

Clean Water Act § 401 Certification
for the
Deschutes Valley Water District
Opal Springs Hydroelectric Project
(FERC No. 5891)
Crooked River Subbasin,
Jefferson County, Oregon

Upon Federal Energy Regulatory Commission issuance of an amended license for the Opal Springs Hydroelectric Project, the Deschutes Valley Water District shall comply with the following § 401 water quality certification conditions:

1. Water Quality Management Plan

Within six months of receiving an amended FERC license Deschutes Valley Water District shall submit a Water Quality Management Plan to the Oregon Department of Environmental Quality. Upon approval by DEQ, Deschutes Valley Water District shall file the WQMP with FERC and implement the WQMP upon FERC approval. The WQMP must address parameters specified in this § 401 water quality certification and include:

- a) Data collection protocol, analytical methods, and laboratory method reporting limits;
- b) Location and description of monitoring points;
- c) Compliance monitoring and field audit schedule;
- d) Data sampling frequency;
- e) Applicable compliance criteria;
- f) Instrument calibration procedures and schedule;
- g) Data validation procedures and quality assurance methodology; and
- h) Contingency plan for inoperable or malfunctioning equipment.

2. Biological Criteria; Protection of Beneficial Uses; Instream Flows

a) Bypass Reach Flows

Deschutes Valley shall maintain a minimum continuous instream flow of 50 cfs in the bypass reach below the dam in accordance with Article 36 of the current FERC license.

b) Bypass Flow Accrual Account (BFAA)

Deschutes Valley Water District shall establish, manage, and administer the Bypass Flow Accrual Account in accordance with methodology presented in proposed License Article 4 of the 2015 Amended and Restated Settlement Agreement.

c) Fish Passage

Deschutes Valley Water District shall construct, operate, and maintain fish passage facilities in accordance with the criteria described in proposed License Article 2 of the 2015 Amended and Restated Settlement Agreement.

d) Beneficial Use

If DEQ determines that operation of the fish passage facilities described in Condition 2c of these Conditions extends the range of documented spawning habitat used by salmon, steelhead, or bull trout, the Deschutes Valley Water District must take appropriate actions to comply with the following additional conditions, unless otherwise specified by DEQ:

- (1) The seven-day-average maximum temperature may not exceed 12.0 degrees Celsius in stream segments with documented bull trout spawning and juvenile rearing use;
- (2) The seven-day-average maximum temperature may not exceed 13.0 degrees Celsius during the period identified by DEQ in stream segments with documented salmon or steelhead spawning use;
- (3) Dissolved oxygen may not be less than 11.0 mg/l during the period identified by DEQ in stream segments with documented active spawning use, and if the minimum intergravel dissolved oxygen, measured as a spatial median, is 8.0 mg/l or greater, then the dissolved oxygen limit is 9.0 mg/l.

DEQ will notify Deschutes Valley Water District in writing of its determination that these additional conditions are required, including the corresponding areas and time periods in which each condition applies.

Upon such notification, Deschutes Valley Water District may submit within 90 days an alternative plan that demonstrates compliance with these conditions for DEQ's review. If, after public review and comment in accordance with applicable law, if any, DEQ approves or conditionally approves that plan as consistent with water-quality standards, then DVWD will implement that plan, as conditioned, in accordance with its terms.

3. Narrative Criteria: Objectionable Discoloration, Scum, and Oily Sheens

a) Best Management Practices

Deschutes Valley Water District must employ Best Management Practices when handling, storing, or using materials which may, if spilled, result in adverse or objectionable conditions in violation of this water quality standard.

b) Notification

In the event of a spill or release or threatened spill or release to waters of the state of petroleum or other hazardous substances at or above reportable quantities as specified in applicable state and federal regulations, Deschutes Valley must implement effective spill response procedures, notify Oregon Emergency Response System, and comply with ORS Chapters 466 and 468, as applicable.

c) Recordkeeping

For the term of the amended license, Deschutes Valley Water District shall retain records for the period of time required by law which document: the occurrence of reportable releases; visual observations and/or photographic documentation of hazardous material releases which impact aquatic resources; remedial activities undertaken by Deschutes Valley Water District or a contractor to address hazardous material releases; correspondence and/or conversation records which document agency notification, as warranted regarding hazardous material releases; other records deemed appropriate.

4. Dissolved Oxygen

a) Water Quality Monitoring Plan

The WQMP developed by Deschutes Valley Water District pursuant to Condition 1 of these § 401 Certification Conditions shall incorporate the dissolved oxygen monitoring requirements presented below:

(1) Impoundment

Deschutes Valley Water District shall continuously measure DO at upstream and downstream locations in the diversion pool for a minimum of 30 consecutive days during the first July and August when the diversion pool is maintained at an average elevation of at least 2,006.61 feet MSL (i.e., 80 percent of the proposed increase in elevation).

Beginning no later than May 1, Deschutes Valley Water District shall continuously measure DO at the above referenced locations for at least 15 consecutive days during the first May in which the diversion pool is maintained at an average elevation of at least 2,006.61 feet MSL.

(2) Bypass Reach

Concurrent with the measurements and schedules described in Condition 4a(1) above, Deschutes Valley Water District shall measure DO in the upper bypass reach in the vicinity of the proposed ladder entrance.

b) Duration

Water quality monitoring is required for three consecutive years beginning in the first year following completion of fish passage facilities identified in Condition 2c. If, after the second year of required monitoring, DEQ is reasonably assured the Project will meet applicable water quality standards, DEQ may approve discontinuing further monitoring. Alternatively, DEQ may require additional monitoring and/or adaptive management after the third year of monitoring, as warranted, to demonstrate provide support for all recognized beneficial uses.

c) Reporting

Deschutes Valley Water District shall report DO monitoring data to DEQ by December 31 of each year for which monitoring was performed. The report shall address the requirements in Condition 1 of these Conditions and analyze the effects, if any, of Project operation on the DO water quality standard. Following review and approval of the report by DEQ, Deschutes Valley Water District shall file the report with FERC.

d) Adaptive Management

If monitoring indicates the DO water quality standard is not met, DEQ will require Deschutes Valley Water District to submit a report analyzing the situation and shall require additional monitoring and adaptive management of the Project to ensure Project operation does not contribute to violations of water quality standards. Strategies to achieve this objective may include reducing the operating elevation of the diversion pool, increasing flow in the bypass reach or other operational adjustments to ensure Project operation does not contribute to violations of water quality standards.

5. Hydrogen Ion Concentration (pH)

a) Water Quality Monitoring Plan

The WQMP developed by Deschutes Valley Water District pursuant to Condition 1 of these § 401 Certification Conditions shall incorporate the pH monitoring requirements presented below:

(1) Impoundment

Deschutes Valley Water District shall measure pH at upstream and downstream locations in the diversion pool for a minimum of 30 consecutive days during the first July and August when the diversion pool is maintained at an average elevation of at least 2,006.61 feet MSL.

(2) Bypass Reach

Concurrent with the measurements and schedules described in Condition 5(a)(1) above, Deschutes Valley Water District shall measure pH in the upper bypass reach in the vicinity of the proposed ladder entrance.

b) Duration

Water quality monitoring is required for three consecutive years beginning in the first year following completion of fish passage facilities identified in Condition 2c. If, after the second year of required monitoring, DEQ is reasonably assured the Project will meet applicable water quality standards, DEQ may approve discontinuing further monitoring. Alternatively, DEQ may require additional monitoring and/or adaptive management after the third year of monitoring, as warranted, to demonstrate provide support for all recognized beneficial uses.

c) Reporting

Deschutes Valley Water District shall report pH monitoring data to DEQ by December 31 of each year for which monitoring was performed. The report shall address the requirements in Condition 1 of these Conditions and analyze the effects, if any, of Project operation on the pH water quality standard. Following review and approval of the report by DEQ, Deschutes Valley Water District shall file the report with FERC.

d) Adaptive Management

If monitoring indicates the pH water quality standard is not met, DEQ will require Deschutes Valley Water District to submit a report analyzing the situation and shall require additional monitoring and or adaptive management of the Project to ensure Project operation does not contribute to violations of water quality standards. Strategies to achieve this objective may include reducing the operating elevation of the diversion pool, increasing flow in the bypass reach, or other operational adjustments to ensure Project operation does not contribute to violations of water quality standards.

6. Temperature

a) Water Quality Monitoring Plan

The WQMP developed by Deschutes Valley Water District pursuant to Condition 1 of these § 401 Certification Conditions shall incorporate the minimum temperature monitoring requirements presented below:

(1) Impoundment

Deschutes Valley Water District shall measure temperature at upstream and downstream locations in the diversion pool from May 1 through September 30 beginning with the first year after completion of activities proposed under the proposed license amendment.

Monitoring shall include a minimum of 30 days during the July and August when the diversion pool is maintained at an average elevation of at least 2,006.61 feet.

(2) Bypass Reach

Concurrent with the measurements and schedules described in Condition 6a(1) above, Deschutes Valley Water District shall measure temperature in the upper bypass reach in the vicinity of the proposed ladder entrance.

b) Duration

Water quality monitoring is required for three consecutive years beginning in the first year following completion of fish passage facilities identified in Condition 2c. Based on the results of the first and second year of required monitoring, DEQ will determine whether monitoring may be discontinued or additional data collection is required. If DEQ determines that additional data collection is required, DEQ will require additional monitoring and adaptive management.

c) Reporting

Deschutes Valley Water District shall report temperature monitoring data to DEQ by December 31 of each year for which monitoring was performed. The report shall address the requirements in Condition 1 of these Conditions and analyze the effects, if any, of Project operation on the temperature water quality standard. Following review and approval of the report by DEQ, Deschutes Valley Water District shall file the report with FERC.

d) Adaptive Management

If monitoring indicates the temperature water quality standard is not met, DEQ will require Deschutes Valley Water District to submit a report analyzing the situation and may require additional monitoring and/or adaptive management of the Project to ensure Project operation does not contribute to violations of water quality standards. Adaptive measures may include altering the timing and/or magnitude of Bypass Flow Accrual Account releases to minimize temperature increases in the bypass reach, lowering the elevation of the diversion pool to decrease retention time, or other measures intended to reduce Project-related thermal impacts. Deschutes Valley Water District must submit the report within six months of identifying temperature exceedances. Upon DEQ approval, Deschutes Valley shall submit the plan to FERC for approval. Upon FERC approval, Deschutes Valley shall implement the plan.

7. General Conditions

a) Certification Modification

DEQ, 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.

b) Other Federal Permits

Upon applying for any federal license or permit authorizing a discharge to waters of the United States other than the new or amended FERC license, Deschutes Valley Water District shall provide DEQ 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 Deschutes Valley Water District 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.

For projects which require in-water work, Deschutes Valley Water District shall obtain, as applicable, a removal-fill permit from Oregon Department of State Lands, a dredge and fill permit from the Corps pursuant to § 404 of the Clean Water Act, and a §401 water quality certification from DEQ.

c) Project Modification

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

d) Repair and Maintenance

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

e) Inspection

Deschutes Valley Water District shall allow DEQ 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.

f) Posting

Deschutes Valley Water District shall post or maintain a copy of these § 401 Certification Conditions at the Opal Springs Hydro Project Office.

8. Project Specific Fees

In accordance with ORS 543.080, Deschutes Valley Water District shall pay project-specific fees, in 2016 dollars adjusted according to the formula in Condition 8c below, to DEQ for costs of overseeing implementation of this Certification.

a) Oregon Department of Environmental Quality

Deschutes Valley Water District shall pay project-specific fees to ODEQ, made payable to State of Oregon, Department of Environmental Quality, according to the following schedule:

FERC License	Annual Project-Specific Fee Subject to Adjustment	Due
Upon License Amendment Years 1 - 5	\$ 3,500 prorated to June 30 \$ 3,500	Within 30 days July 1

b) Annual Adjustment

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

$$AD = D \times (CPI-U)/(CPI-U-June 2010)$$

Where:

- AD = Adjusted dollar amount payable to agency.
- D = Dollar amount pursuant to Condition 8a 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 DEQ and Deschutes Valley Water District.

c) Payment Schedule

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

d) 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.

e) Expenditure Summary

Upon request, DEQ shall, on a biennial basis, provide Deschutes Valley Water District with a summary of project specific expenditures.

f) Duration

The DEQ fee shall expire 3 years after the first July 1 following the issuance of the new FERC license, 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 Deschutes Valley Water District shall review the need, if any, to modify, extend, or terminate the fee, in accordance with ORS 543.080. Deschutes Valley Water District shall pay any project-specific fee required after such review as provided in ORS 543.080.

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

David Belyea
Acting Western Region Administrator

Date