



Rocky Reach Hydroelectric Project
FERC No. 2145

2017 Progress Report 2018 Annual Work Plan

Completed per Rocky Reach Settlement Agreement, Sections 15.1.1 & 15.6.4

Reports provided by Chelan PUD Forum Leads:

Ryan Baker (Recreation Forum)

Steve Hemstrom (Fish Forum)

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Jennifer Burns (Cultural Forum)

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2017 Completed Activities

Rocky Reach Hydroelectric Project 2017 Progress Report

Forum	Activity
Rocky Reach Recreation Forum	<ul style="list-style-type: none"> Ⓢ Lincoln Rock State Park Swim Beach Improvements: As built submitted on 7/31/17 FERC approved 12/1/17 Ⓢ Lincoln Rock Cabin Loop complete: As built submitted on 7/31/17 FERC approved 12/1/17 Ⓢ Daroga State Park enhancements: Group camp restroom and RV hook-ups complete As built submitted 11/30/16 FERC approved 4/3/17 Ⓢ Entiatqua Trail as built submitted to FERC 10/21/16 FERC approved 4/3/17
Rocky Reach Fish Forum	<ul style="list-style-type: none"> Ⓢ Completed 2016 adult lamprey passage study for RR Fishway (September 2017) Ⓢ Final results: Study measured adult lamprey passage rate of 98.8% Ⓢ August 2017, tagged additional 300 lampreys with 98% passage rate measured; Study still in-progress Ⓢ Highest passage rates reported anywhere on Columbia River Ⓢ Rocky Reach Pacific Lamprey Management Plan adult passage objective achieved, exceeded Ⓢ 5th year turbine bypass screen monitoring for juvenile lamprey impingement, no juveniles impinged in 2017 Ⓢ Discussed with RRFF Chelan PUD's 2017 adult passage study results, 98.8% passage rate, objective achieved/exceeded Ⓢ 2,250 white sturgeon released in RR Reservoir per RRFF agreement Ⓢ Discussed resident fish enhancement opportunities and funding
Rocky Reach Wildlife Forum	<ul style="list-style-type: none"> Ⓢ Implementation of approved tasks in the 2016-2020 Rocky Reach Wildlife Habitat Plan. Ⓢ Wildlife monitoring and weed management completed as directed by FERC & RRWF in 2017. Ⓢ Annual monitoring and weed management completed as directed by the FERC and Ute Ladies' Tresses Subcommittee

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2017 Completed Activities (cont.)

Rocky Reach Hydroelectric Project 2017 Progress Report

Forum	Activity
Rocky Reach Cultural Forum	<ul style="list-style-type: none"> ⊗ Completed archeological monitoring of 13 sites within the Rocky Reach Hydroelectric Project ⊗ Hosted the 2017 River Ramble at Rocky Reach Dam ⊗ Completed Beebe Bridge Park shoreline stabilization and park moorage docks replacement
401 Water Quality	<ul style="list-style-type: none"> ⊗ Submitted Gas Abatement Plan to Ecology on March 30, 2017 ⊗ Submitted Gas Abatement (TDG) Annual Report to Ecology on December 29, 2017 ⊗ Continuing to collect annual TDG and temperature data in forebay and tailrace ⊗ Submitted Aquatic Invasive Species (AIS) Report to Ecology, Rocky Reach Fish Forum and FERC April 3, 2017
Project Operations	<ul style="list-style-type: none"> ⊗ Submitted Operations Plan (included Fish Spill Plan) on March 30, 2017 to designated stakeholders and FERC

2018 Recreation

Rocky Reach Recreation Forum – 2018 Work Plan

License Measure	Activity	Activity Timeline	Forum Decisions	Consultation or Meetings	Next Steps
ADA upgrades to Lincoln Rock restroom loop #1	Removal from Recreation Plan recommended	None	none	As needed	All recreation funding has been spent. The recommendation is to work with State Parks to consider this project under future O&M or Capital projects.
Daroga Shoreline Interpretative trail	Removal from Recreation Plan recommended	None	none	As needed	All recreation funding has been spent. The recommendation is to work with State Parks to consider this project under future O&M or Capital projects.

2018 White Sturgeon

Rocky Reach Fish Forum – White Sturgeon 2018 Work Plan

License Measure	Activity	Activity Timeline	Forum Decisions	Consultation or Meetings	Next Steps
White Sturgeon Supplementation	<p>Per RRF Agreement, Release ≈ 2,250 juvenile white sturgeon in 2018.</p> <p>Sixth Year of Tagged Sturgeon Monitoring and Evaluation to Assess Population, Growth, Diet, and Reservoir Locations.</p> <p>Continue to Assess Monitoring Results to Inform Stocking Rates and Determine Reservoir Carrying Capacity if Possible.</p> <p>RRFF Discussion on Sturgeon Supplementation and Effects on Adult Pacific Lamprey Passage and Abundance; Determine if Conflict Exists with Pacific Lamprey Management Plan Goals.</p>	2018	None Expected in 2018	Monthly White Sturgeon Subcommittee Technical Meetings; Fish Forum Meetings for Updates and Decision Approvals.	<p>Release ≈ 2,250 Juveniles in 2018.</p> <p>Brood Collection and or Larval Collection for Culture and Release of Juvenile Sturgeon in 2019. Release Numbers Based on Mark–Recapture Monitoring and Half-Sibling Adult Crosses Available.</p> <p>Continue Annual Monitoring and Evaluation of Tagged Fish to Guide Future Supplementation. RRF to Discuss WS Abundance and Potential Negative Interactions with Lamprey and Other Species.</p>

2018 Bull Trout

Rocky Reach Fish Forum – Bull Trout 2018 Work Plan

License Measure	Activity	Activity Timeline	Forum Decision	Consultation or Meetings	Next Steps
Annual Report to USFWS	Submit 2017 Annual Bull Trout Monitoring and Incidental Take Report	Report due April 15, 2018	None in 2018	2017 incidental Take is within allowable Take limits as No lethal Take observed. USFWS meetings, conference calls, and Incidental Take 48-hour reporting.	2017-18 Continue annual reports to USFWS. Continue annual bull trout passage counts at Rocky Reach Fishway. Complete 2017 Annual report to USFWS by 4/15/2018.
10-Year Incidental Take Check-in Study, PIT Tags, Genetic Samples	Scope and write study design for 2018 PIT Tag Analysis, Study, and Genetic Sampling	May 2018 – May 2019	None	2018 Monthly Fish Forum Meetings for updates.	Conduct 10-year incidental take check-in study using PIT tag data to reduce mortality trapping/tagging effects on bull trout. Collect tissue samples from adult/sub-adult bull trout for one year at Dryden and Tumwater during fish trapping.

2018 Pacific Lamprey

Rocky Reach Fish Forum – 2018 Pacific Lamprey Work Plan

License Measure	Activity	Activity Timeline	Forum Decisions	Consultation or Meetings	Next Steps
Evaluate Ladder Modifications by Measuring Upstream Lamprey Passage Success and Via Full-Duplex PIT-Tags	Complete second Lampreys study (2017-2018) to assess adult passage rates through fishway. 2017 study showing 98% passage success (253/259 lampreys detected in fishway passed); Study Still in Progress.	September 2018	2018 SOA - PLMP Adult Passage Objective Achieved and Exceeded at 98% Passage.	Rocky Reach Fish Forum Monthly Meetings	Finalize 2017-2018 study, September 2018. No New Passage Studies Planned in 2018.
Achieve PLMP Adult Passage Objectives	Show improvement in passage rates after ladder modifications; Achieve Passage Rates Similar to the Best on the Columbia River.	2012-2018	Passage Improved; Rocky Reach with Best Lamprey Passage Rates on Columbia River.	Rocky Reach Fish Forum monthly Meetings	SOA with RRF, Formalize Lamprey Passage Success Rates.
Conduct Bi-annual Juvenile Lamprey Impingement Monitoring	Monitoring Bypass Screens in Turbine Units 1 and 2 for Impingement of Juvenile Lamprey.	None in 2018	RRFF Approved (2017) Monitoring Report Results, No Juvenile Effects	Fish Forum Monthly Meetings	Chelan PUD proposal to decrease monitoring frequency to 3-5 years; no impingement ever observed over 5 monitoring years.
Measurement of Impacts on Juvenile Lamprey Downstream Passage	Ongoing RRF Review of Acoustic Tag Technology and Lack of Availability of Testable Juvenile Lamprey.	2018 January - Dec	None Expected For 2018	Fish Forum Monthly Meetings; Pacific Lamprey Subcommittee	Wait for tag technology, physiology studies of tagged juveniles to accept tag, and unbiased methods to conduct paired release studies. Wait on Source of Study Fish.
No Net Impact	RRFF Discussion of Adult Lamprey NNI Following Completion of Adult Passage Studies.	2018	RRFF acceptance of measured adult passage rates and upstream passage objectives achieved.	Fish Forum Monthly meetings; Pacific Lamprey Subcommittee	2017-2018. RRF to define NNI and develop calculations and scope projects to achieve NNI based on measure adult passage rates, once passage studies are completed in 2018

2018 Resident Fish

Rocky Reach Fish Forum – Resident Fish 2018 Work Plan

License Measure	Activity	Activity Timeline	Forum Decisions	Consultation or Meetings	Next Steps
Resident Fish Monitor & Measure Relative Abundance and Species Comp	No Resident Study in 2018.	Next Resident Fish Study 2023	None Expected in 2018 on Resident Fish Study.	Fish Forum Monthly Meetings.	Next Monitoring Study 2023 in Rocky Reach Reservoir.
	Funding (\$100,000) to Rear/Release Catchable Rainbow Trout.	Annual	None Expected 2018	Fish Forum Monthly Meetings.	
	Discuss Funding for Resident Fish Enhancement Measures.	Annual	RRFF to Decide Best Enhancement Opportunities with Available Funds.	Fish Forum Monthly Meetings.	Scope Projects and Proposals
Resident Fish Monitoring Plan	Scope and Design Check-in Study	2022	First of Three Additional Studies During RR License	Fish Forum monthly Meetings	Conduct Next Evaluations: 2023, 2033, 2043

2018 Wildlife/Habitat

Rocky Reach Wildlife Forum – 2018 Work Plan

License Measure	Activity	Activity Timeline	Forum Decisions	Consultation or Meetings	Next Steps
Agency funding (WDFW , BLM, USFS)	Project management, reimburse for work completed	Ongoing	None	Annual meetings in late fall with each agency to establish project schedules and budgets	Implement approved measures (FERC & RRWF) Execute Payment Agreements for new Plan
Wildlife Monitoring	Conduct annual wildlife monitoring as directed by RRWF (owls for 2018)	Conduct monitoring for approved projects, provide summary reports	Propose wildlife monitoring projects Approve project proposals	Late fall meeting with RRWF to summarize monitoring results and propose monitoring for 2019	Conduct 2018 monitoring Provide annual summary reports to RRWF
Integrated Terrestrial Invasive Plant Control Plan	Conduct annual weed control project(s) as directed by RRWF	Enter into contracts or plan work to conduct weed control for approved projects	Propose weed control projects. Approve project proposals	RRWF meeting in late fall to summarize weed control work and propose monitoring for 2019	Conduct 2018 weed control project Provide annual summary reports to RRWF
Sun Cove Conservation Easement	none	When necessary	None	As necessary	Preserve property until buffer is necessary

2018 Ute Ladies' Tresses

Rocky Reach Wildlife Forum –2018 Work Plan

License Measure	Activity	Activity Timeline	Subcommittee Decisions	Consultation or Meetings	Next Steps
Integrated Terrestrial Invasive Plant Control Plan	Implement Integrated weed control Plan	Spring and Fall weed control as approved by Subcommittee	Propose and approve 2018 weed control Plan	Late fall meeting for 2018 project close-out; 2019 weed control proposals	Review monitoring reports, conduct site visit(s), implement approved weed control Plan
Spiranthes Existing Populations Monitoring, Reporting, and Mapping	Annual Monitoring and reporting 2018 – 5-year monitoring and reporting	August – Sept surveys Sept- Dec report writing and review Submit annual and 5-year report by Dec. 31.	Prioritize threats, determine 2019 weed control options	Fall meeting to review annual monitoring efforts and consider 2019 weed control work	Annual monitoring and report (by December 31)

2018 Cultural

Rocky Reach Cultural Forum – 2018 Work Overview

License Measure	Activity	Activity Timeline	Forum Decisions	Consultation or Meetings	Next Steps
Develop TCP Plan	Develop Plan	TBD	Complete and Approve Plan	Schedule regular forum meetings to implement provisions within the HPMP.	Implement Plan
Conduct Site Surveys and Treatment	Continuous as needed	2018	Approvals	Schedule regular forum meetings to implement provisions within the HPMP.	Continue to consult with Forum on any project impacts (e.g. discovery)
Curate Items	Complete	2018	Complete	N/A	Complete
Cultural Resource Monitoring Plan	Complete	2018	Revising per discussion with forum	Forum to approve.	Implement Plan
Education Interpretive Plan	Complete	2018	Complete	Schedule regular forum meetings to implement provisions within the Plan.	Consult with Forum on additional opportunities to further public education on cultural resource issues.

2018 401 Certification

Rocky Reach Water Quality – 2018 Work Plan

License Measure	Activity	Activity Timeline	Consultation or Meetings	Next Steps
Gas Abatement Plan (TDG)	Complete Plan	Due to Ecology April 1	Ecology review and approval.	Draft due February 28. Final due to Ecology April 1.
Total Dissolved Gas Annual Report	Complete Report	Due to Ecology Dec 31	Ecology review	Draft to Ecology October 31 Final due December 31.
TDG Monitoring	Monitoring	Year round	NA	Annually
Temp Monitoring – Forebay/Tailrace	Monitoring	April - Oct	NA	Annually
Aquatic Invasive Species Report	Annual Report	Draft to Ecology & RRF Feb 20 Due to FERC April 1	Ecology & RRF consultation on draft	Draft to Ecology and RRF, February 20 File with FERC by April 1
Water Quality Monitoring Report and QAPP Update	Annual Report	Draft to Ecology March 1 Due to FERC May 1	Ecology review and approval. FERC approval.	Draft to Ecology March 1 Due to FERC May 1
TMDL Measures	Monitoring	Ongoing		Ongoing
WQPP	Develop plan	Project specific	Ecology review and approval	As needed

2018 Project Operations

Rocky Reach Project Operations – 2018 Work Plan

License Measure	Activity	Activity Timeline	Consultation or Meetings	Next Steps
Annual Operations Plan (Article 402)	Complete Annual Plan	Submit draft for agency and Tribes review. Final to FERC by March 30, 2018.	Draft provided to agencies and Tribes for comment on Feb 23, 2018.	Incorporate comments and submit to FERC by March 30, 2018.