

Clean Water Act § 401 Certification Conditions

For the Rock Creek Hydroelectric Project

(FERC No. P-12726)

Powder River Basin

Baker County, Oregon

September 9, 2020

Upon Federal Energy Regulatory Commission (FERC) issuance of a license for the Rock Creek Hydroelectric Project (Project), Warm Springs Hydro LLC (Warm Springs Hydro) must comply with the following § 401 Certification conditions:

1) Project Operation:

- a) Throughout the life of the FERC license, Warm Springs Hydro shall operate the Project in a “run of river” mode as described in Section 3.4 of the Application for Section 401 Water Quality Certification received by DEQ on December 23, 2019. In accordance with applicable law, Warm Springs Hydro shall notify DEQ if FERC authorizes modification to these operations so as to allow DEQ to determine whether such changes may affect compliance with water quality standards.
- b) Warm Springs Hydro shall discharge a continuous minimum flow from the Project diversion dam into Rock Creek in the quantities shown in Table 1 or 2, below, whenever water is diverted. If inflow at the Project diversion dam is equal to or less than the required minimum flow then Warm Springs Hydro shall divert no flow to the Project. The minimum flow released into Rock Creek shall be equal to or greater than those flows shown in Table 1 unless alternative flows are approved by DEQ in an approved habitat mitigation plan. If there is an approved habitat mitigation plan, the minimum flow values in Table 2 apply. Minimum flows must be met at both compliance flow gages required in Condition 1d.

| Table 1. Minimum flows for Rock Creek without mitigation, based on Application for Instream Water Right (IS 72194) ODF&W 1/8/92 (cubic feet/second) | |
|--|----------------------|
| Time Interval | Instream Flow |
| January 1-February 15 | 9 cfs |
| February 16-28 | 15 cfs |
| March 1-June 15 | 20 cfs |
| June 16-30 | 15 cfs |
| July 1-31 | 12 cfs |
| August 1-December 31 | 9 cfs |

| Table 2. Minimum flows for Rock Creek with mitigation. (cubic feet/second) | |
|---|--------|
| January 1-March 15 | 6 cfs |
| March 16-31 | 8 cfs |
| April 1-15 | 10 cfs |
| April 16-30 | 12 cfs |
| May 1-June 15 | 20 cfs |
| June 16-July 31 | 15 cfs |
| August 1-31 | 12 cfs |
| September 1-15 | 7 cfs |
| September 16-December 31 | 6 cfs |

- c) Warm Springs Hydro may temporarily deviate from the applicable minimum flows set forth in Table 1 or 2 above, as applicable, if required by operating emergencies beyond the control of Warm Springs Hydro or for short periods as approved by DEQ in writing, after consultation with Warm Springs Hydro, Oregon Department of Fish and Wildlife (ODFW), Oregon Water Resources Department (WRD), U.S. Fish and Wildlife Service (USFWS), U.S. Forest Service (USFS) (collectively referred to herein as “Agencies”). Warm Springs Hydro must report deviations from the minimum flow requirements, as observed at the compliance gages, to DEQ and Agencies by the next business day.
- d) Prior to operation of the project, Warm Springs Hydro must install and maintain an operational compliance monitoring flow gage at the Project diversion dam, and a second gage in Rock Creek between the Olsen irrigation diversion and the Project powerhouse discharge. The flow gages must provide for continuous real time recording

of flow and water temperature in the bypass reach measured in 15 minute intervals during the duration of the FERC license.

- e) Warm Springs Hydro must provide to DEQ and Agencies flow and water temperature data collected from both compliance gages on a real time or near-real time basis through an internet reporting system or other system approved by DEQ. Warm Springs Hydro must develop rating curves to enable accurate flow measurements at flows up to a level that is greater than or equal to bank-full stage at each gage location. The flow gages must be constructed, operated, and maintained in conformance with U. S. Geological Survey (USGS) Techniques and Methods 3-A7 and 3-A8 (2010) or other guidance approved by DEQ, through the life of the FERC license. Warm Springs Hydro or an agreed upon designee must perform regular maintenance and calibration of the gages.
- f) Warm Springs Hydro must perform daily water temperature modeling runs when operating the Project during the period of June 1 to September 30, as described in the Water Quality Monitoring and management Plan and Operation Compliance Monitoring Plan required in Condition 2. Minimum flows in the by-pass reach of Rock Creek will be increased as necessary to avoid heating beyond 0.3° C (0.5°F) above background. All temperature model input parameters, calculated bypass reach heating estimate, and Powerhouse operating flow will be reported daily on the Agency approved reporting system described in Section 1e.
- g) Warm Springs Hydro shall operate the Project to minimize Project-induced flow fluctuations in the Rock Creek bypass reach by adhering to the following ramping rates:
 - i) From May 1 to October 31, ramping shall not exceed 1-inch per hour to protect larval fish; and
 - ii) From November 1 to April 30, ramping shall not exceed 2-inches per hour to protect juvenile and adult rearing.The above ramping rates apply during all Project start up or shut down activities.
- h) Prior to commencement of Project operations, Warm Springs Hydro shall complete a site-specific study to develop operating procedures to meet the ramping rates.

2) Water Quality Monitoring and Reporting:

- a) Water Quality Monitoring and Management Plan: Within 90 days of issuance of the FERC license, Warm Springs Hydro must, in consultation with DEQ, develop a Project Water Quality Monitoring and Management Plan (WQMMP) consistent with this §401 Certification that includes at least the following components:
 - i. Identification of monitoring locations.

- ii. A description of the data reporting system required in Condition 1d.
- iii. A comprehensive plan for acquiring data that will support HEC-RAS temperature model implementation and refinement in order to ensure Project operations will not increase warming of the bypass reach more than 0.3°C (0.5°F).
- iv. A temperature compliance plan that includes all measures needed to analyze temperature, flow and other necessary data to determine when production must be curtailed to avoid any increased heating of the bypass reach more than 0.3°C (0.5°F). Minimum required parameters to be monitored and reported by Warm Springs Hydro must include the following unless changes are approved by DEQ:
 - Flow Rates –OWRD’s gage (13281200) approximately 1/2 mile downstream of the powerhouse at approximately RM 6.5 was used for flow records in initial water temperature modeling runs. New flow and temperature compliance gages will be added at the diversion dam and at a point in Rock Creek between the Olsen diversion and the Project Powerhouse discharge. Flow and temperature data from these gages will be used in future temperature compliance model runs.
 - Air Temperature – hourly air temperature data at both the upper and lower ends of the bypass reach.
 - Relative Humidity - hourly relative humidity data at both the upper and lower ends of the bypass reach.
 - Water Temperature - hourly water temperature data collected at both the upper and lower ends of the bypass reach.
 - Atmospheric Pressure - hourly atmospheric pressure data collected at both the upper and lower ends of the bypass reach.
 - Cloudiness – estimated based on localized relative humidity data (mentioned above) and cloudiness data from National Weather Service station at Baker City, OR, with all assumptions and adjustments to represent localized conditions in the bypass reach will be thoroughly documented and justified.
 - Solar Radiation – Solar radiation measurements used in water temperature modeling will be taken at a station established at the Project site. As described in the Project’s Application for Section 401 Water Quality Certification, U.S. Army Corps of Engineers guidance will be followed to develop a time series for Solar Radiation based on the site latitude, longitude and time of year.

Wind Speed and Direction – Initial values will be taken from an AgriMet station located near Haines, OR and/or a National Weather Service station in Eilertson meadows about 1 mile upstream of the project on Rock Creek. All assumptions and adjustments to represent localized conditions in the bypass reach will be documented and justified.

- v. A plan to measure dissolved oxygen (DO) in Rock Creek at the outlet of the Powerhouse continuously during Project operations for a period of 90 days starting July 15th of the first year of operation of the Project. Warm Springs Hydro must download and evaluate DO data on a weekly basis. During Project operation, Warm Springs Hydro must also measure total dissolved gas (TDG) in the Rock Creek the Powerhouse outlet for a minimum of seventy-two (72) hours under lower flow conditions in August-September and higher flow conditions in June-July, as well as record associated power generation from the Project during the 72-hour Monitoring periods. Warm Springs Hydro must report all DO, TDG, flow, water temperature and power generation data to DEQ within 90 days of the conclusion of the monitoring period.
- vi. Applicable DO and TDG criteria; monitoring methodology; reporting schedule; and adaptive management plan procedures during DO or TDG violations. If it is determined based on monitoring results that Project operations are contributing to downstream violations of the applicable DO standard or the TDG standard, Warm Springs Hydro must develop and follow an adaptive management plan. The adaptive management plan must be submitted to DEQ for approval and must assure the project does not cause or contribute to violations of the DO or TDG water quality standards.
- vii. If DEQ determines monitoring demonstrates that the project does not cause or contribute to a violation of DO or TDG criteria, then DEQ may allow Warm Springs Hydro to cease monitoring for a period of time or for the remaining term of the FERC license.

In addition, the WQMMP must include provisions to address water quality monitoring equipment malfunctions, specifically at least:

- i. Procedures and measures that will be implemented to prevent monitoring equipment malfunctions;
- ii. Procedures for identifying the occurrence and nature of any monitoring equipment malfunctions that may occur;

- iii. Plan, schedule, and corrective measures that will be implemented to address monitoring equipment malfunctions;
- iv. Procedures for notifying DEQ of the occurrence and nature of monitoring equipment malfunctions, corrective measures implemented, and recommencement of monitoring equipment operation.
- v. Procedures and timelines for Project shutdown as may be necessitated by monitoring equipment malfunctions; and
- vi. Plan and schedule for maintenance and calibration of field test equipment.

b) Operation Compliance Monitoring Plan:

Within six months of issuance of a FERC license, Warm Springs Hydro shall submit for DEQ approval a written Operation Compliance Monitoring Plan that must be developed in consultation with the Agencies, subject to approval of DEQ, which must include the following components:

- i. Preliminary design of the flow gage,
- ii. Description of intended and required reporting of flow measurements,
- iii. Development of the rating curve,
- iv. Description of how Warm Springs Hydro will carry out its maintenance responsibilities;
- v. Description of operator training and supervision;
- vi. List procedures required to:
 - 1. maintain minimum instream flows,
 - 2. perform and report results of temperature modeling,
 - 3. meet temperature criteria,
 - 4. adhere to specified ramping rates;
 - 5. report required information to DEQ and Agencies, including but not limited to unscheduled Project outages within one business day;
 - 6. carry out all other requirements of this Certification;
 - 7. provide DEQ and Agencies prior notification, and to coordinate with Agencies to receive approval, if required, regarding maintenance scheduling, emergencies that affect water quality and fish and wildlife resources, or when minimum flow violations occur.

Following DEQ's approval, Warm Springs Hydro shall implement that plan in accordance with DEQ's approval, and, in addition, file the OCMP with FERC for its approval to become part of these §401 Certification Conditions for the Project. This plan must be approved by DEQ prior to operation of the Project, and this plan may be modified upon review and approval of DEQ, after consultation with the Agencies.

3) Protection of Beneficial Uses; Narrative Water Quality Criteria; Compliance With Other Requirements of State Law:

- a) Within 90 days of the issuance of the FERC License, Warm Springs Hydro shall submit a plan to DEQ to collect, analyze and report baseline macro-invertebrate biomonitoring data, and a five-year comparative analysis, as well as if necessary, creation of an adaptive management plan to address cumulative impacts from multiple stressors associated with Project developments and operations.
- b) Warm Springs Hydro shall design, construct, evaluate, operate and maintain downstream and upstream fish passage facilities (including fish screens) at the Project diversion dam as proposed on page 8 and Exhibit F-4, F-5 and F-6 of the Final License Application, which is incorporated in its entirety here by reference, to provide for the safe, timely, and effective upstream and downstream passage of native fish species, primarily redband trout. Warm Springs Hydro shall ensure optimal performance of such facilities over the FERC license term. Warm Springs Hydro shall submit all downstream and upstream fish passage facility preliminary design plans and specifications, and final design plans and specifications to the Agencies for review, and to DEQ, for its approval.
- c) Prior to any diversion to the bypass reach, Warm Springs Hydro must design and construct upstream and downstream fish passage facilities (including fish screens) in accordance with National Marine Fisheries Service (NMFS, 2011) guidance and the conditions listed in Condition 2 of the ODF&W 30c Terms and Conditions (30c Terms and Conditions), and Sections 13 of the USFWS 30c Terms and Conditions for the Project submitted to FERC on November 12, 2019.
- d) Within the first year of Project operation, Warm Springs Hydro must complete a hydraulic evaluation of both the downstream and upstream fish passage facilities and fish screens to ensure the facility operates within allowable hydraulic criteria, and optimal performance over the FERC license term.
- e) Within the first year of Project operation Warm Springs Hydro must perform post construction monitoring, inspection of fish passage facilities, as well as Bull trout presence documentation procedures described in Terms and Conditions 14.0, 15.0, and

17.0 of the USFWS 30c Terms and Conditions for the Project submitted to FERC on November 12, 2019.

4) Erosion and Sediment Control:

- a) In-Water Work: For Project construction or operations that require in-water work, Warm Springs Hydro must obtain,, a removal-fill permit from Oregon Department of State Lands (DSL), a dredge and fill permit from the U.S. Army Corps of Engineers pursuant to Clean Water Act §404 and any associated Clean Water Act §401 water quality certification from DEQ, as applicable. If Project construction or operations require in-water work that could potentially create an artificial obstruction to native migratory fish, as defined by OAR 635-412-0005(3) and (32), respectively, Warm Springs Hydro must carry out such work in compliance with ODF&W fish passage criteria under OAR 635-412-0035.
- b) Warm Springs Hydro must also obtain a NPDES 1200C stormwater permit from DEQ during construction or other ground disturbance activities.

5) Spill Prevention Control and Countermeasures Plan:

- a) Warm Springs Hydro must implement and maintain at all times the current Spill Prevention Control and Countermeasures Plan.
- b) In the event of a spill or release or threatened spill or release to waters of the state, Warm Springs Hydro must immediately implement the plan and notify Oregon Emergency Response System (OERS) at 1-800-452-0311.
- c) If Warm Springs Hydro becomes aware that Project operations may be causing a water quality violation that results in distressed or dying fish, Warm Springs Hydro must immediately:
 - i. Cease operations;
 - ii. Take appropriate corrective measures to prevent environmental damage;
 - iii. Collect water samples; and
 - iv. immediately notify DEQ and the Agencies.
- d) Warm Springs Hydro shall manage work and staging areas in a manner that prevents the introduction of sediment, wastes, or hazardous materials into waters of the State in accordance with the Erosion and Sediment Control Plan.

6) General Conditions:

- a) Implementation: Warm Springs Hydro must provide DEQ evidence that Warm Springs Hydro has received all required permits and approvals before Project construction activities commence.

b) § 401 Certification Modification: Without limiting DEQ's discretion to take other actions in accordance with OAR Chapter 340, Division 48, and, as applicable, 33 USC 1341, DEQ may modify the Certification to add, delete, or modify Certification conditions as necessary and feasible to address:

- i. Adverse or potentially adverse Project effects on water quality or designated beneficial uses that did not exist or were not reasonably apparent when this Certification was issued;
- ii. TMDLs;
- iii. Changes in water quality standards;
- iv. Any failure of Certification conditions to protect water quality or designated beneficial uses when the Certification was issued; or
- v. Any change in the Project or its operations that was not contemplated by this Certification that might adversely affect water quality or designated beneficial uses.

c) Other Federal Permits: Upon applying for any federal license or permit authorizing a discharge to waters of the United States other than the FERC license, Warm Springs Hydro must provide written notice of such application and of any proposed changes or new activity requested to be authorized since issuance of this § 401 Certification. After such notification to DEQ, Warm Springs Hydro will communicate to the applicable federal agency either that DEQ has determined: (1) this § 401 Certification is sufficient for purposes of the federal license or permit; or (2) in light of new information related to the activity requested to be authorized that could result in water quality impacts, there is no longer reasonable assurance of the Project's compliance with state water quality standards. In the latter event, DEQ may consider the new information, solicit and consider public and agency comment as required by law, and issue a new or modified 401 certification determination.

d) Project Changes: Warm Springs Hydro must notify DEQ of any change in ownership of the Project, including, but not limited to changes to Project structures, construction, operations, or flows. Warm Springs Hydro must obtain DEQ review and approval before undertaking any such change that may affect water quality (other than project changes required by or contemplated in this §401 Certification).

e) Project Repair or Maintenance: Warm Springs Hydro must obtain DEQ review and approval before undertaking Project repair or maintenance activities that might affect

water quality (other than repair or maintenance activities authorized by the FERC license that are required by or contemplated in this §401 Certification). DEQ may, at Warm Springs Hydro's request, approve specified repair and maintenance activities on a periodic or ongoing basis.

f) Project Inspection: Warm Springs Hydro must allow DEQ such access as necessary to inspect the Project area and Project records required by this Certification at reasonable times as necessary to monitor compliance with § 401 certification conditions.

g) Posting of § 401 Certification: Warm Springs Hydro must post a copy of these certification conditions in a prominent location in the Rock Creek Powerhouse or other location approved by DEQ.

h) Water Quality Standards Compliance: Notwithstanding the conditions of this certification, no wastes will be discharged and no activities will be conducted which will violate state water quality standards.

i) Project-Specific Fees: In accordance with ORS 543.080, Warm Springs Hydro must pay a Project-specific fee for DEQ's costs of overseeing implementation of the conditions of this Certification as follows:

Project-Specific Fee

To implement the conditions of this Certification, Warm Springs Hydro must pay project-specific fees of \$4,000 during each of the first four (4) years beginning July 1 of each year following issuance of a FERC License in 2020 dollars adjusted according to the formula below, made payable to State of Oregon, Department of Environmental Quality.

Adjustment

Fee amounts must be adjusted annually, according to the following formula:

$$AD = D \times (CPI-U)/(CPI-U-April 2020)$$

Where:

AD = Adjusted dollar amount payable to agency.

D = Dollar amount pursuant to Project Specific Fee above,

Signature: Lauri Aunan
Lauri Aunan (Sep 9, 2020 12:00 PDT)

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CPI-U = the most current published version of the Consumer Price Index-Urban. The CPI-U is published monthly by the Bureau of Labor Statistics of the U.S. Department of Labor. If that index ceases to be published, any reasonably equivalent index published by the Bureau of Economic Analysis may be substituted by written agreement between DEQ and Warm Springs Hydro.

Payment Schedule

Fees must be paid pursuant to a written invoice from DEQ. Except as provided below, project-specific fees will be due on July 1 of each year following issuance of a FERC License. Warm Springs Hydro must pay an initial prorated payment to DEQ within thirty (30) days of FERC license issuance, for the period from the date of license issuance to the first June 30 which follows license issuance.

Credits

DEQ will credit against this amount any fee or other compensation paid or payable to DEQ, directly or through other agencies of the State of Oregon, during the preceding year (July 1 to June 30) for DEQ's costs of oversight.

Expenditure Summary

DEQ shall, on a biennial basis, provide Warm Springs Hydro with a summary of project-specific expenditures.

Duration

Warm Springs Hydro will pay a Project-specific fee following FERC license issuance and for four (4) years after the first July 1 following FERC license issuance, unless DEQ terminates it earlier because oversight is no longer necessary. One year before the expiration of the fee, or earlier if mutually agreed, DEQ and Warm Springs Hydro shall review the need, if any, to modify, extend, or terminate the fee, in accordance with ORS 543.080. Warm Springs Hydro must pay any project-specific fee required after such review as provided in ORS 543.080.

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Lauri Aunan

Sep 9, 2020

Lauri Aunan

Date

DEQ Interim Eastern Region Administrator