to boat, not the minimum flow necessary to navigate. The optimum flow is your preferred flow to boat this segment.

Base your flow recommendations on the **Newhalem gage** (USGS Gage 1218000).

Minimum Acceptable Flow (cfs)

Optimum Flow (cfs)



Skagit River Recreation Flow Survey

* 20. For the segment from **Marblemount Boat Launch to Howard Miller Steelhead Park (the eagle viewing segment)**, please identify your preferred watercraft type. Select only one watercraft type.

- ☐ I do not boat the segment from Marblemount Boat Launch to Howard Miller Steelhead Park
- ☐ Closed Deck Hardshell (kayak, C1, or C2)
- ☐ Open Canoe
- ☐ Small Inflatable (IK, pack raft, or SUP)
- ☐ Large Inflatable (raft or cataraft)
- ☐ Dory
- ☐ Motor Boat
- ☐ Other Watercraft

Please specify other watercraft type.



Skagit River Recreation Flow Survey

Marblemount to Howard Miller Steelhead Park (the eagle viewing section)

21. For the segment from **Marblemount Boat Launch to Howard Miller Steelhead Park (the eagle viewing segment)**, please rate the quality of each flow for your skill level and watercraft. In your evaluation please consider the flow dependent characteristics that contribute to a high quality trip (e.g., travel time, challenge, safety, availability of whitewater play features, navigability, and aesthetics). If you have not boated this segment or do not feel comfortable evaluating a flow you have not observed, don't rate it.

Base your evaluation on the **preferred watercraft you selected for this river segment in question 20**. Please confirm your preferred watercraft for which you evaluated the range of flows at the bottom of this question.

The range of flows in the table are based on the **Marblemount gage** (USGS Gage 1218100).

	1 Totally Unacceptable	2 Moderately Unacceptable	3 Slightly Unacceptable	4 Marginal	5 Slightly Acceptable	6 Moderately Acceptable	7 Totally Acceptable
1000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10,000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
>10,000 cfs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Preferred watercraft type used for this rating

22. For the segment from **Marblemount Boat Launch to Howard Miller Steelhead Park (the eagle viewing segment)**, please specify the **minimum acceptable flow and optimum flow** in cubic feet per second (cfs) for your preferred watercraft. The minimum acceptable flow is the lowest flow you would return to boat, not the minimum flow necessary to navigate. The optimum flow is your preferred flow to boat this segment.

Base your flow recommendations on the **Marblemount gage** (USGS Gage 1218100).

Minimum Acceptable Flow (cfs)

Optimum Flow (cfs)



Skagit River Recreation Flow Survey

River Access Sites and Facilities

23. Which of these river access sites do you use on the Skagit River?

	Use	Do Not Use
Goodell Creek Boat Launch	<input type="radio"/>	<input type="radio"/>
Damnation Creek Boat-in Picnic Site	<input type="radio"/>	<input type="radio"/>
Copper Creek Boat Access Site	<input type="radio"/>	<input type="radio"/>
Marblemount Boat Launch	<input type="radio"/>	<input type="radio"/>
Howard Miller Steelhead Park Boat Launch	<input type="radio"/>	<input type="radio"/>

24. How satisfied are you with the amenities (e.g., restrooms, picnic tables, parking, boat launch, etc.) at each of the following recreation sites? Select one response per row.

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied	Do Not Use
Goodell Creek Boat Launch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Damnation Creek Boat-in Picnic Site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Copper Creek Boat Access Site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marblemount Boat Launch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Howard Miller Steelhead Park Boat Launch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

25. Please rate the need for improvements to amenities at the existing river recreation access sites. Select one response per row.

	High Need	Slight Need	Neither	Not Much Need	Do Not Need At All	Do Not Use
Restrooms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trash receptacles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Picnic tables	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Firepits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pavilion/shelter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Additional vehicle parking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Additional trailer parking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boat ramp improvements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carry-in boat launches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trails	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

26. Based on your response in question 25, please describe the additional amenities and/or improvements you believe are needed to enhance your river recreation experience for the sites listed below.

Goodell Creek Boat Launch

Damnation Creek Boat-in Picnic Site

Copper Creek Boat Access Site

Marblemount Boat Launch

Howard Miller Steelhead Park Boat Launch

27. Please share any additional information or comments about your boating trips. Include any information describing the special or unique qualities of these three segments of the Skagit River.



Skagit River Recreation Flow Survey

28. We are interested in interviewing individuals with experience boating these three segments of the Skagit River as part of this study. Please provide your contact information if you are interested in a follow-up interview. If yes, we may contact you to set up a convenient time for an interview over the phone or computer.

Email Address

Phone Number



Skagit River Recreation Flow Survey

Thank you for taking the time to complete this survey. Your input is greatly appreciated. Participation in this recreation flow survey is important to the success of the study. Please encourage others with knowledge of recreation flows in these three segments of the Skagit River to participate in the survey. The survey will remain open until October 2022.

City Light will publish the results of this study in a technical report available to the public in March 2023. For more information about the Skagit Hydroelectric Project relicensing process please visit the [Skagit River relicensing website](#).

For questions or comments on the recreation flow survey please contact [Mike Aronowitz](#) at Seattle City Light.

**LOWER SKAGIT RIVER RECREATION FLOW STUDY
INTERIM REPORT**

ATTACHMENT B

RECREATION FLOW SURVEY ANNOUNCEMENT



Skagit River Recreation Flow Survey

Seattle City Light is conducting an online recreation flow survey for three river segments on the Skagit River. The recreation flow survey is part of a suite of studies associated with the relicensing process for the Skagit River Hydroelectric Project (Project). American Whitewater, Mt. Baker-Snoqualmie National Forest and North Cascades National Park participated in the development of this study plan. The Project is licensed to the City of Seattle, Washington, and operated through its publicly-owned electric power utility Seattle City Light (City Light).

The purpose of this recreation flow survey is to gather information about recreation flow preferences for three river segments on the Skagit River along a 25.2-mile length from Goodell Creek Boat Launch to the Howard Miller Steelhead Park near Rockport. A map of the Skagit River delineating these three river segments is provided below (Figure 1). The river segments include the following:

- Goodell Creek Boat Launch to Copper Creek Boat Access Site (the S-Bends whitewater section) (8.7 miles);
- Copper Creek Boat Access Site to Marblemount Boat Launch (5.9 miles); and
- Marblemount Boat Launch to Howard Miller Steelhead Park (the eagle viewing section) (10.6 miles).

The online survey is best viewed using a computer screen. The survey will take approximately 15 – 20 minutes to complete. Question formats are not ideal for smaller screens such as mobile devices.

Thank you for taking the time to complete the survey. Your input is greatly appreciated. Participation in the recreation flow survey is important to the success of the study. Please encourage others with knowledge of recreation flows in these three segments of the Skagit River to participate in the survey. The survey will remain open until October 2022.

For more information about the Skagit Hydroelectric Project Relicensing process please visit the Skagit River relicensing website at <https://www.seattle.gov/city-light/in-the-community/current-projects/skagit-relicensing>. For questions or comments on the recreation flow survey please contact Mike Aronowitz at Seattle City Light.

Skagit recreation flow survey url:

<https://www.surveymonkey.com/r/Skagitrecflowsurvey>



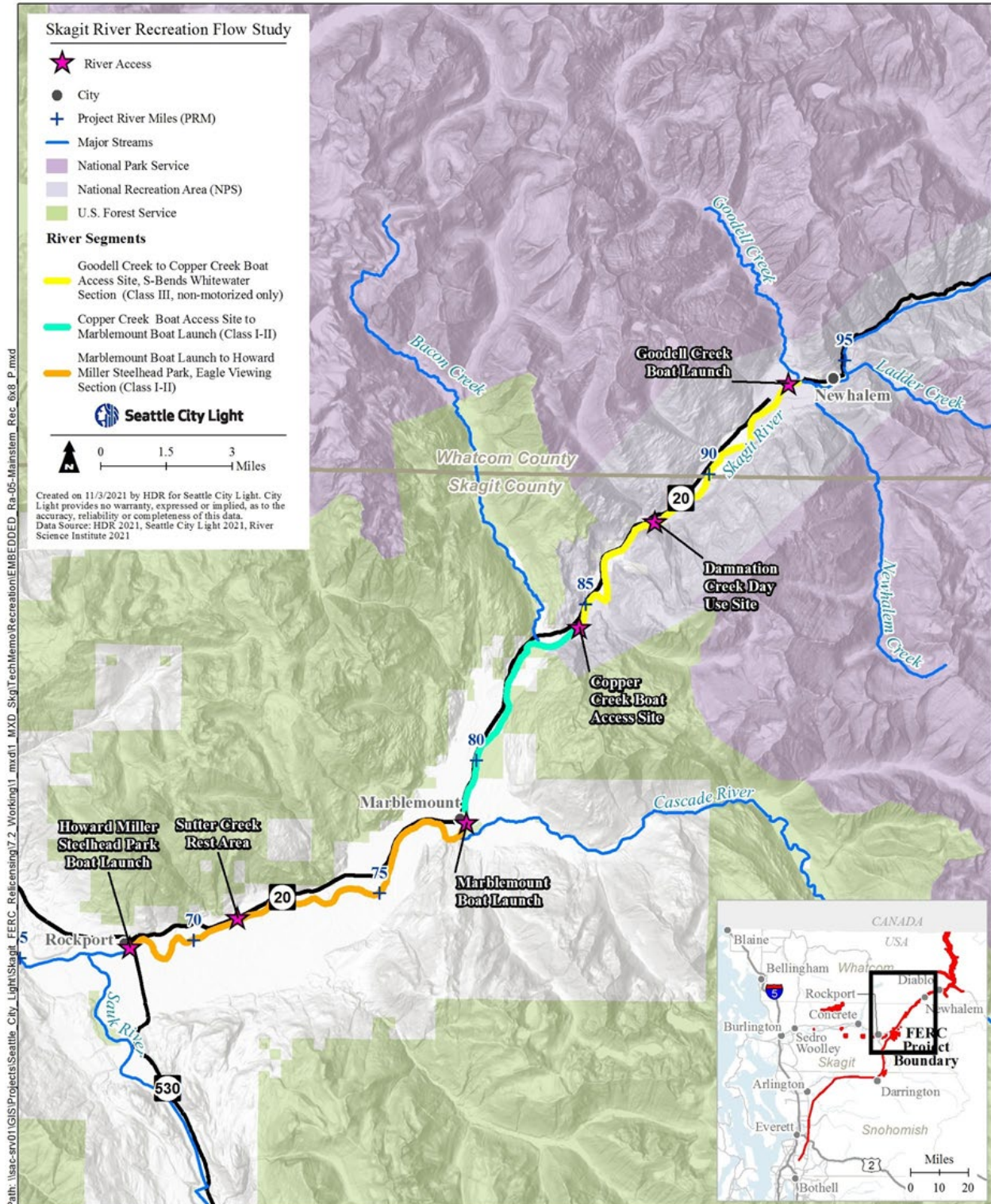


Figure 1: Skagit River Recreation Flow Survey River Segments

**LOWER SKAGIT RIVER RECREATION FLOW STUDY
INTERIM REPORT**

ATTACHMENT C

STRUCTURED INTERVIEW QUESTIONS

Structured Interview Questions:

1. In what capacity are you familiar with the Skagit River; e.g., resource agency staff person/manager, commercial outfitter, private boater?
2. What is your knowledge, experience, and frequency of use on each river segment?
 - a. How many times per year do you boat the respective river segments?
 - b. How many years have you been boating these segments on the Skagit River?
3. What types of watercraft do you think are suitable for each of three river segments?
4. What is your opinion regarding the whitewater difficulty for each river segment?
5. What is the estimated range of boatable flows for watercraft types in which you are familiar with for the respective river segments?
 - a. Minimum acceptable flow?
 - b. Optimum or preferred flow?
6. Describe your familiarity with the S-Bends rapids on the Goodell Creek to Copper Creek segment of the river.
 - a. Do boaters utilize the social trails from Highway 20 to portage the S-Bends or to access the whitewater rapids on this short segment?
7. What seasonal and flow related use patterns have you observed on the respective river segments for commercial and non-commercial user groups?
8. What factors are the primary trigger attracting recreation use on the respective river segments?
9. Are you satisfied with the amenities at the designated river access sites?
10. What type of improvements, if any, do you think are needed at the designated river access sites?
11. Do you have recommendations for other potential interview candidates with knowledge and experience on these river segments?