

# Exhibit A

## Carmen-Smith Hydroelectric Project (FERC No. 2242)

### Proposed License Articles

Submitted by:

Eugene Water & Electric Board



**Exhibit A**  
**Proposed License Articles**

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## CARMEN-SMITH PROPOSED LICENSE ARTICLES

### ORDERING PARAGRAPHS

- (A) The Amended and Restated Settlement Agreement For the Relicensing of the Carmen Smith Hydroelectric Project, filed with the Commission on November 30, 2016, (the “Settlement Agreement”), including the exhibits attached thereto, is hereby approved and adopted.
- (B) The following license management plans are approved and made a part of this license:
- (1) Aquatics Management Plan (AMP), Exhibit B to the November 2016 Amended and Restated Amended and Restated Settlement Agreement For the Relicensing of the Carmen Smith Hydroelectric Project with the exception of the following measures:
    - a) Gravel Augmentation activities in the vicinity of Transect No. 7 in the Upper Carmen Bypass Reach (contained in Section 4.3.1.8)
    - b) Gravel Augmentation in the Lower Carmen Bypass Reach and an associated new road (Section 4.3.2.1 and 4.3.2.2)
    - c) Lower Carmen Bypass Reach, Contingency Actions (Section 4.3.5.5)
  - (2) Recreation and Aesthetics Management Plan, Exhibit C to the November 2016 Amended and Restated Settlement Agreement For the Relicensing of the Carmen Smith Hydroelectric Project with the exception of the following measures:
    - a) Rehabilitation of the Ice Cap Creek Campground (Section 4.1)
    - b) Closure of dispersed use area at Fish Ladder Rapids and conversion to a parking area and spur for river scouting by boaters (Section 4.18.2)
  - (3) Wildlife Management Plan, Exhibit D to the November 2016 Amended and Restated Settlement Agreement For the Relicensing of the Carmen Smith Hydroelectric Project;
  - (4) Vegetation Management Plan, Exhibit E to the November 2016 Amended and Restated Settlement Agreement For the Relicensing of the Carmen Smith Hydroelectric Project;
  - (5) Historic Properties Management Plan, Exhibit F to the November 2016 Amended and Restated Settlement Agreement For the Relicensing of the Carmen Smith Hydroelectric Project; and
  - (6) Roads, Waste Areas, and Staging Areas Management Plan, Exhibit G to the November 2016 Amended and Restated Settlement Agreement For the Relicensing of the Carmen Smith Hydroelectric Project.

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- (C) This license is subject to the conditions submitted by the State of Oregon Department of Environmental Quality under Section 401 of the Clean Water Act, as those conditions are set forth in Appendix A to this order.
  - (D) This license is subject to the conditions submitted by the Secretary of the U.S. Department of the Interior under section 18 of the Federal Power Act (FPA), as set forth in Appendix B to this order.
  - (E) This license is subject to the conditions submitted by the Secretary of the U.S. Department of Commerce under section 18 of the FPA, as those conditions are set forth in Appendix C to this order.
  - (F) This license is subject to the conditions submitted by the U.S. Forest Service under section 4(e) of the FPA, as set forth in Appendix D to this order.
  - (G) This license is issued to Eugene Water & Electric Board (Licensee) to construct, operate and maintain the Carmen-Smith Project for a period of 40 years, effective the first day of the month in which this order is issued. The license is subject to the terms and conditions of the FPA, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

## **ARTICLE 1. CONSULTATION AND APPROVAL PROCESS**

This license, the license articles, the management plans required to be implemented under this license, and the management plans required to be developed and implemented under this license require the Licensee to consult with certain parties and to obtain approval from various agencies before taking specific actions. In each such instance where the license or management plan calls for consultation or agency approval, the Licensee shall follow the appropriate consultation process, the agency approval process, and the expedited consultation and agency approval process in paragraphs (a), (b) and (c) below. Where this license requires approval by Fish Agencies, Fish Agencies include the National Marine Fisheries Service, the United States Fish and Wildlife Service and the Oregon Department of Fish and Wildlife to the extent of each of their legal authorities.

### **(a) Consultation Process**

The Licensee shall, where this license or a management plan requires consultation before the Licensee files with the Commission any study, operating or implementation plan, report, or facility design: (i) where specified in a management plan, consult with the work group during the development of the draft study, operating or implementation plan, report, or facility design, (ii) provide the required parties or work group members with a copy of the draft study, operating or implementation plan, report, or facility design and all data supporting that draft study, operating or implementation plan, report, or facility design, and (iii) allow a minimum of 30 days (which the Licensee may reasonably extend upon request of a party or work group member if needed to facilitate consultation) for comment and recommendations, unless a different time period is established under the license or the management plan, or is directed by the Commission. During the

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consultation period, the Licensee shall convene at least one meeting of the parties or work group members to discuss the draft study, operating or implementation plan, report, or facility design and reach consensus and if consensus cannot be reached proceed as described below. “Consensus” means that any decision must be acceptable to, or not opposed by, all of the parties or work group members. The Licensee shall provide to the parties or work group members a final version of the study, operating or implementation plan, report, or facility design at the time that the Licensee provides the final version of the document for approval pursuant to paragraph (b) below.

If a party or work group member does not respond to a request for consultation within 30 days, or as such period may have been extended, that party or work group member is not considered for purposes of obtaining consensus. If no party or work group member responds to the request for consultation within 30 days, or as such period may have been extended, the Licensee may file the study, operating or implementation plan, report, or facility design with the Commission.

When consultation is required under this license or a management plan and consensus is not reached prior to the date the Licensee is required to make a submission to the Commission, the Licensee shall make the submission to the Commission according to the schedule provided in this license or the management plan, or as directed by the Commission, and shall describe to the Commission how the Licensee’s submission accommodates any comments and recommendations of the parties or work group members. If the Licensee’s submission does not adopt a recommendation, the submission will include the Licensee’s reasons based on Project-specific information. The Licensee shall provide the Commission with a copy of any comments and recommendations provided by the parties or work group members during the consultation. Any party or work group member may seek to resolve the consultation disagreement in accordance with the dispute resolution process in Section 7 of the Settlement Agreement. The parties or work group members may submit their own comments to the Commission. If applicable, once the dispute resolution process is completed, the Licensee shall file the study, operating or implementation plan, report or facility design with the Commission.

#### (b) Agency Approval Process

Where this license or a management plan requires consultation with required parties or work group members and approval by one or more agencies, the Licensee’s submission of a study, operating or implementation plan, report, or facility design to the parties or work group members will also constitute submission for approval to such agency, if a party or work group member. When approval of an agency is required, the Licensee shall provide to the agency a final version of the study, operating or implementation plan, report, or facility design on which approval is sought. Unless a different time period is established in this license or in a management plan or is directed by the Commission, the Licensee shall, where approval by an agency is required, allow a minimum of 30 days for the agency to provide its approval before the Licensee files any study, operating or implementation plan, report, or facility design with the Commission. If consensus is

achieved by the parties or work group members pursuant to paragraph (a) above, such approval shall be deemed to have been obtained. Each agency who is a party or work group member with approval authority will document its approval in writing to the Licensee, which approval or approvals the Licensee shall include in any filing with the Commission. Unless otherwise required by this license or a management plan or directed by the Commission, the Licensee shall, if requested by an agency with approval authority, grant a 30-day extension for completion of consultation. Any agency or agencies will endeavor to make approval decisions during consultation whenever possible.

If an agency does not respond to a request for approval within 30 days, or as such period may have been extended, the obligation for obtaining approval from that agency will be deemed to have been satisfied for purposes of meeting the requirements of the license and the Settlement Agreement. If no agencies with approval authority respond to the request for approval within 30 days, or as such period may have been extended, the Licensee may file the study, operating or implementation plan, report or facility design with the Commission.

When approval of an agency is required under this license or a management plan and approval has not been provided, the Licensee or the agency may seek to resolve the lack of approval in accordance with the dispute resolution process in Section 7 of the Settlement Agreement. If the dispute has not been resolved after the dispute resolution process outlined in Sections 7.1, 7.1.1 and 7.1.2 of the Settlement Agreement or approval has not been provided prior to the date that the Licensee is required to make a submission to the Commission, the Licensee shall make the submission to the Commission according to the schedule provided in this license or the management plan, or as directed by the Commission, and shall describe to the Commission why approval was not provided. In such instance, the agency whose approval was required may submit its own explanation as to why approval was not provided. The Licensee or the agency may seek to resolve the lack of approval in accordance with the dispute resolution process in Section 7 of the Settlement Agreement. If applicable, once the dispute resolution process is completed, the Licensee shall file the study, operating or implementation plan, report or facility design with the Commission. If resolution was not achieved through dispute resolution, then the agency may submit its own explanation as to why resolution was not achieved.

#### (c) Expedited Consultation and Agency Approval Process

When consultation under paragraph (a) above or agency approval under paragraph (b) above is required and the time provided for consultation in paragraph (a) or approval in paragraph (b) is not reasonably available because the Licensee must implement an action under this license or a management plan within a shorter period of time due to extraordinary circumstances beyond the Licensee's reasonable control, the Licensee shall provide notice to the required parties or work group members and the agencies with approval authority, as applicable, that: (1) an expedited consultation and approval process will occur within the time available, (2) the location, date and time for the process, (3) the subject for the process, and (4) why the Licensee must take action within the shorter

period of time. The Licensee shall complete as much of the consultation and approval process as can occur in the time reasonably available before the Licensee must implement the action. If consultation is not completed or an approval is not obtained within the time available, the Licensee may implement the action to the extent allowed by law after Commission approval if applicable, but the parties or work group members may still require that the consultation process in paragraph (a) above and the agency approval process in paragraph (b) above, as applicable, be completed after the Licensee has implemented the action.

## **ARTICLE 2. MANAGEMENT PLAN WORK GROUPS**

The Licensee shall convene and administer the following work groups for implementation of applicable management plans required by this license: the Fisheries Work Group, Vegetation Management Plan Work Group, Wildlife Management Plan Work Group, Historic Properties Management Plan Work Group, Recreation and Aesthetics Management Plan Work Group, Roads, Waste Areas and Staging Areas Management Plan Work Group, Water Quality Management Plan Work Group, Transmission Line Management Plan Work Group, and Fire Response and Suppression Coordination Plan Work Group. Each work group will be established as provided in the applicable management plan or license article. The Licensee may, with consensus (as defined in Article 1 above) of the applicable work group members, combine for a period of time one or more work groups into a larger work group. The Licensee shall coordinate the work groups in cooperation with the applicable work group members.

## **ARTICLE 3. INSTREAM FLOWS**

The Licensee shall implement Section 4.2 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement. The Licensee shall implement Section 4.2 in consultation with the Fisheries Work Group and subject to approval by the Fish Agencies and USDA Forest Service as provided in Section 4.2.

## **ARTICLE 4. HABITAT PROTECTION, MITIGATION, AND ENHANCEMENT— UPPER CARMEN BYPASS REACH AND CARMEN DIVERSION DAM FISH PASSAGE**

The Licensee shall implement Section 4.3.1 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, with the exception of gravel augmentation in the vicinity of Transect No. 7 in the Upper Carmen Bypass Reach. The Licensee shall implement Section 4.3.1 in consultation with the Fisheries

Work Group and subject to approval by the Fish Agencies and USDA Forest Service as provided in Section 4.3.1. The Licensee shall initiate the upper Carmen Bypass Reach Protection, Mitigation and Enhancement Plan described in Section 4.3.1 no later than the first year after the Carmen Diversion Dam instream flow releases (required in Article 3) commence, unless a different timeframe is otherwise agreed to by the Fish Agencies and USDA Forest Service.

### **ARTICLE 5. HABITAT PROTECTION, MITIGATION AND ENHANCEMENT—CARMEN DIVERSION RESERVOIR**

The Licensee shall implement Section 4.3.3 Carmen Diversion Reservoir Habitat Protection, Mitigation and Enhancement of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, within 3 years after license issuance. The Licensee shall implement Section 4.3.3 in consultation with the Fisheries Work Group and subject to approval by the Fish Agencies and USDA Forest Service as provided in Section 4.3.3.

### **ARTICLE 6. HABITAT PROTECTION, MITIGATION AND ENHANCEMENT—SMITH RESERVOIR**

The Licensee shall implement Section 4.3.4 Smith Reservoir Habitat Protection, Mitigation and Enhancement of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, within 5 years after license issuance. The Licensee shall implement Section 4.3.4 in consultation with the Fisheries Work Group and subject to approval by the Fish Agencies and USDA Forest Service as provided in Section 4.3.4.

### **ARTICLE 7. HABITAT PROTECTION, MITIGATION AND ENHANCEMENT—SMITH BYPASS REACH**

The Licensee shall implement Section 4.3.5 Smith Bypass Reach of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, within 4 years after license issuance. The Licensee shall implement Section 4.3.5 in consultation with the Fisheries Work Group and subject to approval by the Fish Agencies and USDA Forest Service as provided in Section 4.3.5. The schedule will provide that the Licensee shall complete “Step 2” (Section 4.3.5.2) within 9 years after license issuance unless the Licensee implements any of the adaptive management provisions of Section 4.3.5 (e.g., Section 4.3.5.3).

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**ARTICLE 8. HABITAT PROTECTION, MITIGATION AND ENHANCEMENT—TRAIL BRIDGE RESERVOIR**

The Licensee shall implement Section 4.3.6 Trail Bridge Reservoir Habitat of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, within 5 years after license issuance. The Licensee shall implement Section 4.3.6 in consultation with the Fisheries Work Group and subject to approval by the Fish Agencies and USDA Forest Service as provided in Section 4.3.6.

**ARTICLE 9. HABITAT PROTECTION, MITIGATION AND ENHANCEMENT—CARMEN-SMITH SPAWNING CHANNEL**

The Licensee shall implement Section 4.3.7 Spawning Channel of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, within 5 years after license issuance. The Licensee shall implement Section 4.3.7 in consultation with the Fisheries Work Group and subject to approval by the Fish Agencies and USDA Forest Service as provided in Section 4.3.7.

**ARTICLE 10. TRAIL BRIDGE RESERVOIR FLUCTUATIONS**

The Licensee shall implement Section 4.4.1 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement. The Licensee shall implement Section 4.4.1 in consultation with the Fisheries Work Group and subject to approval by the Fish Agencies and USDA Forest Service as provided in Section 4.4.1.

**ARTICLE 11. TRAIL BRIDGE RESERVOIR STRANDING MANAGEMENT**

The Licensee shall implement Section 4.4.2 Trail Bridge Reservoir Stranding Management of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement. The Licensee shall implement Section 4.4.2 in consultation with the Fisheries Work Group and subject to approval by the Fish Agencies and USDA Forest Service as provided in Section 4.4.2.

**ARTICLE 12. RAMPING-MCKENZIE RIVER**

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The Licensee shall implement Section 4.4.3 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement. The Licensee shall implement Section 4.4.3 in consultation with the Fisheries Work Group and subject to approval by the Fish Agencies and USDA Forest Service as provided in Section 4.4.3.

### **ARTICLE 13. LARGE WOODY DEBRIS MANAGEMENT**

The Licensee shall initiate implementation of Section 4.5 Large Woody Debris Management of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, within 6 months after license issuance. The Licensee shall implement Section 4.5 in consultation with the Fisheries Work Group and subject to approval by the Fish Agencies and USDA Forest Service as provided in Section 4.5.

### **ARTICLE 14. WATER QUALITY MANAGEMENT**

Within 12 months after issuance of the license, the Licensee shall submit a Water Quality Management Plan (WQMP) to the State of Oregon Department of Environmental Quality (ODEQ) for approval. The WQMP shall comply with the conditions presented in the Clean Water Act Section 401 Water Quality Certification for the Project. The Licensee shall include in the WQMP objectives, plan elements, performance standards, monitoring protocols, reporting schedules and procedures, adaptive management strategies, and an implementation schedule. Upon approval of the WQMP by ODEQ, the Licensee shall file the WQMP with the Commission for approval. The Licensee shall implement the WQMP upon Commission approval.

### **ARTICLE 15. REPORTING REQUIREMENTS**

The Licensee shall prepare an annual report regarding the Licensee's implementation of each of the following resource management plans: Aquatics Management Plan, Vegetation Management Plan, Wildlife Management Plan, Historic Properties Management Plan, Recreation and Aesthetics Management Plan, Roads, Waste Areas, and Staging Areas Management Plan, Water Quality Management Plan, Transmission Line Management Plan, and Fire Response and Suppression Coordination Plan.

The Licensee shall provide a draft of the annual report to the work group formed under each resource management plan for a 30-day comment period. At the request of a work group member, the Licensee shall extend the comment period for an additional 30 days. The Licensee shall submit a final report and response to comments on the draft report to the Commission within 90 days after the end of the comment period. The Licensee shall

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include, at a minimum, the following information in the annual report for each resource management plan identified above:

- (a) A summary of the actions implemented during the previous calendar year.
- (b) A discussion of any substantial differences between the actions provided in each resource management plan above and the actions that the Licensee implemented, including explanations and any necessary agency approvals for any substantial differences.
- (c) A summary of the actions the Licensee plans to implement for the current calendar year.
- (d) A discussion of any significant differences between the implementation schedule in each resource management plan and the schedule for the actions the Licensee plans to implement in the current calendar year, including an explanation for any significant differences.
- (e) Documentation of consultation with the respective resource management plan work group and approval by the agencies with approval authority regarding actions the Licensee implemented under each resource management plan in the previous calendar year.
- (f) Results of any monitoring that occurred during the previous calendar year, conclusions that the Licensee draws from the monitoring results, and any changes to each resource management plan the Licensee proposes based on the monitoring results. Prior to formally proposing any changes to the Commission, the Licensee will consult with the appropriate work group and obtain the appropriate agency approval as required by that work plan.

## **ARTICLE 16. CONSTRUCTION MANAGEMENT PLAN**

Within 6 months after license issuance, the Licensee, in consultation with the Fisheries Work Group and subject to approval by the Fish Agencies, USDA Forest Service and Oregon Department of Environmental Quality in accordance with their statutory authorities, shall develop and file with the Commission for approval a construction management plan for construction activities at the Project pursuant to the new license. Following Commission approval, the Licensee shall implement the plan.

The plan shall address the following:

- a) Measures designed to minimize adverse impacts in turbidity and other water quality parameters in the reservoir and downstream of Trail Bridge Dam during reservoir drawdown and construction periods.

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- b) Maximum allowable increases and decreases in water surface levels in the McKenzie River downstream of Trail Bridge Dam during reservoir drawdown and construction periods.
  - c) Fish salvage, including relocation or deposit of salvaged fish, during reservoir drawdown and construction periods.
  - d) Interim fish passage measures for up and downstream native migrant fish at Trail Bridge Dam during reservoir drawdown and construction periods.
  - e) Interim fish passage measures for up and downstream native migrant fish at Sweetwater Creek Culvert during reservoir drawdown and construction periods.
  - f) Routing of water for the entire Project during reservoir drawdown and construction periods, including Bypass Reaches.
  - g) Maximum allowable increases and decreases in water surface levels in Trail Bridge Reservoir during reservoir drawdown and construction periods.
  - h) Contingency actions to maintain adult native fish access to Bypass Reaches from Trail Bridge Reservoir if reservoir drawdown restricts access.
  - i) Contingency actions to address loss of native fish production during reservoir refill, if warranted.
  - j) Provision of interim flows of at least 30 cfs from Carmen Diversion Dam into upper Carmen Bypass Reach when reasonably practicable (e.g., not restricted by activities in the Carmen Reservoir and Upper Carmen Bypass Reach) prior to implementation of flows of 30 cfs under Section 4.2.1.1 of the Aquatics Management Plan.
  - k) Public or other authorized uses in and around construction sites and Project areas affected by construction, and related public safety and associated risks.
  - l) Authorization for use and occupancy of National Forest System lands outside of the Project Boundary needed during construction activities.
  - m) Public education and outreach regarding construction activities and alternative recreation access sites in coordination with the USDA Forest Service.

## **ARTICLE 17. VEGETATION MANAGEMENT PLAN**

Upon License issuance, the Licensee shall implement the Vegetation Management Plan (“VMP”), Exhibit E to the November 2016 Amended and Restated Settlement Agreement. The Licensee shall implement the VMP in consultation with the Vegetation Work Group and subject to approval by the Governmental Parties and Tribes as provided in the VMP.

## **ARTICLE 18. WILDLIFE MANAGEMENT PLAN**

Upon License issuance, the Licensee shall implement the Wildlife Management Plan (“WMP”), Exhibit D to the November 2016 Amended and Restated Settlement Agreement. The Licensee shall implement the WMP in consultation with the Wildlife Work Group and subject to approval by the Governmental Parties and Tribes as provided in the WMP.

## **ARTICLE 19. HISTORIC PROPERTIES MANAGEMENT PLAN**

The Licensee shall implement the “Programmatic Agreement (PA) between the Federal Energy Regulatory Commission and the State of Oregon, State Historic Preservation Officer for Managing Historic Properties That May Be Affected By A License Issuing to Eugene Water & Electric Board for the Continued Operation of the Carmen-Smith Hydropower Project in Lane and Linn Counties Oregon”, executed on May 5, 2010, including but not limited to the final Historic Properties Management Plan (HPMP) for the Project, Exhibit F of the Settlement Agreement. In the event the Programmatic Agreement is terminated the Licensee shall implement the provisions of the final HPMP. The Commission reserves the authority to require changes to the HPMP at any time during the term of the license. If the Programmatic Agreement is terminated prior to Commission approval of the HPMP, the Licensee shall obtain approval from the Commission and the Oregon State Historic Preservation Officer before engaging in any ground-disturbing activities or taking any other action that may affect any historic properties within the Project’s area of potential effect.

## **ARTICLE 20. RECREATION AND AESTHETICS MANAGEMENT PLAN**

Upon License issuance, the Licensee shall implement the Recreation and Aesthetics Management Plan (“RAMP”), Exhibit C to the November 2016 Amended and Restated Settlement Agreement, except Sections 4.1 (Ice Cap Creek Campground) and 4.18.2 (Dispersed sites in Lower Carmen Bypass). The Licensee shall implement the RAMP in consultation with the Recreation and Aesthetics Work Group and subject to approval by the Governmental Parties and Tribes as provided in the RAMP.

## **ARTICLE 21. ROADS, WASTE AREAS, AND STAGING**

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## **AREAS MANAGEMENT PLAN**

Upon License issuance, the Licensee shall implement the Roads, Waste Areas, and Staging Areas Management Plan (“RWMP”), Exhibit G to the November 2016 Amended and Restated Settlement Agreement. The Licensee shall implement the RWMP in consultation with the Roads, Waste Areas, and Staging Areas Management Plan Work Group and subject to approval by the Governmental Parties and Tribes as provided in the RWMP.

## **ARTICLE 22. TRANSMISSION LINE MANAGEMENT PLAN**

Within one year after License issuance, the Licensee shall develop a Transmission Line Management Plan (Plan) in consultation with the Parties to the Settlement Agreement, and subject to approval by the USDA Forest Service. The plan shall incorporate and be consistent with land management requirements for National Forest System lands described in the Vegetation Management Plan and Wildlife Management Plan required by License Article 17 and 18 respectively. Within one year after issuance of the License, the Licensee shall file the Plan with the Commission for approval. Following Commission approval, the Licensee shall implement the Plan. The Licensee shall describe in the Plan the Licensee’s responsibilities for the management of the Project’s 115 kV transmission line for the term of the License. The Plan shall also provide for the relocation of the Deer Creek valley portion of the 115 kV transmission line out of the Deer Creek riparian area and towards the southwest, adjacent to the existing Deer Creek road, Forest Road Number 2654000, by no later than three years after License issuance.

## **ARTICLE 23. FIRE RESPONSE AND SUPPRESSION COORDINATION PLAN**

(a) The Licensee shall develop a Fire Response and Suppression Coordination Plan (Plan) that identifies the Licensee’s responsibilities for the prevention, response and suppression of fires within the Project boundary, in consultation with the USDA Forest Service and appropriate State of Oregon and local fire agencies, and subject to approval by the USDA Forest Service. Within one year after issuance of the license, the Licensee shall file the Plan with the Commission for approval. Following Commission approval, the Licensee shall implement the Plan.

(b) The Licensee shall include and implement the following elements in the Plan:

- (1) The periodic assessment and management of fuels associated with the Project in order to reduce fire risk within the Project boundary and area of potential effect. The periodic assessment and management will include the following components:

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- (i) a defensible space plan for Project structures, including standards for Project structures, and a description of the Licensee’s responsibilities under the Community Wildfire Protection Plan for Lane County. Annually, the Licensee, in consultation with the USDA Forest Service, will review and revise the defensible space plan to correct any identified discrepancies.
  - (ii) a fuels assessment for Project recreation sites and the transmission line. Annually, the Licensee, in consultation with the USDA Forest Service, shall review and revise the fuels assessment to correct any identified discrepancies. The Licensee shall comply with USDA Forest Service Standards and Guides (FW-212) on fuel loading and updated burn pile management requirements.
  - (iii) a description of fuels management techniques to be applied to the waste areas identified in Section 1.2.2 of the Roads, Waste Areas, and Staging Areas Management Plan, Exhibit G to the November 2016 Amended and Restated Settlement Agreement.
- (2) Develop measures the Licensee shall implement to prevent fire starts from Project operation and maintenance. The Licensee shall comply with the requirements identified in the Oregon Department of Forestry (ODF) Industrial Fire Precaution Levels (IFPL), USDA Forest Service fire season requirements (from April 1 through October 31), and ORS Chapter 477 on fire tools and equipment. Describe fire adjective classes and public use restrictions.
- (3) Identify the fire equipment and infrastructure that the Licensee shall possess and maintain to assess, respond to, and suppress fires consistent with ODF and National Forest Protection Act requirements, including:
- (i) where ODF requirements are in effect as well as National Forest Protection Act requirements are in effect in the power plants, shops and structures;
  - (ii) schedules for obtaining and installing needed equipment, and maintaining, testing and servicing such equipment; and
  - (iii) fire equipment and infrastructure responsibility lists that the Licensee shall review on an annual basis, and make upgrades or adjustments as necessary.
- (4) Describe the proper notification and response by the Licensee when a fire start occurs within the Project boundary or from Project-associated activities, including development, maintenance and implementation of a “Fire Response Action Plan” for the Project, which will
- (i) identify and implement communication and coordination protocols for license Project staff, including the Licensee dispatch, in the event of a fire start or ongoing fire response and suppression activities in the Project area.

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- (ii) identify first responder responsibilities and protocols associated with a fire, and describe a first responder training program and schedule for implementing the training program for Licensee Project employees; and
- (iii) describe protocols for the Licensee’s participation in the annual McKenzie River Ranger District Wildfire Situation Analysis (WFSA) exercise when Project facilities are included within the WFSA area.
- (iv) The Licensee shall describe in the Fire Response Action Plan required in subsection (b)(4) above the specific tasks, monitoring, contingency actions, and maintenance activities the Licensee shall undertake to meet Plan objectives, including:
- (1’) Annual compliance inspection of Licensee equipment used within the Project boundary by the USDA Forest Service and the corrective actions and timelines needed to correct deficiencies noted in the annual inspection.
  - (2’) Inspection of Licensee contractors by the USDA Forest Service prior to beginning Project-related work on NFS lands. Deficiencies must be corrected before Project work can begin.
  - (3’) Inspection by the Licensee for compliance with NFPA requirements at least every five years.
  - (4’) Review of the Fire Response Action Plan annually and updating the Plan as necessary, including acquisition of new equipment, changes to the IFPL requirements, ORS Chapter 477 requirements and USDA Forest Service fire season requirements. Changes to the Plan should be made as soon as reasonably possible. The Licensee shall continue to implement the existing agreed-to fire prevention measures until the new Plan is approved and/or subsequently revised.
  - (5’) Annually review communication and coordination protocols focusing on points of contact and contact information in coordination with the USDA Forest Service. Correct or update communication and coordination protocols within 14 days of a noted error or deficiency and within 30 days of any change of personnel affecting communication and coordination protocols. The Licensee, in coordination with the USDA Forest Service, will notify the other parties within the communication and coordination protocols within 30 days of any change of personnel that may require modification of communication and coordination protocols.
- (c) The Licensee shall provide a brief annual report on implementation, monitoring and any maintenance or contingency actions performed during the previous year. The Licensee shall meet annually with the USDA Forest Service to discuss activity occurring under this Plan during the previous year and to discuss the upcoming fire season. The annual meeting will be timed to coincide with the annual fire inspections of Project facilities and equipment. The Licensee shall provide updated copies of the Fire Response

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Action Plan to the USDA Forest Service, as necessary or upon request by the USDA Forest Service.

## **ARTICLE 24. IMPLEMENTATION ON NFS LANDS**

**(a) Authorization for Occupation and Use of NFS Lands.** Within one year after license issuance and before initiating any habitat or ground-disturbing activities on National Forest System (NFS) lands, the Licensee shall obtain from the USDA Forest Service and file with the Commission an intergovernmental agreement (IGA) for the occupancy and use of NFS lands that are within the Project Boundary established by the license.

If long term occupancy and use of NFS lands are required for Project-related purposes and such occupancy and use are not authorized by such lands being included within the Project Boundary established by the license, the Licensee shall obtain a special-use authorization for occupancy and use of such NFS lands from the USDA Forest Service. Before conducting any habitat or ground-disturbing activities on such NFS lands, the Licensee shall obtain from the USDA Forest Service and file with the Commission a special-use authorization for occupancy and use of such NFS lands. If required by the USDA Forest Service, the Licensee shall amend the IGA to include such NFS lands.

The Licensee shall comply with the terms and conditions of any USDA Forest Service special-use authorization, and with the terms and conditions of the IGA.

The Licensee shall apply for and obtain special use authorization from the USDA Forest Service to occupy and use any additional NFS lands necessary for the Project and not covered under the IGA and special-use authorization.

**(b) Approval of Changes on NFS Lands after License Issuance.** The Licensee shall consult with and receive written approval from the USDA Forest Service to the extent required by and as provided in this license, and any exhibits approved under the license prior to making changes in the Project features or facilities on NFS lands, or in the uses of Project land and waters on NFS lands, or any departure from the requirements of any approved exhibits for Project facilities located on NFS lands filed by the Licensee with the Commission. The Licensee shall also consult with and receive written approval from the USDA Forest Service consistent with the consultation process in Article 1 for any application to amend the license to authorize a change in the Project features or facilities on NFS lands.

Following receipt of such approval from the USDA Forest Service for a proposed license amendment authorizing a change in a Project feature or facility on NFS lands, and at least 60 days prior to initiating any such changes, the Licensee shall include in the license amendment application a description of the changes, the reasons for the changes, and documentation of the approval of the USDA Forest Service for such changes. The

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Licensee shall file an exact copy of the license amendment application with the USDA Forest Service at the time it is filed with the Commission.

**(c) Site-Specific Plans for Unanticipated Project Operations and Maintenance.**

The Licensee shall not commence implementation of habitat or ground-disturbing activities on NFS lands not otherwise required or authorized under this license, any exhibits approved under the license, the IGA or any special use authorization until the Licensee has submitted, and the USDA Forest Service has approved, a site-specific project plan and issued a notice to proceed.

The Licensee shall include in a site-specific plan:

- (1) A map depicting the location of the proposed activity and GPS coordinates.
- (2) A description of the USDA Forest Service land management area designation for the location of the proposed activity and applicable standards and guidelines.
- (3) A description of alternative locations, designs and mitigation measures considered, including erosion control and implementation and effectiveness monitoring designed to meet applicable standards and guidelines.
- (4) Draft biological evaluations or assessments including survey data as required by regulations applicable to ground or habitat-disturbing activities on NFS lands in existence at the time the plan is prepared.
- (5) An environmental analysis of the proposed action consistent with USDA Forest Service National Environmental Policy Act (NEPA) requirements in existence at the time the plan is prepared for Commission-licensed projects on NFS lands.

## **ARTICLE 25. INSPECTION OF PROJECT**

The Licensee shall permit the Parties to the settlement, at any reasonable time, access to, through, and across Project lands and works for the purpose of inspecting Project facilities and Project records pertaining to the operation of the Project and implementation of the Settlement Agreement and the License. The Licensee shall allow such inspections only after the Party requesting the inspection provides the Licensee reasonable notice of such inspections and agrees to follow the Licensee's applicable safety and security procedures when engaged in such inspections.

## **ARTICLE 26. EMERGENCY OR SPECIAL CONDITIONS**

(a) The Licensee shall notify the local District Office of the Oregon Department of Fish and Wildlife of any unanticipated or emergency situation resulting from Project operations where fish, bald eagle, northern spotted owl, peregrine falcon, or harlequin duck are killed or injured as soon as reasonably possible but not later than 24 hours after

becoming aware of such death or injury. Within 2 days after becoming aware of such death or injury, the Licensee shall send a report of dead or injured fish, bald eagle, northern spotted owl, peregrine falcon, or harlequin duck to the local District Office of the Oregon Department of Fish and Wildlife.

(b) Within 2 days of observance, the Licensee shall send reports of dead or injured Chinook salmon to: Carmen-Smith Hydro Project Staff Lead, Hydro Power Division, National Marine Fisheries Service, 1201 NE Lloyd Blvd., Suite 1100, Portland, Oregon 97232. The Licensee shall include in each report a concise description of the causative event (if known), and a description of any resultant corrective actions taken (if any) to reduce the likelihood of future mortalities or injuries.

(c) The Licensee shall notify the FWS within 3 working days upon locating a dead, injured, or sick endangered or threatened species specimen. They must make initial notification at the nearest FWS Law Enforcement Office, and/or to the Energy Coordinator at the FWS Oregon Fish and Wildlife Office at (503) 231-6179. Notification must include the date, time, precise location of the injured animal or carcass, and any other pertinent information. Care should be taken in the handling of sick or injured specimens to preserve biological materials in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured endangered or threatened species or preservation of biological materials from a dead animal, the finder has the responsibility to ensure that evidence associated with the specimen is not unnecessarily disturbed. Reports of incidental injury or killing must include the date, time, precise location of the injured animal or carcass, and any other pertinent information such as cause of death or injury. In regards to bull trout, all incidental mortalities shall be preserved in a fashion to best provide maximum scientific information (otoliths, scales, genetic samples, general fisheries statistics, etc.). Any specimen killed shall be kept whole and put on ice or frozen, and a small sample of tissue (fin clip approximately 1 square centimeter) shall be preserved in a vial of 95 percent ethanol for genetic analysis.

## **ARTICLE 27. RESERVATION OF AUTHORITY: FISHWAYS**

Pursuant to Section 18 of the Federal Power Act, authority is reserved to the Commission to require the Licensee to construct, operate, and maintain, or provide for the construction, operation, and maintenance of such fishways as may be prescribed by either the Secretary of the Interior or the Secretary of Commerce.

## **ARTICLE 28. FISH PASSAGE**

Consistent with these license articles, the Licensee shall implement Section 4.1 Fish Passage of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement.

**ARTICLE 29. TRAP AND HAUL FISH PASSAGE AT TRAIL BRIDGE DAM**

**(a) Upstream Fish Passage Facilities and Standards**

The Licensee shall design, construct, operate, and maintain a trap and haul facility at Trail Bridge Dam to provide upstream fish passage, as described in Section 4.1.2, Sections 1) through 6) of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement. The Licensee shall design the trap and haul facility in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service. The trap and haul facility shall be designed consistent with EWEB Technical Memorandum to NMFS: Trail Bridge Trap and Haul Design Criteria Summary dated June 28, 2016, and according to the NMFS criteria document entitled Anadromous Salmonid Passage Facility Design Anadromous Salmonid Passage Facility Design developed by National Marine Fisheries Service, Northwest Region (NMFS 2011) or current versions thereof for the purpose of supporting safe, timely, and effective upstream passage of fish, and to achieve upstream fish passage standards described in Table 1:

**Table 1.** Numeric standard for upstream passage of adult Chinook salmon and adult bull trout, following construction of the Trail Bridge Trap and Haul facility.

Species	Standard
Chinook	<1% adult mortality per year, including delay induced mortality
Bull trout	No more than 2 adult fish per year or 1% (whichever is higher) mortality; 5% injury per year

- (1) Within 6 months after License issuance, the Licensee shall, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, prepare and file with the Commission a plan and schedule for design and construction of the Trail Bridge Dam trap and haul facilities. Subject to Commission approval, within 3 years after the later of License issuance or final resolution of any administrative or judicial petition or appeals, or other formal agency adjudication relating to Section 4.1.2 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, the Licensee shall complete construction of the Trail Bridge Dam trap and haul facilities.
- (2) Within 6 months after License issuance, the Licensee shall, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, prepare and file with the Commission a plan and schedule for the demolition of the existing tailrace barrier below Trail Bridge Dam, consistent with Section 4.1.2, Paragraph 6) of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement. Subject to Commission approval, within 3 years after the later of License issuance or final resolution of any administrative or judicial petition or appeals, or other formal agency adjudication relating to this Section 4.1.2., the Licensee shall complete

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demolition of the existing tailrace barrier below Trail Bridge Dam, providing fish access to the trap and haul facility for upstream fish passage.

**(b) Trail Bridge Upstream Passage Facilities Operations and Maintenance**

No later than 6 months prior to planned completion of the trap and haul facilities, the Licensee shall, in consultation with the FWG and subject to approval by the Fish Agencies and the USDA Forest Service, prepare and file with the Commission a Preliminary Operations and Maintenance Plan for Trap and Haul (POMPHT), consistent with Section 4.1.2, Paragraph 3) of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, to provide an initial guide for the operation of the trap and haul facilities.

**(c) Upstream Fish Passage Evaluation Program (UPEP)**

The Licensee shall implement Section 4.1.6 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, which provides for three distinct plans to be implemented consecutively and that are designed to build upon one another in succession to provide monitoring of upstream fish migration through the Project for the duration of the License. The Licensee shall implement Section 4.1.6 in consultation with the Fisheries Work Group and subject to approval by the Fish Agencies and USDA Forest Service as provided in Section 4.1.6. The three stages of the Program are as follows:

**Stage 1 - Upstream Passage Observation and Evaluation Plan (UPOEP)**

- (1) Six months prior to planned completion of the Trail Bridge Dam trap and haul facilities, the Licensee shall, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, prepare and file with the Commission, the Upstream Passage Observation and Evaluation Plan (UPOEP), consistent with Section 4.1.6.1 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, to conduct hydraulic and biological monitoring at the Project.
- (2) Within 6 months after Licensee's completion of the implementation of the UPOEP, Licensee shall, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, prepare a report documenting the results of the evaluation and the data collected. Licensee shall file the report with the Commission along with comments by members of the FWG and describing how EWEB addressed or responded to the comments.
- (3) If Licensee's implementation of the UPOEP verifies that the Project facilities function as designed, where applicable, and injury and mortality at the Project facilities are within the passage standards provided in Section (a) of this License Article 29 and Sections 4.1.1.1 of the November 2016 Amended and Restated Settlement Agreement, then no further hydraulic or biological evaluation by

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EWEB is required, except as provided in the Upstream Passage Ongoing Monitoring Plan (UPOMP).

- (4) Within 6 months of the Commission approval of the report documenting results of the Upstream Passage Observation and Evaluation Plan (UPOEP) provided in this License Article 29 and Section 4.1.6.1 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, the Licensee shall, in consultation with the FWG and subject to approval by the Fish Agencies and the USDA Forest Service, prepare and file with the Commission a Revised Operations and Maintenance Plan for Trap and Haul (ROMPTH) for the Trail Bridge trap and haul facility. Upon Commission approval, the Licensee shall implement the ROMPTH.
- (5) Five years after commissioning of the trap and haul facilities, EWEB may, in consultation with the FWG and subject to approval by the Fish Agencies and the USDA Forest Service, file an amendment to the ROMPTH with the Commission to modify frequency and/or timing of trap operations, if warranted.

## **Stage 2 - Upstream Passage Adaptive Management Plan (UPAMP)**

- (6) If the results of the UPOEP as described in the completion report submitted to the Commission indicate the trap and haul facility induced mortality rate of adult Chinook salmon or bull trout exceeds the fish passage standards of Table 1 of this License Article 29, the Licensee shall, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, prepare and file with the Commission a plan and schedule, called the UPAMP, consistent with Section 4.1.6.2 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, to address causes of injury or mortality. Upon Commission approval, the Licensee shall implement the UPAMP to modify the trap and haul facilities. The design modifications will address the causes in the most expeditious way practicable.
- (7) Upon completion of the modifications, the Licensee shall, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, implement a modified version of the UPOEP to evaluate that the modifications have achieved the fish passage standards in Table 1 of this License Article 29. The cycle of evaluation and modification will repeat for no more than 10 upstream migration seasons.
- (8) At the end of 10 upstream migration seasons of evaluation and modifications, if facility induced mortality rates of adult Chinook salmon or bull trout continue to exceed the fish passage standards provided in Table 1 of this License Article 29, the Licensee shall in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, prepare and file with the Commission a plan and schedule for the design and construction of a volitional fish ladder or

other agreed upon remedy including Project decommissioning. Within 12 months after Commission approval, the Licensee shall, in consultation with and subject to the approval of Fish Agencies and USDA Forest Service, complete design of a volitional fish ladder, decommissioning, or other approved remedy, and shall begin construction (or deconstruction) as soon as possible after completion and approval of design. If a volitional fish ladder or other remedy is constructed, the Licensee shall operate and maintain the facility throughout the term of the License. In the interim, the Licensee will continue to operate the trap and haul facility or other approved fish passage measures. If construction of the volitional ladder or other remedy interferes with operation of fish passage, the Licensee will implement other temporary means of passage.

### **Stage 3 - Upstream Passage Ongoing Monitoring Plan (UPOMP)**

- (9) Within 6 months of the Commission approval of the report documenting the UPOEP results, the Licensee shall, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, prepare and file with the Commission, the Upstream Passage Ongoing Monitoring Plan (UPOMP), consistent with Section 4.1.6.3 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, to describe the Licensee's ongoing upstream passage monitoring efforts at the Project. Upon Commission approval, the Licensee shall implement the UPOMP.
- (10) The UPOMP will describe how the Licensee shall monitor Project fish passage facilities, and report its findings to the FWG on an annual basis. The Licensee shall prepare the annual report in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service. The monitoring report is anticipated to include summaries of video monitoring and visual observations, as well as documentation of the number of each species, dates fish were observed in the trap, numbers of fish transported and released upstream, and condition of all observed fish. The report will also include summaries of all analyses, if any, conducted on successful fish passage, delay, injury, and mortality in relation to upstream fish passage facility operations, project operations (e.g. shut downs), and environmental conditions (e.g., instream flow).
- (11) If, in the course of annual monitoring of operations of the Trail Bridge trap and haul facilities, mortality or serious injury fish passage standards provided in this License Article 29 and Section 4.1.1.1 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement are exceeded, the Licensee will notify the FWG and in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, develop a plan to implement corrective measures similar to the UPAMP as described above.

- (12) After 10 annual UPOMP reports, the Licensee, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, may consider changing the reporting interval to less frequently than annually.

### **ARTICLE 30. UPSTREAM PASSAGE AT THE CARMEN-SMITH SPAWNING CHANNEL**

(a) In consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, the Licensee shall design, construct, operate and maintain upstream fish passage with steps no higher than 6 inches at the Carmen-Smith Spawning Channel entrance consistent with AMP-90% Design Submittal Volume 3, dated December 2012 by CH2MHill and the Anadromous Salmonid Passage Facility Design developed by National Marine Fisheries Service, Northwest Region (NMFS 2011) or current version thereof at the time of design, and a facility for upstream passage out of the channel at the spawning channel water control structure for the purpose of supporting safe, timely and effective upstream passage of fish at the spawning channel. The Licensee shall design the upstream passage spawning channel modifications in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service. Within 1 year after New License issuance, the Licensee shall prepare, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, and file with the Commission, a plan and schedule for design and construction of the spawning channel fish passage facilities. Subject to Commission approval, within four years after New License issuance, the Licensee shall complete construction of the spawning channel fish passage facilities.

(b) Within 12 months after the Licensee's completion of the evaluation described in the Upstream Passage Evaluation Program (UPEP) provided in License Article 29 and Section 4.1.6 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, the Licensee shall, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, prepare and file with the Commission a Spawning Channel Operations and Maintenance Plan (SCOMP) to provide for operation of the spawning channel fish passage facilities. The Licensee shall base the SCOMP on the Anadromous Salmonid Passage Facility Design developed by National Marine Fisheries Service, Northwest Region (NMFS 2011) or current version thereof at the time of design, and the results of the Licensee's implementation of the Upstream Passage Observation and Evaluation Plan (UPOEP) described in Section 4.1.6 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement. Upon Commission approval, the Licensee shall implement the SCOMP.

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## **ARTICLE 31. UPSTREAM PASSAGE AT SWEETWATER CREEK**

Except as otherwise provided in the Construction Management Plan implemented under Article 16, the Licensee shall maintain a minimum elevation of 2,083 feet in Trail Bridge Reservoir from 15 August through 31 October for the term of the New License, which is intended to aid upstream passage of bull trout into Sweetwater Creek by providing a minimum depth of one foot of water in the entrance to the Sweetwater Creek culvert.

The Licensee shall carry out a Sweetwater Creek Culvert biological evaluation, as described in Section 4.1.6.1 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement to evaluate the effectiveness of modifications to Trail Bridge Reservoir operations (Section 4.1.4 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement ) to aid bull trout entry into Sweetwater Creek.

## **ARTICLE 32. FISH PROTECTION AT CARMEN POWER PLANT**

The Licensee, in consultation with the FWG and subject to the approval of the fish Agencies and USDA Forest Service, shall carry out a Carmen Power Plant biological evaluation, as described in Section 4.1.6.1 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement. The evaluation will be used to construct, if needed, an adaptive approach for fish passage at the Carmen Power Plant tailrace by monitoring fish after adult spring Chinook salmon and bull trout are hauled from the Trail Bridge Dam trap and haul facilities and released in Trail Bridge Reservoir above Trail Bridge Dam, to determine if there is significant delay, substantial mortality, or serious injury to Chinook salmon and bull trout associated with upstream passage past the Carmen Power Plant tailrace as a result of its facilities or operations.

The standard for mortality and injury are considered to be exceeded if monitoring surveys document Carmen Power Plant facilities and operations result in three or more adult fish (any combination of bull trout or Chinook salmon) observed dead or seriously injured in a calendar year as provided in Section 4.1.1.3 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement.

If, based on the results from the Licensee's implementation of the Carmen Power Plant biological evaluation as described in Section 4.1.6.1 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, the standard for significant delay or the standard for substantial mortality and serious injury is exceeded, the Licensee shall, in consultation with the Fisheries Work Group and subject to approval by the Fish Agencies and USDA Forest Service, prepare and file with the Commission a list of appropriate modifications or additions to Project facilities or operations designed to address identified substantial delay, significant mortality or

serious injury. Upon Commission approval, Licensee shall implement the modifications or additions to Project facilities or operations.

### **ARTICLE 33. DOWNSTREAM PASSAGE AT TRAIL BRIDGE DAM**

#### **(a) Downstream Fish Passage Facilities and Standards**

The Licensee shall design, construct, operate, and maintain the Trail Bridge Dam spillway, gate and hoist system, and attraction water supply (AWS) for the purpose of supporting year-round safe, timely, and effective downstream passage of fish consistent with the NMFS criteria document entitled Anadromous Salmonid Passage Facility Design developed by National Marine Fisheries Service, Northwest Region (NMFS 2011) or current version thereof at the time of design, in order to achieve downstream fish passage standards, regardless of passage route, described in Table 2. The Licensee shall design the spillway, gate and hoist system, and AWS in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service.

**Table 2.** Numeric standard for downstream passage for Chinook salmon and bull trout, following construction of the Trail Bridge Trap and Haul facility.

Species	Affected Life Stages	Standard
Chinook	fry and juveniles	2% mortality, 5% injury, per year
	Adult	No more than 2 fish per year or 2% mortality (whichever is higher); 5% injury, per year
Bull trout	fry and juveniles and subadults	2% mortality, 5% injury, per year
	Adult	No more than 2 fish per year or 2% mortality (whichever is higher); 5% injury, per year

- (1) Within 6 months after License issuance, the Licensee shall in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, prepare and file with the Commission a plan, schedule, and design for construction of modifications to the spillway, gate and hoist system, and for ceasing operation of the Trail Bridge power plant for the purposes of power generation. Subject to Commission approval, within 3 years after the later of License issuance or final resolution of any administrative or judicial petition or appeals, or other formal agency adjudication relating to Section 4.1.3 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, the Licensee shall complete modifications to the spillway, gate and hoist system.

Upon completion of the upstream and downstream fish passage facilities, Licensee shall cease operation of the Trail Bridge power plant, except for purposes of maintaining the Trail Bridge power plant in safe working order, as provided in Section 4.1.3.2. of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement.

- (2) The Licensee shall include (but not be limited to) in the design of the spillway, and gate and hoist system facilities the following:
- i. Modification of the spillway gate to allow a 12-inch minimum opening to accommodate adult bull trout and adult Chinook passage,
  - ii. Modifications of the “flip bucket” and other features to promote laminar flow and reduce turbulence;
  - iii. Modifications to eliminate, to the extent possible the need to salvage adult fish from the flip bucket;
  - iv. Installation of gate hoist mechanism to allow fine control of gate openings and spillway flows to meet ramping criteria; and
  - v. Modification to tailrace configuration, if needed to ensure safe landing and discharge conditions for fish as they exit the spillway.



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**(b) Trail Bridge Downstream Passage Facilities Operations and Maintenance**

No later than 6 months prior to planned completion of modifications to the Trail Bridge Dam spillway, gate and hoist system, the Licensee shall in consultation with the FWG and subject to approval by the Fish Agencies and the USDA Forest Service, prepare and file with the Commission a Preliminary Operations and Maintenance Plan for Spillway (POMPS) for the modified spillway, and gate hoist system and Trail Bridge power plant. Upon Commission approval, the Licensee shall implement the POMPS.

- (1) Within 12 months after completion of the evaluation described in the Downstream Passage Evaluation Program (DPEP) provided in this License Article 33 and Section 4.1.7 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, the Licensee shall in consultation with the FWG and subject to approval by the Fish Agencies and the USDA Forest Service, prepare and file with the Commission, a Revised Operations and Maintenance Plan for Spillway (ROMPS). Upon Commission approval, the Licensee shall implement the ROMPS.
- (2) To minimize fish entrainment, the Licensee will limit operation of the Trail Bridge power plant turbine as provided in Section 4.1.3.2 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, including the following situations:
  - i. during the Trail Bridge Spillway maintenance and construction periods after consultation with the FWG and subject to approval by the Fish Agencies and the USDA Forest Service;
  - ii. to minimize use of the existing energy dissipation valve; or
  - iii. as may be necessary to meet FERC requirements, after prompt notification to the Fish Agencies.

**(c) Downstream Fish Passage Evaluation Plan (DPEP)**

- (1) No later than 6 months prior to the Licensee's planned completion of modifications to the spillway, gate and hoist system as provided in this License Article 33 and Section 4.1.3 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, the Licensee shall in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, prepare and file with the Commission a Downstream Passage Evaluation Plan (DPEP), Section 4.1.7 of Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, to conduct hydraulic and biological monitoring of the spillway and the trap and haul AWS intake. The DPEP shall include an implementation schedule. Subject to Commission approval, the Licensee shall implement the DPEP, after completion of the spillway, gate and hoist modifications.

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- (2) Within 6 months after completion of the DPEP, the Licensee shall in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, prepare and file with the Commission a DPEP report documenting the results of the monitoring and describing any findings that require implementation of the next phase, the Downstream Adaptive Management Plan (DAMP). The cycle of DPEP to DAMP has the potential to repeat, as described in Section 4.1.7.3 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement.
  - (3) The DPEP will include the Downstream Adaptive Management Plan (DAMP), to evaluate and modify downstream fish passage at Trail Bridge Dam, as described in Section 4.1.7.3 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement.
  - (4) If the results of the DPEP, as determined by the Licensee in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, indicate that the spillway passage route does not exceed fish passage standards provided in Section 4.1.1.2 of the Aquatics Management Plan, Exhibit B to the November 2016 Amended and Restated Settlement Agreement, the Licensee's obligation for continued evaluation of the spillway using the DPEP will be fulfilled. "Exceeding fish passage standards" will be defined as study result estimating greater than the 2% mortality standard. However, if the estimate of mortality is greater than the 2% mortality standard, but within the margin of error, the Licensee in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service may determine that the standard has been met. Alternatively, the Licensee, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service may determine that additional evaluations or modified spillway operations are needed to achieve the standard, or to improve study methods or effort to reduce error around the estimate.
  - (5) If fish passage standards are exceeded (as defined in this License Article 33, paragraph (c)(4) above, the Licensee shall prepare, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, and file with the Commission, a report describing the causes of injury and mortality, and a plan, designs, and schedule for implementing spillway measures to address the causes of injury or mortality from the spillway passage route. Upon Commission approval, the Licensee shall implement the plan to modify the spillway passage route. The design modifications will strive to remedy the causes in the most expeditious way practicable.
  - (6) The cycle of evaluation and modification described in the DPEP and in this License Article 33, paragraphs (c)(4) and (c)(5) above will continue until the standards in License Article 33 paragraphs (c)(4) and (c)(5) above are not exceeded, but will not repeat for more than 10 years, cumulatively from the

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completion of the initial modifications of the downstream fish passage facilities (spillway, gate and hoist system, and AWS).

- (7) At the end of the 10 year evaluation period described in this License Article 33 paragraph (c)(6) above, if injury and mortality rates are within the fish passage standards as provided in this License Article 33, paragraphs (c)(4) and (c)(5), the passage standard will be considered to have been met. If the passage standard is not met, the Licensee shall, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, prepare and file with the Commission a plan and schedule for implementation of one of the following actions: construction of a new outflow structure designed to efficiently and safely passage fish; dam removal; or other measures. Upon Commission approval, the Licensee shall implement the plan.
- (8) The results of assessing potential entrainment at the trap and haul, and AWS intake described in this License Article 33 above will be considered in the DAMP.
  - i. If qualitative and quantitative assessments do not show a substantial risk of entrainment at the AWS intake as determined by the Licensee, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, the Licensee's obligation for continued evaluation of the AWS intake using the DPEP will be fulfilled.
  - ii. If qualitative assessments of fish behavior in the vicinity of the AWS intake indicate that entrainment is a substantial risk, or if quantitative assessments indicate that substantial (e.g., >1% of downstream migrants of either Chinook or bulltrout) numbers of fish are observed to be entrained in the AWS as determined by the Licensee in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, the Licensee will develop a plan and schedule to take corrective actions, in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service. The Licensee shall file the plan with the Commission and, upon Commission approval, implement the plan.
- (9) After meeting fish passage standards provided in this License Article 33 Table 2 and paragraphs (c)(4) and (c)(5) during the 10 year evaluation cycle described in paragraph (c)(6) above, the Licensee shall monitor Project fish passage facilities, and in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, prepare and file with the Commission an annual report. The annual monitoring report is anticipated to include summaries of visual observations of fish, copies of spillway and gate inspection reports, how inspection findings will be addressed if needed, and documentation of the number of each species, age classes, and condition of all observed fish. The report will also include summaries of all analysis, if any, conducted on downstream fish passage, injury and mortality, in relation to fish passage

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facility operations, project operations (e.g. shut downs), and environmental conditions (e.g., instream flow).

- (10) If in the course of annual monitoring of operations of the Trail Bridge spillway, gate and hoist system facilities after the initial 10 year evaluation period described in this License Article 33 paragraph (c)(6) above, and implementation of an action implemented pursuant to paragraph (c)(7) above, mortality or serious injury exceeds the standards provided in this License Article 33 Table 2 and paragraphs (c)(4) and (c)(5), the Licensee in consultation with the FWG and subject to approval by the Fish Agencies and USDA Forest Service, will develop and file with the Commission a plan to implement corrective measures consistent with the then existing facilities.

### **ARTICLE 34. RESERVATION OF AUTHORITY**

The Licensee shall implement, upon order of the Commission, such additional conditions as may be identified by the Secretary of Agriculture, pursuant to the authority provided in Section 4(e) of the Federal Power Act, as necessary for the adequate protection and utilization of the public land reservations under the authority of the USDA Forest Service.