

Clean Water Act § 401 Certification Conditions
for the
Fall Creek Hydroelectric Project
(FERC No. 12778)
Middle Fork Willamette Subbasin,
Lane County, Oregon

Upon Federal Energy Regulatory Commission (FERC) issuance of a new license for the Fall Creek Hydroelectric Project (Project), Symbiotics shall comply with the following § 401 Certification Conditions:

1. Water Quality Management Plan

Symbiotics shall submit a Water Quality Management Plan (WQMP) to the Oregon Department of Environmental Quality (ODEQ) for approval within 12 months of FERC license issuance. Upon approval by ODEQ, Symbiotics shall file the WQMP with FERC and implement the WQMP upon FERC approval. The WQMP must address parameters as specified in these § 401 Certification Conditions and include:

- a) Data collection protocol, analytical methods, and laboratory method reporting limits;
- b) Location and description of monitoring points;
- c) Provision for establishing a downstream gauge;
- d) Compliance monitoring and field audit schedule;
- e) Data sampling frequency;
- f) Applicable compliance criteria;
- g) Instrument calibration procedures and schedule;
- h) Data validation procedures and quality assurance methodology;
- i) Reporting schedule;
- j) Contingency plan for inoperable or malfunctioning equipment; and
- k) Provision for adaptive management in the event water quality criteria are not attained.

2. Project Operation

FCH shall operate the Project in “run-of-reservoir” mode for the duration of the FERC license. Load-following or peaking operation is not allowed. The Project may not affect the timing, magnitude, or ramping of releases or impact the ability of the Corps to achieve authorized management objectives. FCH shall enter into an agreement with the Corps to coordinate transfer of flows between Corps and Project release outlets in a manner which achieves the flow and ramping objectives established in the National Marine Fisheries Service (NMFS) Willamette Valley Project Biological Opinion (July 2008).

3. Flows and Ramping

a) Instream Flows

FCH shall coordinate with the Corps to ensure Project outflow below Fall Creek Dam meets the minimum instream flow objectives as prescribed in the 2008 NMFS Willamette Valley Project Biological Opinion presented below:

<u>Minimum Flow</u>	
200 cfs	Sept. 1 to Oct. 15
80 cfs	Oct. 16 to March 31
50 cfs	April 1 to August 31

b) Flow Fluctuations and Ramping

FCH shall coordinate with the Corps to ensure Project operation does not contribute to violations in ramping objectives prescribed in the 2008 NMFS Willamette Valley Project Biological Opinion and presented below:

<u>Base Flow</u>	<u>Approximate Change in Flow per Hour</u>	
	<u>Day (0.2 ft/hr)</u>	<u>Night (0.1 ft/hr)</u>
50 cfs	---	---
100 cfs	40 cfs	20 cfs
300 cfs	80 cfs	40 cfs
500 cfs	100 cfs	50 cfs
700 cfs	120 cfs	60 cfs

c) Downstream Gauge

FCH shall fund the installation, operation, and maintenance of a new stream gauge located in Fall Creek approximately 500 feet below the dam. Location of the gauge shall be made in consultation and with the approval of ODEQ. The gauge must be fully operational prior Project operation. The gauge must provide publically accessible, real-time transmission of all flow and water quality measurements recorded at that location.

d) Flow Measurement and Reporting

FCH shall record and report flow at the downstream gauge installed in accordance with Condition 3(c), individual flow through each fish horn, and discharge through the Corps regulating outlet.

FCH shall prepare and submit to ODEQ an annual report of average hourly flows at the locations described above. FCH shall submit the report to ODEQ by December 31, or an alternate date agreed to by ODEQ, for each preceding 12-month period ending September 30.

4. Erosion and Sedimentation

FCH shall implement the following conditions to minimize erosion and sedimentation during Project operation.

a) Erosion Control

To reduce erosion and sedimentation, FCH shall conduct restoration and/or enhancement efforts in riparian areas in accordance with the methodology and performance standards presented in the Soil Erosion Control Plan or current revision.

b) In-Water Work

For projects which require in-water work, FCH shall obtain, as applicable, a removal-fill permit from Oregon Department of State Lands, a dredge and fill permit from the Corps pursuant to CWA § 404 and a CWA §401 water quality certification from ODEQ.

5. Monitoring and Reporting

FCH shall develop a WQMP within 12 months of FERC license which incorporates the monitoring and reporting requirements presented below.

a) Monitoring Locations

FCH shall establish monitoring stations at the locations described below. Monitoring stations must provide continuous, real-time transmission of data in accordance with the provisions identified in Condition 1.

(1) Fall Creek Reservoir

FCH shall establish monitoring locations at the inlet to each of the three proposed fish horns. Monitoring probes must be placed in a manner which accurately reflects the condition of water entering the structure.

(2) Powerhouse Tailrace

FCH shall establish a monitoring location in the tailrace below the powerhouse in accordance with the WQMP. Monitoring shall be performed in a location which accurately reflects the condition of Project outflow and the effects of the air admission system.

(3) Fall Creek Downstream Gauge Location

FCH shall maintain a monitoring station at the location of the downstream gauge installed in accordance with Condition 3(c) of this Certification.

b) General Monitoring Requirements

(1) Monitoring Schedule

FCH must record water quality measurements in accordance with the following schedule:

Parameter	Station(s)	Duration	Comments
Dissolved Oxygen & percent saturation Temperature pH	Fall Creek Reservoir Powerhouse Tailrace Downstream Gauge	Five years	Reservoir measurements required at each Project inlet; See Condition 5(b)(2)(i)
Turbidity	Powerhouse Tailrace Downstream Gauge	Five years	See Condition 5(b)(2)(i)
Total Dissolved Gas & percent saturation	Powerhouse Tailrace Downstream Gauge	Five years	See Conditions 5(b)(2)(i & ii)
Project Outflow	Downstream Gauge	License	See Conditions 5(b)(2)(i & iii)

(2) Adjustments to Monitoring Schedule

- i. ODEQ reserves the authority to modify the WQMP to require additional monitoring beyond the duration identified in the above referenced schedule to ensure Project operation does not contribute to water quality violations or degradation.
- ii. The requirement to monitor TDG and percent saturation may be reviewed after two years and modified or waived, as appropriate, with the approval of ODEQ.
- iii. FCH must monitor Project outflow for the duration of the FERC license to ensure compliance with minimum flow and ramping limits. The requirement to report Project outflow to ODEQ is sustained for the duration that water quality monitoring is required.

(3) Audits

Temperature devices shall be tested before and after field deployment to ensure proper operation and calibration. FCH shall perform field audits of all temperature recording devices during the recording period as provided in the WQMP. Pre- and post-deployment and field audits shall be conducted by comparing output against a National Institute of Standards and Technology (NIST) traceable thermometer accurate to $\pm 0.2^{\circ}\text{C}$. FCH shall report temperature audits in the annual reports prepared pursuant to Condition 5(c)(1).

(4) Data Capture

Minimum acceptable data capture is 95 percent, except for circumstances beyond the control of FCH. If data capture falls below 95 percent, ODEQ may require FCH to collect additional data in a following year for all or a portion of the period which data gaps are identified.

c) General Reporting Requirements

(1) Annual Reports

FCH shall prepare an annual water quality report for submittal to ODEQ in accordance with the schedule specified in the WQMP.

(2) Event Reports

FCH shall notify ODEQ within 24 hours of a water quality violation which necessitates suspension of power generation as required by this Certification.

d) Adaptive Management

If water quality monitoring indicates water quality standards are not met, ODEQ may require FCH to submit a report analyzing the situation and may require additional monitoring and/or adaptive management of the Project to ensure compliance with applicable water quality criteria.

6. Air Admission System Plan

FCH shall prepare and submit to ODEQ an Air Admission System Plan within 12 months following FERC license issuance. Upon ODEQ approval, FCH shall submit the plan to FERC. Upon FERC approval, FCH shall implement the plan.

At a minimum, the plan shall include the following elements:

a) Engineering and Technical Specifications

The plan should provide technical specifications of the proposed air admission system including data to support estimates of dissolved oxygen augmentation, engineering design drawings, and modeling results, as appropriate.

b) Air Admission System Operation

The Air Admission System Plan should describe the strategy for operating the air admission system. The plan should address the collection and evaluation of data needed to inform changes in system operation, adaptive management strategies, and predictive methods, as warranted.

c) Project Shutdown

FCH must temporarily cease power generation if dissolved oxygen concentrations measured at the downstream monitoring station fail to meet applicable dissolved oxygen objectives identified in the WQMP. Prior to restarting the Project, FCH must demonstrate to ODEQ that applicable

dissolved oxygen water quality criteria will be met and maintained. FCH must receive authorization from ODEQ prior to restarting hydropower operations. Three years following the date of initial startup, FCH may request authorization from ODEQ to modify the requirement to receive ODEQ authorization prior to restarting Project operation.

d) Notification

FCH must notify ODEQ within 24 hours of an event which requires the suspension of power generation pursuant to Condition 6(c). FCH shall identify and evaluate all events which required FCH to suspend power generation in the annual report prepared for ODEQ pursuant to Condition 5(c)(1). The report must identify episodes during which the Project was prevented from operating due to dissolved oxygen water quality violations, describe measures performed to correct for dissolved oxygen deficits, and document authorization, if required, to restart the facility.

7. Toxic Substances; Solid Waste Management; and Spill Response

- a) FCH shall maintain its current Hazardous Substances Spill Prevention and Cleanup Plan, or applicable contingency plan, in effect at all times.
- b) In the event of a spill or release or threatened spill or release to state waters, FCH shall implement the applicable contingency plan and notify the Oregon Emergency Response System (OERS) at 1-800-452-0311.
- c) Project maintenance that could result in accumulations of solid waste or other residues shall comply with ODEQ regulations and permit requirements. FCH employees and its contractors shall receive instruction and training designed to be sufficient to implement applicable prevention and emergency response plans and to respond to situations that could result in unauthorized discharges to waters of the State.
- d) FCH shall manage staging areas in a manner which prevents the introduction of sediment, wastes, or hazardous materials into waters of the State in accordance with the Soil Erosion Control Plan.

8. General

a) Implementation

FCH shall provide ODEQ evidence that FCH has received all required permits and approvals before implementation or Project construction.

b) Certification Modification

ODEQ, in accordance with Oregon and Federal law including OAR Chapter 340, Division 48 and, as applicable, 33 USC 1341, may modify this Certification to add, delete, or alter Certification conditions as necessary to address:

- (1) Adverse or potentially adverse Project effects on water quality or designated beneficial uses that did not exist or were not reasonably apparent when this § 401 Certification was issued;
- (2) TMDLs (not specifically addressed above in these § 401 Certification Conditions);
- (3) Changes in water quality standards;
- (4) Any failure of these § 401 Certification Conditions to protect water quality or designated beneficial uses as expected when this § 401 Certification was issued; or
- (5) Any change in the Project or its operations that was not contemplated by this § 401 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 new FERC license, FCH shall provide ODEQ written notice of such

application and of any proposed changes or new activity requested to be authorized under the application since issuance of this § 401 Certification. DEQ will notify FCH and the applicable federal agency either that: (1) this § 401 Certification is sufficient for purposes of the federal license or permit; or (2) in light of new information related to the water quality impacts of the activity requested to be authorized under the application, there is no longer reasonable assurance of compliance with state water quality standards. In the latter event, ODEQ will consider the new information, solicit and consider public and agency comment as required by law, and issue a 401 certification determination for purposes of the federal license or permit.

(d) Project Modification

FCH shall obtain ODEQ review and approval before undertaking any change to the Project that might significantly affect water quality (other than project changes authorized by the new FERC license or required by or considered in this § 401 Certification), including changes to Project structures, operations, and flows.

(e) Repair and Maintenance

FCH shall obtain ODEQ review and approval before undertaking Project repair or maintenance activities that might significantly affect water quality (other than repair or maintenance activities authorized by the new FERC license required by or considered in this § 401 Certification). ODEQ may, at FCH's request, provide such prior approval effective prospectively for specified repair and maintenance activities.

(f) Inspection

FCH shall allow ODEQ such access as necessary to inspect the Project area and Project records required by these § 401 Certification Conditions and to monitor compliance with these § 401 Certification Conditions, upon reasonable notice and subject to applicable safety and security procedures when engaged in such access.

(g) Posting

FCH shall post or maintain a copy of these § 401 Certification Conditions at the Fall Creek Hydroelectric Project Office.

9. Project Specific Fees

In accordance with ORS 543.080, Symbiotics shall pay a Project-specific fee for ODEQ's costs of overseeing implementation of the conditions of this Certification.

a) Project-Specific Fee

To implement the conditions of this Certification, FCH shall pay project-specific fees of \$12,500 during each of the first two years following issuance of a FERC license and \$9,500.00 in each year thereafter, in 2012 dollars adjusted according to the formula below, made payable to State of Oregon, Department of Environmental Quality.

b) Adjustment

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

$$AD = D \times (CPI-U)/(CPI-U-June 2012)$$

Where:

AD = Adjusted dollar amount payable to agency.

D = Dollar amount pursuant to Condition 12a and Condition 12b above,

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 ODEQ and FCH.

c) Payment Schedule

Fees shall be paid pursuant to a written invoice from ODEQ. Except as provided below, project-specific fees shall be due on July 1 of each year following issuance of the new FERC License. FCH shall pay an initial prorated payment to ODEQ within 30 days of license issuance, for the period from the date of license issuance to the first June 30 which follows license issuance.

d) Credits

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

e) Expenditure Summary

ODEQ shall, on a biennial basis, provide FCH with a summary of project specific expenditures.

f) Duration

The ODEQ fee shall begin with FERC license issuance and expire 5 years after the first July 1 following post-test commencement of commercial power generation, unless ODEQ terminates it earlier because oversight is no longer necessary. One year before the expiration of the fee, or earlier if mutually agreed, ODEQ and FCH shall review the need, if any, to modify, extend, or terminate the fee, in accordance with ORS 543.080. FCH shall pay any project-specific fee required after such review as provided in ORS 543.080.

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Keith Andersen
Western Region Administrator

March 30, 2012

Date