113 FERC ¶62,148
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

PacifiCorp | Project No. 2659-011 and -016

ORDER AMENDING LICENSE, ACCEPTING SURRENDER, AND DISMISSING APPLICATION FOR NEW LICENSE

November 22, 2005

INTRODUCTION

1. This order amends PacifiCorp's current license for the 6-megawatt (MW) Powerdale Hydroelectric Project No. 2659 (Powerdale Project) and accepts surrender, with a delayed effective date, of the project's license, in keeping with the proposals in a settlement agreement PacifiCorp filed on June 16, 2003. The order also dismisses PacifiCorp's application for a new license for the project.

PROJECT DESCRIPTION

2. The Powerdale Project is located on the Hood River in Hood River County, Oregon.[1] The project has an installed capacity of six megawatts (MW), and includes: (1) a 10-foot-high, 206-foot-long concrete diversion dam; (2) an 80-foot by 60-foot concrete intake structure; (3) a reservoir with a storage capacity of approximately 5 acre-feet at the normal pool elevation of 292 feet National Geodetic Vertical Datum (NGVD); (4) a 16,000-foot-long water conveyance system consisting of a concrete canal, steel flume, settling basin, penstock intake, wood stave and steel penstock, and surge tank; (5) an 86-foot-wide, 51-foot-long

[1] Powerdale is located on a segment of the Hood River that has been determined to be a navigable waterway of the United States. *See* 10 FERC ¶ 62,216 (1980).

concrete powerhouse with a 6-MW turbine-generator unit; (6) a 15-foot-long rock-lined tailrace; and (7) upstream and downstream fish passage facilities.[2]

3. There are no federal lands within the project boundary, but the powerhouse and the lower half of the penstock are located in the Columbia River Gorge National Scenic Area, which is managed by the U.S. Forest Service. The project is operated in a run-of-river mode.

BACKGROUND

4. The original license for the Powerdale Project was issued March 14, 1980, with an effective date of April 1, 1962, and a termination date of March 1, 2000, for a license term of 37 years and 11 months.[3]

5. Pursuant to Part I of the Federal Power Act (FPA),[4] PacifiCorp filed an application for new license on February 25, 1998. No competing applications were filed. Since expiration of the original license, project operations have continued pursuant to annual licenses, pending disposition of PacifiCorp's application for a new license.[5]

6. Commission staff issued a draft Environmental Assessment (EA) on March 2, 2001, and a final EA on December 26, 2001, addressing PacifiCorp's relicensing proposal. On February 1, 2002, PacifiCorp informed the Commission that it considered the costs of project operation with the recommended terms and

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[2] The existing ladder for upstream passage is located on the eastern side of the dam. It operates with a 15 cubic foot per second (cfs) conveyance flow and an additional 70-cfs auxiliary attraction flow. Downstream passage is provided through the combination of five vertical traveling belt screens located in front of the intakes to the flowline and releases to the bypassed reach.

[3] *Pacific Power & Light Company*10 FERC ¶ 62, 216 (1980). The license was transferred to PacifiCorp in 1988. 45 FERC ¶ 62,146 (1988). The license term was set under the then-applicable license term policy for operating projects that the owners knew or should have known were required to be licensed. *See Bangor Hydro-Electric Company*, 6 FERC ¶ 61,287 (1979).

[4] 16 U.S.C. § 808.

[5] 16 U.S.C. § 808(a)(1).

conditions set forth in the final EA to be economically unacceptable, and it was entering into discussions with other interested entities with a view to surrendering its license and retiring the project.

7. PacifiCorp and most of the entities involved in the relicense proceeding conducted settlement negotiations, and on June 16, 2003, PacifiCorp filed a settlement agreement (agreement) proposing to: (1) amend its original license to extend the project's license term to February 12, 2012; (2) permit operation of the project, along with implementation of environmental protection, mitigation, and enhancement measures, until 2010; and (3) between 2010 and 2012, remove most project works[6] and secure the rest.[7]

8. A public notice of PacifiCorp's offer of settlement and application for surrender was issued on June 26, 2003,[8] and timely interventions were filed by the National Marine Fisheries Service (NMFS), the U.S. Department of the Interior (Interior), and American Rivers. The State of Oregon filed a motion for late intervention which was granted.[9] These four entities filed comments in support of the settlement agreement and application for surrender of the license. The

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[6] PacifiCorp refers to "decommissioning" of the project, and submits a "project decommissioning plan" (*see* Appendix B of the Agreement), but what it actually proposes is removal of various project works. The term "decommission" has no designated meaning in the context of Part I of the FPA, which governs hydropower licensing. In various proceedings, parties, as well as the Commission, have used the term as short-hand both for the cessation of hydroelectric generation and for the removal of project works. For clarity, it is preferable to refer to project removal or the removal of project works, where that is the intended meaning. *Portland General Electric Company*, 107 FERC ¶ 61,158 at 61,519 n.11 (2004).

[7] The agreement was signed by PacifiCorp; United States Fish and Wildlife Service; National Marine Fisheries Service; Oregon Department of Fish and Wildlife; Oregon Department of Environmental Quality; Oregon Water Resources Department; Confederated Tribes of the Warm Springs Reservation of Oregon; American Rivers; and the Hood River Watershed Group. In addition, the Hood River Valley Parks and Recreation District signed as a non-party supporting the Agreement.

[8] *See* Notice of Offer of Settlement, Application for Surrender of License, and Soliciting Comments, Motions to Intervene and Protests, issued June 26, 2003.

[9] *See* unpublished notice of December 3, 2003.

Commission issued an EA of the agreement and surrender proposal on December 5, 2003.

9. Amendment/removal agreements like this one are, in effect, applications to surrender an existing license with a future effectiveness date, and PacifiCorp's request has been treated as such here.[10] For the reasons discussed below, the surrender of PacifiCorp's license with a delayed effective date of February 29, 2012, is accepted. The terms of the project's annual license[11] are amended to: (1) permit continued generation until April 1, 2010,[12] and (2) incorporate, with minor modifications, the agreement's proposed protection, mitigation, and enhancement measures for that period of time. The agreement's proposals concerning removal of project works and associated protection and mitigation measures are also adopted, with minor modifications, as requirements of the surrender. Because PacifiCorp's surrender of its license is accepted, its application for a new license is dismissed.

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[10] With respect to PacifiCorp's request to extend the term of its license, the standard basis for extending a license term is the licensee's need for additional years over which it can amortize the cost of a substantial increase in generation capacity and/or substantial new environmental measures. These bases are not present here. In *PacifiCorp*, 97 FERC ¶ 61,348 at 62,626 (2001), the Commission stated that, by proposing, through amendment, to embed a retirement and removal requirement in the then-current license for the Condit Project No. 2342, PacifiCorp was, in different packaging, proposing to surrender that license, but delay effectiveness of the surrender for a period of years. Here, as in *PacifiCorp*, the ultimate purpose of the proposed amendment and settlement is project retirement and removal.

[11] Pursuant to section 15(a)(1) of the FPA, 16 U.S.C. § 808(a)(1), the terms of an annual license are the terms of the prior license. Furthermore, under the annual licenses issued for a project, the terms of an existing license remain in effect pending relicense or surrender, and are subject to amendment. *See, Central Nebraska Public Power and Irrigation District*, 50 FERC ¶ 61,180 (1990); and *Central Nebraska Public Power and Irrigation District*, 56 FERC ¶ 61,059 (1991).

[12] The agreement does not appear to specify a particular date in April. In the absence of such specification, we assume that PacifiCorp is proposing to cease generation and commence retirement activities on April 1, 2010.

DISCUSSION

A. Delayed Effective Date of Surrender

10. The determination that a license ought to be surrendered and/or removed does not *per se* mean that the public interest requires immediate cessation of project operations. In some instances, it may be in the public interest for generation to continue for some period before project removal begins.[13] In this instance, PacifiCorp and the settlement parties propose to commence project retirement -- with its associated removal and securing of project works -- in approximately 4.5 years after the Commission's acceptance of surrender, and complete it approximately 7 years after acceptance.

11. PacifiCorp has proposed to surrender its license based on its determination that the likely cost of environmental protection, mitigation, and enhancement measures associated with relicensing the project, along with projected capital expenses necessary to keep the project operating for a full new license term, would make continued operation uneconomical.[14] It has proposed to delay effectiveness of the surrender and to operate for an interim period in order to permit completion of fisheries studies being conducted by Oregon Department of Fish and Wildlife (Oregon DFW) and Confederated Tribes of the Warm Springs Reservation of Oregon (Confederated Tribes).[15] Because these studies involve sorting and collecting fish at a collection facility located adjacent to the existing fish ladder at the Powerdale project's dam, their successful completion is dependent on the operation of the project's fish ladder until 2010. In addition, continued generation of electricity during the interim period will maximize the value of all resources associated with the project. On the facts of this case, I conclude that the proposed delay is reasonable and supported by the record.[16]

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[13] *Arizona Public Service Co.*, 97 FERC ¶ 61,315 at 62,456 (2001).

[14] PacifiCorp's decision to surrender the project is also based in part on the fact that a debris flow triggered by heavy rainfall resulted in a nearly six-month project shutdown in September 2000, and its concern about the possibility of similar debilitating debris flows in the future.

[15] Oregon DFW and Confederated Tribes are undertaking fish studies in the Hood River basin as part of an effort to rebuild anadromous fish populations in the Hood River.

[16] *See PacifiCorp*, 97 FERC ¶ 61,348 at 62,626; *Arizona Public Service Co.*, 97 FERC ¶ 61,315 at 62,456 (2001).

B. Interim Operating Period Requirements

12. PacifiCorp and the settlement parties have proposed the following protection, mitigation and enhancement measures to apply during the interim operating period (that is, until April 1, 2010):[17] (1) ramping rate requirements; (2) minimum instream flow requirements;[18] (3) cessation of generation between April 15 and June 30 of each year, during which period diversion flow will be reduced to a maximum of 25 cubic feet per second (cfs);[19] (4) water quality sampling and monitoring requirements related to the yearly resumption of power generation in July: (5) restriction of flushing of the sand settling basin; (6) operation and maintenance of existing intake screens (including regular inspections, repair, and rehabilitation, or replacement); (7) maintenance of the project's fish ladder auxiliary attraction water bar rack; (8) limitation of ground-disturbing activities that would affect terrestrial and wetland habitat; (9) cooperation with agencies in the monitoring of endangered species; (10) revision of the project's cultural resources management plan (CRMP) to reflect the actions proposed in the agreement, and issuance of a new programmatic agreement; (11) continued maintenance of existing recreation facilities; (12) information sharing with agencies and project access to agencies; and (13) continued ownership and maintenance of certain specified lands.[20]

13. Based on staff's analysis in the EA, I find that these proposals for measures to be implemented during the interim operating period will adequately protect the

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[17] *See* Agreement, Section 3.

[18] PacifiCorp will also develop standard operating procedures to meet the ramping rate and instream flow requirements, as well as monitoring plans and reports to ensure compliance and assess any need for changes.

[19] The cessation of diversion flow is intended to facilitate safe and effective downstream passage of juvenile salmon and steelhead.

[20] The lands described in the agreement appear to include lands outside the project boundary as well as lands within it. *See* discussion, *infra*. The Commission lacks jurisdiction to require ownership and maintenance of lands not within the project boundary although it may require that lands serving a project purpose be brought within the project boundary.

environment. PacifiCorp's license will be amended to include these provisions except as discussed *infra*.[21]

C. Project Surrender Requirements

14. PacifiCorp and the settlement parties have proposed that, between April 1, 2010, and February 29, 2012, PacifiCorp will remove the diversion dam, intake, power canal, steel flume and sand-settling basin, flowline pipe, and surge tank.[22] PacifiCorp will leave in place the flowline bridge and associated access to the steel catwalk. It will also leave in place the concrete powerhouse, although it will remove various structures within the powerhouse (equipment located in the interior of the powerhouse, loose equipment, parts and materials, and the internal rotating generator and turbine components), as well as the maintenance garage connected to it. It will drain all oil and hydraulic fluids from equipment located inside the powerhouse, seal the turbine pit with concrete, re-grade areas surrounding the surge tank and maintenance garage, and secure the powerhouse building, all remaining equipment and adjacent remaining facilities.

15. For environmental protection and mitigation in connection with the removal and/or securing of project works, PacifiCorp has proposed measures to: (1) develop and implement an erosion and sediment control plan to protect the Hood River from unplanned releases of sediment and debris, (2) conduct in-water work[23] between July 15 and August 31 (unless a time period outside of that is approved by Oregon DFW, NMFS, and FWS); (3) extend the existing fish ladder return channel, and construct an artificial channel, to provide fish continued access to the existing fish ladder entrance for downstream passage (unless NMFS, FWS,

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[21] Measures (1) through (9), above, are also applicable to the project pursuant to conditions 1 and 2 of the water quality certification issued by the Oregon DEQ, and are contained in Appendix A to this order. *See* discussion, *infra*. Requirements for measures related to recreation facilities and information sharing and access are set out in ordering paragraphs J and K, respectively. Requirements concerning cultural resources are set out in ordering paragraph M.

[22] PacifiCorp will also remove a fish sorting and trapping facility, constructed by Oregon DFW and Confederated Tribes, that is attached to and contiguous with the project's fish ladder.

[23] "In-water work" refers to construction-related activities occurring within the wetted portion of the stream channel.

Oregon DFW, and Confederated Tribes agree such passage is not necessary); (4) prepare final fish passage design and construction plans for the changes to the fish passage facilities; and (5) develop and implement a fish passage monitoring and mitigation plan.

16. PacifiCorp also proposes to: (1) complete surveys for threatened and endangered species in areas planned for construction, and plan and design removal activities to minimize impacts on wildlife species and habitats; (2) prepare and implement a revegetation and mitigation plan; and (3) reach a draft memorandum of agreement with the Oregon SHPO concerning cultural resources.[24]

17. The surrender of a license for an existing project is conditioned, at a minimum, on the licensee disconnecting the generating equipment and taking measures to ensure public safety. The issue of whether to authorize or require the removal of some or all project works requires additional analysis, such as that conducted in an EA.

18. Based on staff's analysis in the EA,[25] I find that project retirement will benefit the environment, and that implementation of PacifiCorp's proposed protection and mitigation measures for project removal will adequately protect the environment.[26]

19. Finally, PacifiCorp also requests adoption of the Decommissioning Plan contained in Appendix B to the agreement.[27] While the Decommissioning Plan provides an acceptable general scheme for project removal and its application is not objectionable, it does not contain adequate engineering detail. To ensure that the removal is adequately and safely conducted, this order requires PacfiCorp to

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[24] *See* Agreement, Sections 4.1 and 4.2.

[25] Staff concluded that project removal would be beneficial to environmental resources by restoring natural conditions within the lower Hood River and eliminating project-related effects on resources in the project area.

[26] The measures discussed above are also applicable to the project pursuant to condition 3 of the water quality certification issued by Oregon DEQ, and they are contained in Appendix A to this order.

[27] The water quality certification requires compliance with the Decommissioning Plan.

file with the Commission detailed plans and specifications and other preconstruction documents before commencing removal of project works. Removal activities may not begin until the Commission's Division of Dam Safety and Inspection, Portland Regional Office, has reviewed and commented on the plans and specifications and determined that all preconstruction requirements have been satisfied.[28]

D. Other Matters

20. While the proposed amendment and surrender requirements are acceptable overall, there are some aspects of the agreement that cannot be adopted as submitted.

1. Commission Oversight

21. The proposed amendment and surrender terms provide for consultation and approval by a variety of federal and state agencies; they do not, for the most part, provide for the Commission's oversight or require its approval.

22. Section 6 of the FPA provides that hydropower licenses "may be altered or surrendered only upon mutual agreement between the licensee and the Commission after 30 days public notice."[29] Our regulations provide that licenses may be surrendered only upon the licensee's fulfillment of such obligations under the license as the Commission may prescribe, as well as "upon such conditions with respect to the disposition of [project] works as may be determined by the Commission."[30]

23. The Commission has both authority and responsibility to enforce its licenses, and this authority does not end, nor does a surrender become effective, until the licensee satisfies all conditions required by the Commission. Although it is appropriate for PacifiCorp to consult with federal and state environmental agencies concerning matters such as ramping, instream flows, etc., ultimately, it is the Commission's approval PacifiCorp must obtain before it may implement either

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[28] *See* ordering paragraphs (G) through (I).

[29] 16 U.S.C. § 799.

[30] 18 C.F.R. § 6(2) (2005).

the license amendment or surrender conditions. Accordingly, we have added a requirement for the Commission's approval to the appropriate conditions.

2. Schedules

24. Appendix A to the agreement purports to set out a schedule for implementation of protection, mitigation and enhancement measures during the interim operating period (Appendix A, Table A), and a schedule for implementation of the project's retirement (Appendix A, Table B). The agreement proposes that the Commission adopt the deadlines set out in these schedules.[31]

25. Some of the Appendix A, Table A deadlines are tied to the effective date of a "final" order in the proceeding.[32] The agreement defines a "final" order as one for which all administrative and judicial appeals relating to the order have been finally adjudicated or dismissed.[33] However, Commission orders are final unless a request for rehearing is filed within 30 days from the date of the order's issuance, as provided in Section 313(a) of the FPA. Furthermore, filing a request for rehearing during the 30-day period does not operate as a stay of the effective date of an order except as specifically ordered by the Commission. Thus, the deadlines for actions occurring during the interim operating period and for implementation of the project's retirement are tied to the date of issuance of this order.[34]

26. Appendix A, Table B is a bar chart that appears to set out approximate months in which various project retirement activities will begin and end. While the periods of time provided for the activities are generally satisfactory, Table B does not provide date-specific deadlines for commencing and completing

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[31] Agreement, Sections 3.1 and 4.1, respectively.

[32] Specifically, Appendix A, Table A, provides that requirements concerning ramping, instream flows, recreation facilities, and information sharing shall be implemented 30 days after a "Final FERC Order." Sections 3.2.2, 3.3.2, and 3.13.2 of the Agreement also tie required action to that deadline.

[33] *See* Agreement, Definitions.

[34] *See* ordering paragraphs, *infra*.

retirement activities. Ordering paragraph G of this order requires PacifiCorp to do so.[35]

3. Early Project Retirement

27. PacifiCorp and the settlement parties have requested that the Commission incorporate Section 5 of the agreement in its amendment/surrender requirements. Section 5 of the agreement provides that PacifiCorp may, subject to Commission approval, cease generation and associated protection, mitigation, and enhancement measures, and proceed with project retirement prior to 2010.[36] Section 5 also sets out protection and mitigation measures PacifiCorp would take after such early cessation of generation (maintenance of facilities until removal, operation of dam to allow operation of the Fish Trapping Facility),[37] as well as to complete early project retirement.

28. Adoption of the Section 5 language is not necessary to permit PacifiCorp, at some future date, to file a request to cease generation and retire the project earlier than the deadlines adopted by this order. However, the propriety of early cessation of generation and project retirement must be determined based on the circumstances presented at the time of the request. To approve terms for early cessation of generation and project retirement as provided by Section 5 would be to prejudge the issue. Accordingly, the requirements of Section 5 will not be adopted.

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[35] Under Section 4.1 of the Agreement, the requirement for completion of project retirement actions is subject to sections 2.2 and 7.3 of the agreement. Section 2.2 provides that PacifiCorp may not be required to implement any action under the agreement until all applicable permits required for the action are obtained in a form that does not conflict with the agreement, and any administrative or judicial review has been completed. Section 7.3 of the agreement states that no party shall be liable for breach of the agreement as a result of failure to perform or delay in performance, if it is delayed or prevented by *force majeure*. This order deletes the section 2.2 and 7.3 caveats. If PacifiCorp cannot meet a deadline set out in this order, it may file a request for an extension. Section 7.3 anticipates a dispute amongst the parties concerning the agreement.

[36] Section 5.1.

[37] Section 5.2.

4. Land Conveyances

29. Section 3.14 of the agreement states that PacifiCorp shall continue to own certain lands identified in the agreement's Appendix D until March 29, 2012, and shall not dispose of, encumber, or initiate changes in the character of those lands, except for conveyances conducted in accordance with section 4.4 and Appendix E of the agreement.

30. To the degree that Section 3.14 requires PacifiCorp to hold until February 29, 2012, (*i.e.*, the effective date of the license surrender) any project lands identified in the agreement's Appendix D in the form they are currently owned (that is, with any currently approved encumbrances, etc.), the requirement in Section 3.14 will be adopted.

31. However, the Commission has no jurisdiction over project lands after the license has been surrendered; therefore, the portion of Section 3.14 that addresses post-surrender conveyances will not be adopted.[38]

32. Nor will the language in Section 3.14 permitting actions and conveyances specified in the agreement's Appendix E be adopted. Appendix E specifies five actions and encumbrances to be permitted during the interim operating period, but does not supply sufficient identification and description to permit a determination of whether the proposed actions are within the project boundary and/or come within the terms of the project's existing land use article, let alone make a finding that they are reasonable, and in the public interest.[39]

[38] Section 3.14 purports to permit post-surrender conveyances pursuant to Section 4.4 of the agreement.

[39] While we will not adopt this provision in this proceeding, PacifiCorp is free to request a further amendment to the annual license, supported by information that will permit us to make a determination.

STATUTORY REQUIREMENTS

A. Water Quality Certification

33. Under section 401(a)(1) of the Clean Water Act (CWA),[40] any applicant for a federal license or permit for an activity that may result in a discharge into United States waters must obtain from the state in which the discharge originates certification that the discharge will comply with applicable water standards. Removal of the Powerdale diversion dam could result in a discharge under section 401 of the CWA. The Commission may therefore not approve the surrender unless and until the state certifying agency has either issued water quality certification for the action or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year.

34. In this instance, the certifying agency is the Oregon Department of Environmental Quality (Oregon DEQ). On June 13, 2003, PacifiCorp applied to the Oregon DEQ for water quality certification. The Oregon DEQ's certification was issued on June 11, 2004.[41]

35. The certification includes conditions: (1) addressing the continued operation of the project through 2010; and (2) for the removal of project facilities by 2012. Specific conditions related to the continued operation of the project include minimum flows, ramping rates, an April 15 to June 30 reduction in diversion flows, project startup operations, sand settling basin flushing, maintenance of the intake screens, maintenance of the fish ladder auxiliary water intake, water temperature monitoring and reporting, flow monitoring and reporting, and specifications for ground-disturbing activities.

36. Specific conditions related to the removal of project facilities include compliance with the settlement agreement and decommissioning plan, development and implementation of a sediment and erosion control plan, timing and notification of in-water work, and providing for fish passage during dam removal.

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[40] 33 U.S.C. § 1341(a)(1).

[41] The certification was filed with the Commission on July 28, 2004, but contained only even pages, and the complete certification was refiled on August 25, 2004.

37. The water quality certification conditions are set out in Appendix A. Compliance with Appendix A is required by ordering paragraph (E).

B. Endangered Species Act

38. Section 7(a)(2) of the Endangered Species Act of 1973 (ESA)[42] requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species, or result in the destruction or adverse modification of designated critical habitat.[43]

39. Based on its biological assessment conducted in the EA, Commission staff concluded that the continued operation of the project and eventual project removal would not be likely to adversely affect the bald eagle but would adversely affect bull trout, Lower Columbia River (LCR) Chinook salmon, LCR coho salmon, and LCR steelhead. Accordingly, on December 17, 2003, staff sent its biological assessment to FWS, requesting concurrence in its determination that continued project operation would not adversely affect the bald eagle, and requesting formal consultation under section 7(a)(2) of the ESA on bull trout. Also, on December 17, 2003, Commission staff sent its biological assessment to NMFS, requesting formal consultation under section 7(a)(2) on LCR Chinook salmon and LCR steelhead. Commission staff did not request consultation on LCR Coho salmon because it was not proposed or listed under the Endangered Species Act at that time.

40. On June 14, 2004, NMFS issued a notice proposing to list LCR coho salmon as threatened, and on August 17, 2004, Commission staff issued an addendum to its biological assessment, indicating that while the proposed action would adversely affect LCR coho salmon, the action would not jeopardize the continued existence of the species.

41. Subsequently, NMFS listed LCR coho salmon as threatened (June 28, 2005) and designated critical habitat in the project area for LCR Chinook salmon and LCR steelhead (August 12, 2005).

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[42] 16 U.S.C. § 1536(a)(2).

[43] 50 U.S.C. § 402.02(d).

42. FWS's Biological and Conference Opinions, filed June 28, 2004, concurred with the Commission's determination that the proposed action would not adversely affect the bald eagle. FWS's opinion also indicated that the proposed action would not jeopardize the continued existence of Columbia River distinct population segment of bull trout, nor adversely modify or destroy proposed bull trout critical habitat, but contained incidental take terms and conditions to implement two reasonable and prudent measures necessary to minimize the take of bull trout.

43. Subsequently, on October 6, 2004, the FWS designated the Hood River in the project area as critical habitat for bull trout. There have been no changes to the proposed action or new information that would alter the analysis of project effects on critical habitat as it is presented in the December 5, 2003 EA. Based on that information and analysis, I conclude that the proposed action will not adversely modify or destroy critical habitat for bull trout and there is no need to reinitiate consultation with FWS regarding the newly designated critical habitat for bull trout.

44. NMFS issued both a draft[44] and final Biological Opinion. Its final Biological Opinion, filed September 22, 2005, concludes that the proposed action will not jeopardize the continued existence of LCR Chinook salmon, LCR coho salmon, or LCR steelhead, nor adversely modify or destroy proposed critical habitat for LCR Chinook salmon or LCR steelhead, but contains terms and conditions to implement reasonable and prudent measures necessary to minimize the take of LCR Chinook salmon, LCR coho salmon, and LCR steelhead.

45. The terms and conditions of the biological opinions of FWS and NMFS are set out in Appendices B and C, respectively, and are adopted as conditions of this order by ordering paragraph L, which also requires PacifiCorp to file with the Commission an endangered species protection plan to include the measures required by FWS and NMFS. Ordering paragraph L requires PacifiCorp to file a plan before commencing any construction in or near project waters.

[44] The draft biological opinion was issued November 19, 2004.

C. Magnuson-Stevens Act

46. Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act[45] requires federal agencies to consult with the Secretary of Commerce on proposed actions which, if authorized by the agency, may adversely affect Essential Fish Habitat (EFH). The Pacific Fisheries Management Council designated essential fish habitat for two species of Pacific salmon that are known to occur within the project area: Chinook salmon and coho salmon. Freshwater EFH for these salmon include all those streams, lakes, ponds, wetlands, and other bodies currently or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable artificial barriers and longstanding, naturally impassable barriers.

47. Based on EFH consultation, NMFS concluded that the proposed action will adversely affect designated EFH for Chinook and coho salmon,[46] and has adopted the incidental take terms and conditions in the incidental take statement of its biological opinion as its recommendations for conservation measures to avoid, minimize, or otherwise offset such adverse effects.[47]

D. Section 106 of the National Historic Preservation Act

48. Under Section 106 of the National Historic Preservation Act (NHPA),[48] the Commission must take into account the effects of its actions on properties included in or eligible for the National Register of Historic Places (National Register) and, prior to taking action on a proposed undertaking, afford the Advisory Council on Historic Preservation (Council) a reasonable opportunity to comment.[49] Such comment generally entails consultation with the State Historic Preservation Officer (SHPO), the Advisory Council, and additional consulting

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[45] 16 U.S.C. § 1855(b)(2).

[46] *See* NMFS's Biological Opinion, Section 11.

[47] *See* Appendix C.

[48] 16 U.S.C. § 470f.

[49] *See* 36 C.F.R. §800.1(a).

entities, including the license applicant, affected Indian tribes,[50] local governments, and members of the public.

49. If a federal agency determines that the undertaking will have an adverse effect on historic properties, and the federal agency and the SHPO agree on how adverse effects will be resolved, they typically execute a Memorandum of Agreement (MOA) addressing potential adverse effects and the actions to be taken to mitigate them, and submit a copy of their executed agreement, along with documentation, to the Council before approving the undertaking.[51]

50. The Powerdale Project contains five historic properties: (1) the diversion dam, (2) the intake and gatehouse, (3) the water conveyance system (flow line), (4) the powerhouse, and (5) the operator's house; together, these facilities comprise the National Register-eligible Powerdale Hydroelectric Project Historic District. As identified in Appendix A to the MOA, the proposed undertaking is the removal of the diversion dam; the intake and gatehouse; the operator's house (unless otherwise agreed with a future landowner); portions of the flowline (wood stave pipeline and surge tank); and portions of the powerhouse (crane, turbines, generators and other equipment). Demolition of these historic buildings and structures that contribute to the Powerdale Hydroelectric Project Historic District would adversely affect the integrity of the Historic District.[52] In addition, the NHPA also applies to properties as yet undiscovered. Ground-disturbing activities could have the potential to affect buried archaeological deposits.

51. The Commission's Office of Energy Projects and the SHPO developed an MOA setting out requirements to address the adverse effects. During the consultation process, PacifiCorp developed a draft cultural resources management plan (CRMP), which incorporated comments received from the Council, the SHPO, and the Commission staff. A draft of the MOA was submitted to the

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[50] Confederated Tribes, the Yakima Indian Nation, the Confederated Tribes of the Umatilla Reservation, and the Nez Perce Tribe participated in the consultation in this proceeding.

[51] 36 C.F.R. § 800.6(b)(1)(2003).

[52] *See* EA, Section K. The powerhouse structure and sections of the flowline (including two sections of wood stave pipe) will remain in place. The status of each remaining facility, individually, as eligible for listing under the NHPA may be retained; however, they will no longer meet the criteria of a Historic District.

Council, which concluded that its participation in the consultation to resolve adverse effects was not needed.[53] The Commission and the SHPO executed the MOA on July 2, 2004, and PacifiCorp signed as a concurring party. A copy of the executed MOA and relevant documentation were submitted to the Council.

52. The MOA requires PacifiCorp to complete a final Historic Properties Management Plan and file it for Commission approval within six months from the issuance of this order. The MOA also stipulates terms for the treatment of historic properties during the interim operating period for the project. The MOA is adopted by ordering paragraph (M).

The Director orders:

(A) PacifiCorp's application for amendment of its annual license and surrender of the license for the Powerdale Hydroelectric Project No. 2659, filed June 16, 2003, is granted as indicated in this order. The surrender shall become effective upon issuance of a Commission notice that all the surrender conditions specified below have been satisfied.

(B) The licensee shall commence dam and facility removal after April 1, 2010. By February 29, 2012, and consistent with Appendix B of the settlement agreement filed with the Commission on June 16, 2003, the licensee shall complete: (1) removal of project dam, intake structure, power canal, steel flume, sand settling basin, transition structure, portions of the flowline, turbine, generator, and appurtenant facilities; (2) the securing of the powerhouse superstructure, powerhouse substructure, portions of the flowline, tailrace, and switchyard; and (3) all post-removal activities to restore the site.

(C) The licensee shall cease generation of power on April 1, 2010.

(D) Effective upon issuance of this order, and continuing through February 29, 2012, the licensee shall continue to own the project lands identified in the Appendix D of the settlement agreement filed with the Commission on June 16, 2003**,** and shall not dispose of, encumber, or initiate changes in the character of such lands.

Within 90 days of issuance of this order, the licensee shall file, for Commission approval, revised Exhibit G drawings that: (1) enclose all principal project works necessary for operation and maintenance of the project within the project boundary line;

[53] *See* letter filed July 2, 2004.

and (2) delineate the location of the lands referenced in section 3.14 of the settlement agreement filed June 16, 2003. The project boundary shall have three control points with latitude and longitude or state plane coordinates, and be stamped by a registered land surveyor pursuant to 18 C.F.R. §§ 4.39 and 4.41.

(E) Effective upon issuance of this order, the license for the Powerdale Hydroelectric Project No. 2659 is amended to adopt the conditions of the water quality certification issued by the Oregon Department of Environmental Quality, which are set forth in Appendix A of this order.

(F) For the period prior to the commencement of dam and facility removal, the license is amended to include the following requirements:

(1) Requirement to File Plans for Commission Approval and Requirement to Consult

Various conditions set forth in Appendix A of this order require the licensee to prepare plans for approval by Oregon Department of Environmental Quality. Each such plan shall also be submitted to the Commission for approval and include an implementation schedule. These plans are listed below.

Condition	Plan	Due Date
Appendix A, Condition 1(a)	Surface Water Temperature Management Plan	Within 90 days of the issuance date of this order
Appendix A, Condition 2(c)(1)	Standard Operating Procedures and Monitoring Plan	Within 90 days of the issuance date of this order
Appendix A, Condition 3(b)(2)	Erosion and Sediment Control Plan	Within 90 days of the issuance date of this order

The licensee shall prepare the plans after consultation with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, Oregon Department of Environmental Quality, Oregon Department of Fish and Wildlife, Oregon Water Resources Department, Confederated Tribes of the Warms Springs Reservation, American Rivers, and Hood River Watershed Group. The licensee shall include with the plan, documentation of its consultation, copies of comments and recommendations made in connection with the plan, and a description of how the plan accommodates the comments and recommendations. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information. The Commission reserves the right to make changes to any plan submitted. Upon Commission approval, the plan becomes a requirement of the license, and the licensee

shall implement the plan, including any changes required by the Commission.

(2) Requirement to File Documentation of Completion

The licensee shall file with the Commission documentation of completion of the following activities.

Condition No.	Activity	Due Date
Appendix A, Condition 1(d)(1)	Annual Temperature and Flow Monitoring Report	By December 31 each year

(3) Requirement to File Amendment Applications

Certain conditions in Appendix A contemplate unspecified long-term changes to project operations, requirements, or facilities for the purpose of protecting and enhancing environmental resources. These changes may not be implemented without prior Commission authorization granted after the filing of an application to amend the license. The conditions are listed below:

Condition No.	Modification
Appendix A, Condition 1(d)(2)	Changes in operations or project facilities intended to prevent project-related warming from exceeding 0.25 ºC
Appendix A, Condition 1(d)(3)(b) or Condition 1(k)	Modification of instream flow requirements
Appendix A, Condition 1(j)	Modification of temperature monitoring required by Appendix A, Condition 1(g)
Appendix A, Condition 2(b)(3)	Changes in operations or project facilities intended to prevent flowline water from causing exceedance of water quality standards
Appendix A, Condition 2(c)(1)	Modification of the ramping rate requirements

(G) At least 60 days before starting removal of the project features, the licensee shall submit one copy of the following documents to the Commission's Division of Dam Safety and Inspections (D2SI) – Portland Regional Office and two copies to the Commission (one of these shall be a courtesy copy to the Director, D2SI): (1) a detailed description of the sequencing of activities and schedule for removing the project features and restoring the site; (2) final contract plans and specifications; (3) Quality Control and Inspection Program; (4) Temporary Construction Emergency Action Plan; (5) a blasting

plan, if necessary; (6) a public safety plan for the period during removal activities; and (7) a detailed erosion and sediment control plan. The licensee may not begin removal activities until the D2SI-Portland Regional Office has reviewed and commented on the plans and specifications, determined that all preconstruction requirements have been satisfied, and authorized start of removal activities.

(H) Before starting removal of the project features, the licensee shall review and approve the design of contractor-designed cofferdams and deep excavations and shall make sure construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of the cofferdam, the licensee shall submit one copy to the Commission's D2SI-Portland Regional Office and two copies to the Commission (one of these copies shall be a courtesy copy to the Director, D2SI), of the approved cofferdam construction drawings and specifications and the letters of approval.

(I) Within 90 days of completing project removal and site restoration, the licensee shall submit one copy to the D2SI – Portland Regional Office and two copies to the Commission (one of these copies shall be a courtesy copy to the Director, D2SI), of a final report which demonstrates that the project facilities have been removed and the project site restored in accordance with the approved plans. The surrender of license shall not be effective until the Regional Engineer has issued a letter stating that all terms and conditions of the surrender order have been satisfied.

(J) Within 90 days from the issuance of this order, the licensee shall file, for Commission approval, a recreation plan to provide for the following items: (1) at Powerdale Park (a) replace the existing toilet facility, when necessary, with a barrier-free accessible toilet facility; (b) provide two picnic tables; and (c) install trail directional sign(s) and a project interpretive sign; (2) at the Powerhouse Day-use Site (a) install a barrier-free toilet facility and construct a pathway to that facility; (b) install warning sign(s) about fluctuating water levels, and (c) install a trail directional sign(s) and an interpretive sign about salmon.

The recreation plan shall address public access at the Powerdale Hydroelectric Project both before and during project removal operations. The licensee shall, at a minimum, provide appropriate sign(s) and notification prior to demolition and restoration activities to inform the public of planned activities at and associated temporary restrictions to the existing day-use sites and bypassed reach; and, where feasible, restore trails, access roads and parking areas to pre-construction conditions after completing the removal of project works.

The licensee shall prepare the recreation plan in consultation with the Oregon

Department of Fish and Wildlife, Oregon State Parks and Recreation Department, and Confederated Tribes of the Warm Springs Reservation of Oregon. The licensee shall include with the plan a map that clearly identifies the location of the recreation facilities in relation to the existing project boundary; documentation of agency and tribe consultation; copies of comments and recommendations on the plan after it has been prepared and provided to the agencies and tribe; and specific descriptions of how the agencies' and tribe's comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies and tribe to comment prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

(K) Within 60 days from the issuance of this order, PacifiCorp shall make powerhouse records, including planned and unplanned outages, instream flow releases, ramping conditions, and temperature monitoring available to National Marine Fisheries Service, U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife, Oregon Department of Environmental Quality, Oregon Water Resources Department, Confederated Tribes of the Warm Springs Reservation, American Rivers, and Hood River Watershed Group. Additionally, beginning in January 2007, and annually thereafter, PacifiCorp shall file an annual report summarizing fish and wildlife mitigation and monitoring activities for the previous year and conduct a meeting with the entities listed above to discuss the report. Within 60 days of the annual meeting, the licensee shall file a consultation report with the Commission that contains meeting minutes or another form of documentation along with any proposals to change project structures or operations based on the results of this consultation.

(L) In all proposed actions involving construction in or near waterways, the licensee shall follow the construction practices contained in Appendices (B) and (C) of this order, which set out the incidental take terms and conditions to implement reasonable and prudent measures of the U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS), respectively. At least ninety (90) days before the start of any proposed action involving construction in or near waterways, the licensee shall file, for Commission approval, an endangered species protection plan that describes how the licensee will implement the measures included in Appendices (B) and (C).

The licensee shall prepare the endangered species protection plan in consultation with the FWS and NMFS. The licensee shall include with the plan, documentation of FWS and NMFS consultation; copies of comments and recommendations on the plan

after it has been prepared and provided to FWS and NMFS; and specific descriptions of how the FWS's and NMFS's comments are addressed by the plan. The licensee shall allow a minimum of 30 days for the FWS and NMFS to comment prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No land-disturbing or land-clearing activities shall begin until after the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

(M) The licensee shall implement the *Memorandum of Agreement between the Federal Energy Regulatory Commission and the Oregon State Historic Preservation Officer for Managing Historic Properties that may be Affected by PacifiCorp's Surrender of License for the Powerdale Hydroelectric Power Project in Hood River County, Oregon, FERC No. 2659-016* (executed on July 2, 2004), including but not limited to the Historic Properties Management Plan (HPMP) for the project.

Within six months from the issuance of this order, the licensee shall file for Commission approval an HPMP as stipulated in the Memorandum of Agreement. In the event that the Memorandum of Agreement is terminated prior to Commission approval of the HPMP, the licensee shall obtain Commission approval 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. In the event that the Memorandum of Agreement is terminated after Commission approval of the HPMP, the licensee shall implement the provisions of its approved HPMP. The Commission reserves the authority to require changes to the HPMP at any time during the term of the license surrender.

(N) The licensee shall serve copies of any Commission filing required by this order on any entity specified in this order to be consulted on matters related to that filing. proof of service on these entities must accompany the filing with the Commission.

(O) PacifiCorp's application for a new license for the Powerdale Hydroelectric Project No. 2659, filed February 25, 1998, is dismissed.

(P) This order is final unless a request for rehearing is filed within 30 days from the date of its issuance, as provided in Section 313(a) of the Federal Power Act. The licensee's failure to file a request for rehearing shall constitute acceptance of the terms of the surrender.

By the Director.

J. Mark Robinson
Director, OEP

APPENDIX A

CLEAN WATER ACT SECTION 401 CERTIFICATION CONDITIONS
FOR INTERIM OPERATION AND DECOMMISSIONING
OF THE POWERDALE HYDROELECTRIC PROJECT

Unless otherwise specifically provided, the following certification conditions are effective 30 days after incorporation into a FERC license or order or other federal license or permit for interim operation and decommissioning of the Powerdale Hydroelectric Project. The conditions are in addition to certain rights and obligations of PacifiCorp and other parties set forth in the June 6, 2003 Settlement Agreement Concerning the Interim Operation and Decommissioning of the Powerdale Hydroelectric Project (Settlement Agreement), specifically PacifiCorp's obligations under the Settlement Agreement to implement certain measures at an earlier date, or to continue measures commenced at an earlier date, and including other parties' review and approval of certain activities under the Settlement Agreement.

1. Interim Operation: Conditions for Compliance with the Temperature Water Quality Standard and Total Maximum Daily Loads (TMDLs).

    a. *Temperature Management Plan*. In accordance with OAR 340-041-0028 (12)(h) PacifiCorp shall implement the Surface Water Temperature Management Plan approved by the Oregon Department of Environmental Quality (ODEQ) in conjunction with this certification and set forth in Conditions 1.b, 1.c, 1.d., 1.f., 1.g., 1.h., 1.i, 1.j., and 2.b.

    b. *Flows*. Subject to Condition 1.d., PacifiCorp shall implement in the bypass reach on an average hourly basis either the Hood River flow immediately upsteam of the Project (less the amount required to compensate for flowline leakage up to a maximum of 25 cfs), or the minimum instream flows set forth in the following table, whichever is less. Minimum instream flow requirements may be met using a combination of flows from the fish ladder, fish screen bypass flow, trash sluice, and spillway gates.

January	140 cfs
February	220 cfs
March	220 cfs
April*	220 cfs
May*	250 cfs
June*	250 cfs

July	250 cfs
August	250 cfs
September	250 cfs
October	250 cfs
November	220 cfs
December	140 cfs

*Minimum instream flows for temperature specified in this table for April 15 through June 30 are superseded by higher minimum instream flows provided in accordance with Conditions 2.a. and 2.b. for the same period.

c. *Powerhouse Discharge*. Heat discharged to the Hood River through powerhouse cooling water may not exceed 19.31 million kilocalories per day.

d. *TMDLs September 15-October 15*. To meet its load allocation (LA) under the TMDL from September 15 through October 15, PacifiCorp shall undertake the following measures:

(1) PacifiCorp shall provide ODEQ with an annual temperature and flow monitoring report by December 31 of each year. The annual monitoring report shall include the required hourly temperature and flow data, pre- and post-deployment data, and monthly field audit data required by Condition 1.g. for that calendar year. The annual report shall identify any instances in which the seven-day moving average of daily maximum temperatures measured at the downstream end of the bypass reach exceeded 55˚F during the period from September 15 through October 15. If any such instances are identified in the first three years of monitoring, PacifiCorp shall conduct and submit in the third annual temperature and flow monitoring report to ODEQ an evaluation of whether the temperature increase in the bypass reach was 0.25˚F (as a seven-day moving average) more than the increase that would have occurred had the Project not diverted water from the bypass reach. In lieu of conducting this evaluation, PacifiCorp may assume that any temperature increase between the upstream and downstream ends of the bypass reach is due to Project diversions.

(2) If, based on the evaluation or assumed Project impact described in the preceding paragraph, ODEQ determines that the stream warming that occurred in the bypass reach was 0.25˚F more than would have occurred had there been no Project diversions,

PacifiCorp shall, within 90 days from written notification from ODEQ, submit to ODEQ a written proposal for measures that PacifiCorp will take to ensure that the Project-related warming in the bypass reach is not more than 0.25˚F (as a seven-day moving average) when the seven-day moving average of daily maximum temperatures exceeds 55˚F at the downstream end of the bypass reach between September 15 and October 15. The measures may include, but are not limited to, the following:

(a) Temperature modeling for the period September 15 through October 15 to determine what minimum instream flows would be necessary to reduce Project-related warming to 0.25˚F or less (as a seven-day moving average) when the seven-day moving average of daily maximum temperatures at the downstream end of the bypass reach exceeds 55˚F. If increased minimum flows are necessary and feasible, PacifiCorp shall provide the increased flows for the necessary period, subject to the limits set forth in Condition 1.d.(3).

(b) In the alternative, PacifiCorp may elect not to divert water (except for amounts required to compensate for flowline leakage up to 25 cfs) whenever and so long as the river temperature exceeds 55˚F at the downstream end of the bypass reach between September 15 and October 15.

(3) The following limitations apply to modifications of minimum instream flows under this Condition 1.d:

(a) ODEQ will not require modification of flows beyond those reasonably necessary to prevent a Project-related instream temperature increase of 0.25˚F or more. This limitation will only apply upon ODEQ's determination that PacifiCorp has satisfactorily demonstrated under prevailing conditions that any such modification would result in a Project-related temperature increase of less than 0.25˚F.

(b) Modification of minimum instream flows shall be limited to no more that a 50 cfs increase in any two-year period.

(c) PacifiCorp's responsibility to fulfill minimum instream flow requirements shall be limited to reducing Project diversions from the bypass reach.

(d) No increase in minimum instream flows shall be required before September 15, 2006.

e. *TMDLs Reservation*. In the event the Project continues to divert water for power generation or Project maintenance during and after 2012, ODEQ reserves the right to modify these certification conditions, in accordance with OAR Chapter 340, Division 48, as necessary to ensure implementation of TMDLs for any applicable period.

f. *Resumption of Power Generation*. Following the period of temporary reduction of flow in the flowline (April 15 to June 30), PacifiCorp shall resume power generation in accordance with Condition 2.b.

g. *Temperature Monitoring*. PacifiCorp shall monitor stream temperatures hourly from July 1 through October 15 each year at the sites PDBUP (upstream end of the bypass reach, approximately 50 meters downstream of the dam) and PDBDN (downstream end of the bypass reach, approximately 250 meters upstream of the powerhouse). The accuracy of temperature recorders shall be tested before and after field deployment to ensure that they are operating within their designated range of accuracy. In addition to pre- and post-deployment checks, the temperature recorders shall be audited monthly during the field measurement period. The pre- and post-deployment and monthly field audit checks shall be made using a National Institute of Standards and Technology (NIST) traceable (calibrated and maintained) thermometer accurate to ±0.2°C or better, which has been checked against an NIST traceable thermometer. PacifiCorp shall also record average hourly flows released from the diversion dam into the bypass reach for the period July 1 through October 15. These flows shall be measured in accordance with Condition 1.h.

h. *Flow Monitoring*.

(1) PacifiCorp shall measure instream flows by a Programmable Logic Control or alternative method for monitoring compliance with minimum instream flows, consistent with standard operating procedures developed by PacifiCorp in consultation with ODEQ, the Oregon Department of Fish and Wildlife (ODFW), the National Marine Fisheries Service (NMFS), the U.S.

Fish and Wildlife Service (USFWS), and the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWS).

(2) PacifiCorp shall publicly post hourly flow data on the Internet. The Internet posting shall clearly display the total average hourly river flow being released into the bypass reach directly downstream of the diversion dam. The Internet posting shall also display the average hourly flow being diverted to the flow conveyance system. Flows shall be reported in cfs. PacifiCorp shall post hourly flow measurements as timely as possible but no more than 24 hours after such measurements are taken.

(3) Unless otherwise agreed upon in writing by ODEQ and PacifiCorp in consultation with ODFW, OWRD, NMFS, USFWS, and CTWS, the following flow verification requirements shall apply: For the first two years, rating tables, including any discharge coefficients used to calculate the gaged flows being tracked by the PLC system, shall be verified at least once every six weeks during the periods when flows at the Tucker Bridge Gage are less than the sum of the minimum instream flow plus the power claim flow (generally about July through November); Rating tables shall be set-up to cover a range of operation settings; If after the initial two-year period a control structure demonstrates instability, or when maintenance changes flow conditions through a control structure, then more frequent than once-per-year verification measurements shall be conducted on an as-needed basis to re-establish a stable rating table for the particular control structure.

i. *Measurable Increase*. Any Project-related instream temperature increase of 0.25˚F or less above the relevant criterion shall not be deemed to contribute to an exceedance of the temperature criterion or to a violation of the temperature water quality standard.

j. *Monitoring Modifications*. ODEQ may make modifications to temperature monitoring required under Condition 1.g. that ODEQ considers to be reasonable and feasible, or, after consultation with ODFW, OWRD, NMFS, USFWS, and CTWS, make reasonable and feasible modifications to flow monitoring required under Condition 1.h, if:

(1) The monitoring requirements prove to be insufficient to provide the necessary data; or,

(2) Modifications to minimum instream flow requirements require

modifications to monitoring requirements.

k. *Temperature Flow Modifications*. With the approval of ODEQ, PacifiCorp may cease implementing or may implement modified flows under the Temperature Management Plan. ODEQ may approve cessation or modification if ODEQ determines that it will not impair the achievement of any TMDL or LA for the Project for temperature and will not contribute to the exceedance of the relevant temperature criterion in waters affected by the Project.

1. *Duration of Conditions*. The above conditions in this section will cease to be effective upon commencement of removal of the dam structure.

2. Interim Operation: Conditions for Compliance with the Biological Criteria, pH, Dissolved Oxygen, and Turbidity Water Quality Standards, Protection of Beneficial Uses, and Compliance with Other Appropriate State Laws.

a. *Flows*. Subject to Condition 1.d, PacifiCorp shall implement in the bypass reach either the Hood River flow immediately upstream of the Project (less the amount required to compensate for flowline leakage up to a maximum of 25 cfs), or the following minimum instream flows, whichever is less:

February 1 to April 14: 220 cfs
April 15 to June 30: manage flows as set forth in Condition 2.b
July 1 to October 31: 250 cfs
November 1 to November 30: 220 cfs
December 1 to January 31: 140 cfs

Minimum instream flow requirements may be met using a combination of flows from the fish ladder, fish screen bypass flow, trash sluice, and spillway gates.

b. Temporary Reduction in Diversion Flow.

(1) From April 15 to June 30 each year, PacifiCorp shall reduce diversion flow to a maximum of 25 cfs. All flows in excess of the amount required to compensate for flowline leakage up to the maximum of 25 cfs shall be passed by the dam.

(2) PacifiCorp may resume power generation of July 1 of each year. For the 96 hours prior to the start-up of the turbine unit,

PacifiCorp shall use multiparameter continuous monitoring devices approved by ODEQ to sample water quality at two sites in the river agreed upon by ODEQ. One site shall be just upstream of the powerhouse tailrace at site PDBDN as defined in Condition 1.g; the other shall be approximately 30 meters downstream of the powerhouse tailrace confluence with the river along the east bank. The continuous sampling devices shall sample and record hourly stream temperature, dissolved oxygen, pH, and turbidity. At least 72 hours prior to the start-up of the turbine unit, but not less than 24 hours after commencing the continuous monitoring, PacifiCorp shall open a 10-inch drain valve in the powerhouse near the tailrace to provide a slow exchange of flowline water. Upon beginning generation on July 1, PacifiCorp shall set the turbine generator unit on the minimum wicket gate setting required to synchronize the turbine generator. PacifiCorp shall then ramp the turbine generator load in sufficiently small increments to the extent feasible to maintain the ramping requirements set forth in Condition 2.c. Monitoring under this Condition 2.b.(2) at the two sampling sites may cease 24 hours after beginning generation. The multiparameter devices shall be calibrated for each parameter according to the manufacturer's specifications prior to deployment. At the time the instruments are deployed in the water and when they are retrieved at each site, PacifiCorp shall audit the multiparameter devices by measuring stream temperature with an NIST traceable thermometer accurate to ± 0.2˚C and measure stream dissolved oxygen via Winkler titration. Within 30 days after the instruments are retrieved, PacifiCorp shall forward ODEQ the electronic files of the continuous sampling, audit, and calibration data.

(3) The procedure set forth in Condition 2.b.(2) might provide dilution of flowline water in excess of that necessary to comply with water quality standards. PacifiCorp may reduce or cease its monitoring effort under Condition 2.b.(2) following three consecutive years of monitoring data, of quality considered accurate and reliable by ODEQ, demonstrating that the flowline water does not contribute to an exceedance of a water quality standard at the downstream monitoring site described in that condition. In the absence of

three years of such data, PacifiCorp may reduce or cease its monitoring effort under Condition 2.b.(2) if ODEQ provides written approval based upon an ODEQ determination that there is no reasonable potential for the flowline water to contribute to an exceedance of one or more water quality standards at the downstream monitoring site. If, notwithstanding use of the procedure described in Condition 2.b.(2), the flowline water causes an exceedance of water quality standards at the downstream monitoring site, ODEQ may direct PacifiCorp to develop and propose, within a reasonable time specified by ODEQ, alternative measures for ensuring that the flowline water does not cause an exceedance of water quality standards at the downstream monitoring site upon beginning generation. Upon approval by ODEQ, PacifiCorp shall implement the alternative measures, which may include increased diversion flow during the period April 15 through June 30.

c. *Ramping*.

(1) PacifiCorp shall make reasonable efforts to limit the ramping rates in the bypass reach to no more than two inches per hour, and in any event such rates shall not exceed three inches per hour. In addition, PacifiCorp shall complete and implement standard operation procedures and a monitoring plan, developed in consultation with ODEQ, ODFW, NMFS, USFWS, and CTWS, for meeting and documenting compliance with the ramping limits. Should development or implementation of the monitoring plan, or the resulting data, show that a different ramping rate will result in the same protections for aquatic species (for example, when river flows into the Project are already high), PacifiCorp may propose such a different ramping requirement. Upon the approval of ODEQ in consultation with ODFW, NMFS, USFWS, and CTWS, the approved variation shall be substituted for the ramping requirements set forth in this condition.

(2) "Ramping" means those Project-induced increases (up-ramping) and decreases (down-ramping) in river discharge and associated changes in water surface elevation over time resulting from generation of electricity by Project facilities, Project

maintenance activities (i.e., planned outages) and unplanned (forced) outages. Ramping does not include changes in flows and change in river stage resulting from increases or decreases in stream flow unrelated to the Project. Ramping rates in this certification are stated in inches of change per hour. Ramping is measured as the distance between the maximum and minimum water level measured at a specified location over the applicable period of time; variation in water levels within the maximum and minimum water level during that period are not considered for purposes of measuring ramping. For example, if the relevant ramping limitation is one inch per hour, and the river gage is at four feet at noon, then during the next hour the water elevation may vary no more than between three feet eleven inches and four feet; between four feet and four feet one inch; et cetera. In each example, the amount of change between the minimum and maximum gage readings in a one-hour time period is not more than one inch, but could vary within that range more than once during the hour.

(3) Following an unplanned outage, PacifiCorp shall observe conditions directly downstream of the Project dam and powerhouse. Should PacifiCorp, ODWF, CTWS, NMFS, or USFWS identify a fish stranding problem, PacifiCorp shall use its best reasonable efforts to minimize the impacts of such stranding by relocating such fish to the river in consultation with ODFW, CTWS, NMFS and USFWS.

d. *Flow Monitoring*. PacifiCorp shall measure and report flows in accordance with Condition 1.h.

e. *Planned Outages*. PacifiCorp shall, to the extent feasible, limit planned outages to April 15 to June 30 to coincide with the temporary reduction of diversion flow required under Condition 2.b., or with the summer, and shall limit planned non-summer outages to 24 hours to the extent reasonably feasible. PacifiCorp shall notify ODFW, NMFS, USFWS, and CTWS of planned outages and subsequent start up periods to allow for monitoring of those areas with the greatest possibility for fish stranding.

f. *Flushing.* PacifiCorp shall restrict flushing of the sand settling basin to periods when bypass reach instream flows are at least 500 cfs, and preferably greater than 1,000 cfs.

g. *Intake Screens*. PacifiCorp shall continue to operate and maintain existing intake screens in working order. The maintenance shall include regular inspections and the repair, rehabilitation, or replacement, as needed, of seals and moving components such as chain drives, sprockets, screen baskets, motors, and screen wash equipment. If a screen is damaged beyond repair, PacifiCorp shall replace it with a screen of similar design; however, PacifiCorp shall not be required to design or install an upgraded fish screen or otherwise make technological or other major improvements.

h. *Fishway Auxiliary Water Intake*. PacifiCorp shall identify and obtain NMFS, USFWS, ODFW and CTWS written approval of a method for maintaining the fish ladder auxiliary attraction water bar rack within the ladder sufficiently free of debris to allow adequate attraction flows. Alternatives to be considered shall be limited to the following unless PacifiCorp and the aforementioned agencies agree otherwise: frequent manual cleaning, modification of the bar spacing on the existing intake trash rack, installation of an intake device incorporating v-bar screen technology, or changing the spacing of the bars on the rack within the ladder. Recommendations and supporting documentation shall be shared with NMFS, USFWS, ODFW and CTWS. No later than the first in-water work opportunity, PacifiCorp shall obtain approval and implement the approved method identified in this condition.

i. *Ground-Disturbing Activities*. Unless emergency conditions exist that require immediate action, PacifiCorp shall limit adverse effects on stream and wetland habitat from any ground-disturbing activities by (i) minimizing the area of disturbance; (ii) adhering to conditions in any applicable U.S. Army Corps of Engineers and Oregon Division of State Lands wetlands permits; (iii) consulting with state and federal wildlife agencies, CTWS, and, when necessary, the Columbia River Gorge Commission prior to carrying out the work to determine appropriate protection measures; (iv) limiting construction to the summer and fall; (v) revegetating disturbed areas with native vegetation to the extent feasible; and (vi) controlling sedimentation of aquatic habitat through erosion control measures contained in the applicable permits. PacifiCorp shall conduct a survey before the initial ground-breaking activities for rare, threatened and endangered species in areas planned for significant construction activities, and shall coordinate with the USFWS, ODFW, the Oregon Department of Agriculture, and the Oregon Natural Heritage Program to ensure that the target species list is current.

j. *Duration of Conditions*. The above conditions in this section will cease to be effective upon commencement of removal of the dam structure.

3. Decommissioning: Conditions for Compliance with Water Quality Standards, Protection of Beneficial Uses, and Compliance with Other Appropriate State Laws.

a. Upon applying for a federal permit or permits for decommissioning activities, including a dredge and fill permit from the U.S. Army Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act (§ 404 permit), PacifiCorp shall provide written notice to ODEQ of such application and of any proposed changes in decommissioning activities since the date of issuance of this certification. Within 60 days of ODEQ's receipt of notice from the Corps or other federal permitting agency that it is processing PacifiCorp's application, ODEQ will notify the federal agency and PacifiCorp either (i) that this certification is sufficient for purposes of the federal permit and permit conditions, or (ii) that, in light of new information related to the water quality impacts of decommissioning activities since issuance of this certification, 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 Section 401 certification determination for purposes of the federal permit and decommissioning activities.

b. In the event ODEQ determines that this certification is sufficient for purposes of a federal permit or permits for decommissioning activities, PacifiCorp shall comply with the following conditions:

(1) *Decommissioning*. Unless otherwise approved by ODEQ in consultation with ODFW, NMFS, USFWS, and CTWS, PacifiCorp shall perform decommissioning in accordance with the Settlement Agreement and the Decommissioning Plan attached to and incorporated by reference into the Settlement Agreement.

(2) *Erosion and Sediment Control Plan.* Before commencement of any in-water decommissioning activities, PacifiCorp shall develop and submit to ODEQ for approval, in consultation with ODFW, NMFS, USFWS, and CTWS, an Erosion and Sediment Control Plan (ESCP) that identifies specific methods that will be implemented at each work area to protect water quality and aquatic habitat. The ESCP shall address (i) protection of the Hood River from unplanned releases of sediment and debris during decommissioning activities; (ii) disposition of sediment and decommissioning debris in accordance with

applicable law, PacifiCorp's Spill Prevention, Control and Countermeasure Plan (SPCC Plan), and public health and safety; (iii) implementation of permanent revegetation measures consistent with best management practices; and (iv) dam removal, which shall be conducted in dry conditions using a coffer dam and artificial channel to divert flows from work areas. In addition, the ESCP shall specify measures such as berms, ditches, sediment retention basins, silt fencing, and site restoration to be undertaken by PacifiCorp. Upon ODEQ approval of the ESCP in consultation with ODFW, NMFS, USFWS, and CTWS, PacifiCorp shall implement the ESCP during decommissioning activities.

(3) *Timing and Notification of In-Water Work.* For all in-water decommissioning work, PacifiCorp shall conduct such work between July 15 and August 31, or outside of that time period with the approval of ODFW, NMFS, and USFWS. Actions that are likely to occur outside of the July 15 to August 31 period include the following decommissioning actions:

(a) Construction and removal of upstream and downstream cofferdams, cofferdam materials and culverts;

(b) Removal of the artificial upstream fish passage channel and bypass flume;

(c) Placement of materials (relocated cofferdam materials and available streambed materials) along the river to create access for removal of remaining portions of dam and fish ladder;

(d) Placement of materials to regrade and armor the east and west banks of the river to harden the disturbed areas; and

(e) Regrading of the streambed above and below the dam as necessary to assist with removal of any barriers to fish passage created as a result of decommissioning activities.

PacifiCorp shall provide NMFS, USFWS, ODFW, and CTWS reasonable notice before initiating any in-water work, regardless of when it occurs, to enable them to view the work and recommend fish salvage or other immediate measures to avoid fish stranding or delay. PacifiCorp shall undertake such measures with the assistance of ODFW and CTWS. For purposes of this requirement, "in-water work" does not include dam removal or other decommissioning actions performed in areas that have been dewatered for purposes of decommissioning actions.

(4) *Fish Passage During Dam Removal*.

(a) *Manner of Fish Passage*. During construction of the cofferdams associated with dam removal activities, PacifiCorp shall extend the existing fish ladder return channel upstream of the dam to above the upstream cofferdam work, and shall install culverts through the downstream cofferdam to provide continued access to the existing fish ladder entrance; provided that PacifiCorp shall not provide such fish passage through the cofferdam culvert if NMFS, USFWS, ODFW and CTWS agree that such passage is not necessary. Coincidental to the construction of the cofferdams, PacifiCorp shall construct an artificial channel extending from a mid-point on the existing fish ladder to a location immediately downstream of the downstream cofferdam. Upon completion of this channel and the bypass channel (described below), PacifiCorp shall close the fish access through the downstream cofferdam, allowing upstream migrants to enter the existing fish ladder structure through a newly constructed access. PacifiCorp shall place rock between the upstream return channel and water bypass intake to minimize upstream migrant entrainment into the downstream bypass flume. During dam removal, PacifiCorp shall divert river flow past the work zone using portions of the existing water conveyance system's steel flume by installing removed sections of the steel flume from above the upstream cofferdam to below the downstream cofferdam, passing over the overflow section and existing fish ladder. This will provide downstream fish passage. PacifiCorp shall position the bypass flume to discharge directly into a pool constructed at the entrance of the upstream passage channel to attract upstream migrants to the channel. The discharge area shall be designed with adequate pool area and depth to minimize impingement of downstream migrants on the bottom or sides of the pool. The requirements of this condition may be modified with the written agreement of PacifiCorp, NMFS, USFWS, ODFW and CTWS.

(b) *Final Fish Passage Design and Construction Plans*. Prior to changing any of the existing fish passage facilities or constructing any new fish passage facilities associated with dam removal, PacifiCorp shall prepare final fish passage design and construction plans in consultation with NMFS, USFWS, ODFW and CTWS. The final design and construction plans shall be

consistent with Condition 3.b.(4)(a) and the following criteria, which may be modified with the written agreement of PacifiCorp, NMFS, USFWS, ODFW and CTWS.

(i) The outfall from the flume shall be designed in accordance with, appropriate, sections 7.4.1, 7.4.2, 7.4.3, 13.10.4, 13.10.5 and 13.10.6 of NMFS' Draft Anadromous Salmonid Passage Facility Guidelines and Criteria as of the Effective Date of the Settlement Agreement. In addition, the pool volume and depth will be designed to minimize pool bottom surface velocities and injury to fish. For purposes of section 13.10.5, the design will minimize, but may not completely avoid, creation of false attraction flows. The outfall shall have a 10-foot minimum drop to the pool below (to prevent adults from entering the pipe), and shall be designed to provide smooth, rounded edges and surfaces, using materials similar to the flume, to minimize injury to fish exiting the pipe and to jumping adults;

(ii) The pipe/flume shall be designed in accordance with, as appropriate, sections 13.9.3.1, 13.9.3.4, 13.9.3.5, 13.9.3.6, 13.9.3.9, 13.9.3.11, 13.9.3.13 and 13.9.3.14 of NMFS' Draft Anadromous Salmonid Passage Facility Guidelines and Criteria as of the Effective Date of the Settlement Agreement. Weathered steel surfaces presently existing on the steel flume sections, or alternatively the galvanized surfaces of standard culvert material, shall be considered acceptable for this application, provided that, if the interior surfaces of the existing steel flume are considered to be too rough to meet NMFS' Passage Facility Guidelines and Criteria, PacifiCorp shall install a liner or conduct sand blasting of the interior surfaces;

(iii) The temporary approach channel to the fishway entrance shall be constructed with "field placed" structure materials to optimize local hydraulic conditions. PacifiCorp shall provide NMFS, USFWS, ODFW and CTWS a minimum of seven days notice prior to the placement of these

materials to allow their on-site participation in field direction of this placement work on-site;

(iv) The control structures within the temporary approach channel to the fishway entrance shall be placed at least one channel width apart. These structures shall have less than one foot of head differential (measured from upstream of the boulder control structures to the downstream water surface elevation), and shall not span the entire width of the approach channel (unless the depth provided over the channel-spanning structure is at least one foot);

(v) If fish will be passing through the temporary culvert(s) installed in the downstream coffer dam, such culverts shall meet, as appropriate, sections 9.7.5, 9.7.8 and 9.7.9 of NMFS' Draft Anadromous Salmonid Passage Facility Guidelines and Criteria as of the Effective Date of the Settlement Agreement. In addition, the bypass shall be designed in accordance with, as appropriate, sections 9.3.2 and 9.3.3 of NMFS' Draft Anadromous Salmonid Passage Facility Guidelines and Criteria as of the Effective Date of the Settlement Agreement;

(vi) The design shall provide supplemental flow to the fishway discharge to allow optimal operation of the fish ladder and temporary approach channel; and

(vii) The design shall be developed such that flow conveyed in the bypass flume is delivered below the temporary approach channel in a manner that will maximize both upstream and downstream passage. The design shall be developed such that the bypass flume and the upstream temporary approach channel work together to both attract adult fish to the temporary approach channel, minimize delay of both upstream and downstream migrants, and minimize injury to fish passing

downstream.

(c) *Fish Passage Monitoring and Contingency Plan.* By October 1, 2004, PacifiCorp shall conduct a geomorphology survey consistent with the scope of work attached as Exhibit 2 to the Settlement Agreement. PacifiCorp shall provide a final geomorphology report to NMFS, USFWS, ODFW, ODEQ and CTWS. The report shall describe: (i) current geomorphic conditions beginning 2200 feet below the dam (near the stream gage) to 1,000 feet upstream of the dam, or above the vegetated island (whichever is farther); and (ii) the anticipated impact of sediment released from dam removal on fish passage and aquatic habitat downstream of the dam removal site. PacifiCorp shall develop and implement a fish passage monitoring and mitigation plan, in consultation with NMFS, USFWS, ODFW, ODEQ and CTWS, and approved by NMFS, USFWS, and ODFW. In the event a fish passage obstruction, as defined by the plan, is caused or exacerbated by dam removal, PacifiCorp shall restore adequate fish passage by implementing mitigation measures set forth in the plan. PacifiCorp shall have no obligation to monitor or mitigate under this condition for more than one cycle of seasons beyond the return of the river to natural conditions, as determined by a team composed of representatives of NMFS, USFWS, ODFW, CTWS and PacifiCorp, in accordance with the geomorphology report.

4. <u>General Conditions for Compliance with Water Quality Standards and Certification.</u>

a. *Fees*. PacifiCorp shall pay a fee for ODEQ's costs of overseeing implementation of this certification. The fee shall be $5,000 (2003 dollars) annually, made payable to "State of Oregon, Department of Environmental Quality," and due on July 1 of each year after FERC approval of interim operation and decommissioning. The fee shall expire six years after the first July 1 following FERC approval of interim operation and decommissioning, unless terminated earlier by ODEQ because oversight of this certification is no longer necessary. One year before the sixth-anniversary expiration of the fee, ODEQ and PacifiCorp will review the need, if any, to modify, extend, or terminate the fee. PacifiCorp shall continue to pay any fee required after such review.

b. *Spill and Waste Management*. PacifiCorp shall implement its SPCC Plan and Waste Management Guidelines. The SPCC Plan and Waste Management Guidelines must be kept current. In the event of a spill or release or threatened spill or release of oil or waste to state waters, PacifiCorp shall immediately implement the site's SPCC Plan, modified SPCC Plan, or other applicable contingency plan and notify the Oregon Emergency Response System at 1-800-452-0311.

c. *Certification Modification*. Subject to the provisions of OAR Chapter 340 Division 48, and, as applicable, 33 USC § 1341, ODEQ may reconsider, and add, delete, or alter, conditions to this certification as necessary to address changes in resource conditions or knowledge or to address any failure of certification conditions to protect water quality and beneficial uses. In accordance with 33 USC § 1341, any modification to conditions shall, so long as it is in effect, become a condition of any federal license or permit subsequently issued for the Project. With respect to a federal license or permit for the Project existing at the time of the modification to certification conditions, ODEQ may petition the federal agency to incorporate the modification into the federal license or permit.

d. *Project Changes*. PacifiCorp shall obtain ODEQ review and approval before undertaking any change to the Project that might significantly affect water quality and that was not evaluated in connection with this certification, including changes to Project operation and flows.

e. *Project Repair or Maintenance*. PacifiCorp shall obtain ODEQ review and approval before undertaking any Project repair or maintenance activity that might significantly affect water quality and that was not evaluated in connection with this certification.

f. *Access*. PacifiCorp shall allow ODEQ reasonable access to Project records and the Project area as necessary to monitor compliance with certification conditions.

g. *Posting of Certification*. PacifiCorp shall post a copy of this certification at a prominent location at the Project powerhouse.

APPENDIX B

U.S. FISH AND WILDLIFE'S
REASONABLE AND PRUDENT MEASURES
AND IMPLEMENTING TERMS AND CONDITIONS

Reasonable and Prudent Measures (RPM)

1. Prior to dam removal, review best available science and, if necessary, modify dam removal activity protocols to minimize effects from incidental take of bull trout.

2. Ensure all dam removal and other decommissioning in-water and near-water construction activities are conducted in a fashion that further minimizes impacts to aquatic and riparian resources.

Terms and Conditions

To Implement RPM 1, above, PacifiCorp must comply with the following:

a. Prior to dam removal (currently scheduled for spring, 2010), prepare final fish passage design and construction plans in consultation with USFWS, NMFS, ODFW and CTWS and consistent with sections 4.2.2.2.1 and 4.2.2.2.2 of the Settlement Agreement. Implement measures required by USFWS and NMFS to minimize the effect of any incidental take of listed species expected to occur during dam removal, provided that such recommendations do not require more than a minor change to the design or construction plans, or alter the basic design, location, scope, duration or timing of such plans.

b. In addition, develop a fish passage monitoring and mitigation plan, in consultation with USFWS, NMFS, ODFW, ODEQ and CTWS, and approved by USFWS, NMFS, and ODFW, consistent with Section 4.2.2.2.4 of the Settlement Agreement. In the event a fish passage obstruction (as defined by the plan) is caused or exacerbated by dam removal, restore adequate fish passage by implementing mitigation measures set forth in the plan.

i. Changes to this Incidental Take Statement required by USFWS and NMFS to minimize the effect of any incidental take of listed species

expected to occur during dam removal will be completed via simple amendment of this Incidental Take Statement. Additional modifications to fish passage and dam removal design and construction plans will be made consistent with Sections 4.2.2.2.1, 4.2.2.2.2, and 6.13 of the Settlement Agreement, and may require additional amendments of this Biological Opinion and Incidental Take Statement, as appropriate.

To Implement RPM 2, above, PacifiCorp must comply with the following:

a. Best management practices to prevent concrete products (dust, chips, larger chunks), mobilized by dam removal activities, from entering flowing or standing waters. Concrete-tainted waste water will be disposed of away from flowing or standing water. Best practicable efforts will be made to collect and remove all concrete products prior to re-watering of construction areas. All concrete and materials containing concrete removed from the dam removal site will be disposed of away from flowing or standing water.

b. Erosion control and sediment containment devices will be employed at the Project site prior to the onset of construction. All erosion control and sediment containment devices will be inspected weekly, at a minimum, during dam removal to ensure that they are working adequately. Any erosion control or sediment containment inadequacies will be immediately addressed until properly functioning.

c. Erosion control and sediment containment materials (e.g., silt fence, straw bales, aggregate) in excess of those installed will be available on site for immediate use during emergency erosion control needs.

d. Vehicles operated within 150 ft of the construction site waterways will be inspected on a daily basis for fluid leaks during periods when such vehicles are operated within or above the waterway. Any fluid leaks identified during the inspection will be repaired prior to the vehicle's use within or above the waterway.

e. Best management practices will be used during construction activities, to prevent the discharge of pollutants of any kind (sewage, waste spoils, petroleum products, etc.) into the water body and the substrate below the mean high-high water elevation or 10-year flood elevation, whichever is greater.

f. Upon learning that imminent flooding is expected, areas subject to such flooding that are used for staging, access roads, or storage will be evacuated of all materials, equipment, and fuel.

g. Vehicle and equipment maintenance, re-fueling of vehicles and equipment, and storage of fuel will be done at least 150 feet from the waterway. Non- or semi-mobile vehicles (e.g., cranes) and equipment may be refueled in place.

h. At the end of each work shift efforts will be made to remove operating equipment from areas outside of the dewatered work zone.

i. Prior to operating within the waterway, all equipment will be cleaned of external oil, grease, dirt or caked mud. Any washing of equipment will be conducted in a location that will not contribute untreated wastewater to any flowing stream or drainage area.

j. Material removed during excavation will only be placed in locations where it cannot enter water.

k. All existing native vegetation within 150 ft of the edge of bank should be retained to the greatest extent practicable.

APPENDIX C

NMFS'S REASONABLE AND PRUDENT MEASURES
AND IMPLEMENTING TERMS AND CONDITIONS

Reasonable and Prudent Measures (RPM)

1. Prior to dam removal, review and use best available science to adaptively manage the dam removal and Project feature removal protocol to incorporate any new practices which will minimize impacts to LCR Chinook salmon, LCR coho salmon, and LCR steelhead in the course of removing Project features.

2. Conduct all operational, dam removal, and any other in-water and near-water construction activities in a manner that minimizes incidental take of ESA-listed or proposed species, minimizes the likelihood of adverse modification of proposed or designated critical habitat, and conserves the aquatic resources on which ESA-listed species depend.

Terms and Conditions

To implement RPM 1, PacifiCorp must comply with the following:

a. Prior to dam removal (currently scheduled to begin in spring 2010), PacifiCorp shall prepare a Final Fish Passage Design and Dam Removal Construction Plan (Construction Plan) in collaboration with NMFS, USFWS, ODFW, and CTWS, consistent with sections 4.2.2.2.1 and 4.2.2.2.2 of the Settlement Agreement. PacifiCorp shall carry out measures in the plan required by USFWS and NMFS to minimize the effect of any incidental take of listed species expected to occur during dam removal, provided that such recommendations do not require more than a minor change to the design or construction plans, or alter the basic design, location, scope, duration or timing of such plans. NMFS must approve in writing the Final Fish Passage Design and Construction Plan and any deviations from the components of NMFS' "Anadromous Salmonid Passage Facility Guidelines and Criteria' (NMFS 2004f) described in section 4.2.2.2.2 of the Settlement Agreement.

b. PacifiCorp shall develop and carry out a Fish Passage Monitoring and Mitigation Plan (Passage Plan), in consultation with NMFS, USFWS,

ODFW, ODEQ, and CTWS, and approved by USFWS, NMFS, and ODFW, consistent with section 4.2.2.2.4 of the Settlement Agreement, that includes methods for identifying potential fish passage impediments and suggests methods for removing them. PacifiCorp shall incorporate the findings of the Final Geomorphic Report into the Passage Plan and carry out measures suggested in the report (if approved by NMFS in the Passage Plan) to minimize the likelihood of fish passage obstructions forming. In the event a fish passage obstruction (as defined by the plan) is caused or exacerbated by dam removal, restore adequate fish passage by carrying out mitigation measures set forth in the plan.

c. PacifiCorp shall develop a Fish Salvage Plan that describes, in detail, protocol for promptly and safely removing listed fish from any areas that will be isolated and/or dewatered during decommissioning. The Fish Salvage Plan must be approved in writing by NMFS prior to commencing any fish salvage.

i. The entire capture and release operation will be conducted or supervised by a fishery biologist experienced with work area isolation and competent to ensure the safe handling of all ESA-listed fish.

ii. If electrofishing equipment is used to capture fish, comply with NMFS' electrofishing guidelines, listed below.

1) Do not electrofish near adult salmon in spawning condition or near redds containing eggs.

2) Keep equipment in good working condition. Complete manufacturers' pre-season checks, follow all provisions, and record major maintenance work in a log.

3) Train the crew by a crew leader with at least 100 hours of experience in the field using similar equipment. Document the crew leader's experience in a logbook. Complete training in waters that do not contain listed fish before an inexperienced crew begins any electrofishing.

4) Measure conductivity and set voltage as follows:

Conductivity (umhos/cm)	Voltage
Less than 100	900 to 1100
100 to 300	500 to 800
Greater than 300	150 to 400

5) Use direct current (DC) at all times.

6) Begin each session with pulse width and rate set to the minimum needed to capture fish. These settings should be

gradually increased only to the point where fish are immobilized and captured. Start with pulse width of 500us and do not exceed 5 milliseconds. Pulse rate should start at 30Hz and work carefully upwards. In general, pulse rate should not exceed 40Hz, to avoid unnecessary injury to the fish.

7) The zone of potential fish injury is 0.5m from the anode. Care should be taken in shallow waters, undercut banks, or where fish can be concentrated, because in such areas the fish are more likely to come into close contact with the anode.
8) Work the monitoring area systematically, moving the anode continuously in a herringbone pattern through the water. Do not electrofish one area for an extended period.
9) Have crew members carefully observe the condition of the sampled fish. Dark bands on the body and longer recovery times are signs of injury or handling stress. When such signs are noted, the settings for the electrofishing unit may need adjusting. End sampling if injuries occur or abnormally long recovery times persist.
10) Whenever possible, place a block net below the area being sampled to capture stunned fish that may drift downstream.
11) Record the electrofishing settings in a logbook along with conductivity, temperature, and other variables affecting efficiency. These notes, with observations on fish condition, will improve technique and form the basis for training new operators.

iii. Develop specific salvage procedures to carry out when water temperatures exceed 18°C (i.e., when fish are particularly susceptible to stress caused by salvage). These high-temperature salvage procedures must be developed in collaboration with NMFS, USFWS, and ODFW and must be approved in writing by NMFS as a component of the Fish Salvage Plan.

iv. Handle ESA-listed fish with extreme care, keeping fish in water to the maximum extent possible during seining and transfer procedures, to prevent the added stress of out-of-water handling.

v. Transport fish in aerated buckets or tanks. Release fish into a safe release site as quickly as possible, and as near as possible to capture sites.

vi. If a listed fish is injured or killed at any point during the salvage operation, contact the NMFS Law Enforcement Office will be contacted (360-418- 4248).

vii. Do not transfer ESA-listed fish to anyone except NMFS or USFWS personnel, unless otherwise approved in writing by them.
viii. Obtain all other Federal, State, and local permits necessary to conduct the capture and release activity.
ix. Allow NMFS or the USFWS or its designated representative to accompany the capture team during the capture and release activity, and to inspect the teams capture and release records and facilities.

To implement RPM 2, PacifiCorp shall ensure that in all actions involving construction near waterways it will carry out BMPs to control sediment, minimize riparian disturbance, and minimize the risk of contaminants entering the waterway. Prior to completing the Final Fish Passage Design and Construction Plan required by the Term and Condition, PacifiCorp shall discuss and adopt current BMPs with NMFS. PacifiCorp shall adopt BMPs that include at least the following:

a. Minimum area. Construction impacts will be confined to the minimum area necessary to complete the project.
   i. Alteration or disturbance of the streambanks and existing riparian vegetation will be minimized to the greatest extent possible.
   ii. No herbicide application should occur as part of this action. Mechanical removal of undesired vegetation and root nodes is permitted.
   iii. All existing vegetation within 150 ft of the edge of bank should be retained to the greatest extent possible.

b. Timing of in-water work. Work below the bankfull elevation will be completed during the State of Oregon's preferred in-water work period (between July 15 and August 31), or outside that time period with the written approval of NMFS.)

c. Cessation of work. Project operations will cease under high flow conditions that may result in inundation of the Project area, except for efforts to avoid or minimize resource damage. All materials, equipment, and fuel must be removed if flooding of the area is expected to occur within 24 hours.

d. Fish screens. All water intakes used for a Project, including pumps used to isolate an in-water work area, will have a fish screen installed, operated, and maintained according to NMFS' fish screen criteria. After fish salvage has been completed, dewatering pumps do not need fish screens, unless it is likely that fish have re-entered the area (e.g., if the cofferdam was

breached). The term "water intakes" does not apply to the fish bypass channel/facility.

e. Construction activities associated with habitat enhancement and erosion control measures must meet or exceed BMPs and other performance standards contained in the applicable State and Federal permits.

f. Pollution and Erosion Control Plan. Prepare, in consultation with NMFS, and carry out a Pollution and Erosion Control Plan to prevent pollution caused by survey, construction, operation, and maintenance activities. The Plan will be available for inspection upon request by FERC or NMFS.

i. Plan Contents. The Pollution and Erosion Control Plan will contain the pertinent elements listed below, and meet requirements of all applicable laws and regulations.

1) The name and address of the party(s) responsible for accomplishment of the Pollution and Erosion Control Plan.

2) Practices to prevent erosion and sedimentation associated with access roads, decommissioned roads, stream crossings, drilling sites, construction sites, borrow pit operations, haul roads, equipment and material storage sites, fueling operations, and staging areas.

3) Practices to confine, remove, and dispose of excess concrete, cement, and other mortars or bonding agents, including measures for washout facilities.

4) A description of any regulated or hazardous products or materials that will be used for the project, including procedures for inventory, storage, handling, and monitoring.

5) A spill containment and control plan with notification procedures, specific cleanup and disposal instructions for different products, quick response containment, and cleanup measures that will be available on the site; proposed methods for disposal of spilled materials; and employee training for spill containment.

6) Practices to prevent construction debris from dropping into any stream or water body, and, to the extent feasible, to remove any material that does drop with a minimum disturbance to the streambed and water quality.

7) Erosion control materials (e.g., silt fence, straw bales, aggregate) in excess of those installed must be available on site for immediate use during emergency erosion control needs.

8) Temporary erosion and sediment controls will be used on all exposed slopes during any hiatus in work exceeding 7 days.

ii. Inspection of erosion controls. During construction, the operator must visually monitor instream turbidity and inspect all erosion controls daily during the rainy season and weekly during the dry season, or more often if necessary (i.e., after significant rainfall events), to ensure they are working adequately.

1) If monitoring or inspection shows that the erosion controls are ineffective, mobilize work crews immediately to make repairs, install replacements, or install additional controls as necessary.

2) Remove sediment from erosion controls once it has reached one-third of the exposed height of the control.

3) Results of visual monitoring and inspection of erosion controls should be summarized in the weekly construction monitoring reports, as described in term and condition 8.4. l.2.p.

g. Construction discharge water. Treat all discharge water created by construction (e.g., concrete washout, pumping for work area isolation, vehicle wash water, drilling fluids) as follows:

i. Water quality. Design, build, and maintain facilities to collect and treat all construction discharge water using the best available technology applicable to site conditions. Provide treatment to remove debris, nutrients, sediment, petroleum hydrocarbons, metals, and other pollutants likely to be present. Treatment may consist of a small holding or settling pond with a straw bale dam that is regularly cleaned. The final design of the facility should be described in the Construction Plan, which will be approved in writing by NMFS.

ii. Discharge velocity. If construction discharge water is released using an outfall or diffuser port, velocities will not exceed 4 ft per second. For clarity, releases from the construction bypass (fish bypass channel) are not considered construction discharges.

iii. Spawning areas. To the extent feasible, do not release construction discharge water within 300 ft upstream of spawning areas.

iv. Pollutants. To the extent feasible, do not allow pollutants, including green concrete, contaminated water, silt, welding slag, or sandblasting abrasive to contact any wetland or the 2-year floodplain, except cement or grout when abandoning a drill boring or installing instrumentation in the boring.

h. During completion of habitat enhancement activities, to the extent feasible, limit the contact of all pollutants (sewage, waste spoils, petroleum products, etc.) with the water body or wetlands or their substrate below the mean high-high water elevation or 10-year flood elevation, whichever is greater.

i. Treated wood.
   i. Projects using treated wood that may contact flowing water or that will be placed over water where it will be exposed to mechanical abrasion or where leachate may enter flowing water will not be used, except for pilings installed following NMFS' guidelines.
   ii. Projects that require removal of treated wood will use the following precautions:
      1) Treated wood debris. Use the containment necessary to prevent treated wood debris from falling into the water. If treated wood debris does fall into the water, remove it immediately.
      2) Disposal of treated wood debris. Dispose of all treated wood debris removed during a project, including treated wood pilings, at an upland facility approved for hazardous materials of this classification. Do not leave treated wood pilings in the water or stacked on the streambank.

j. Preconstruction activity. Complete the following actions before significant alteration of the project area:
   i. Marking. Flag the boundaries of clearing limits associated with site access and construction to prevent ground disturbance of critical riparian vegetation, wetlands, and other sensitive sites beyond the flagged boundary. Construction activity or movement of equipment into existing vegetated areas must not begin until clearing limits are marked.
   ii. Emergency erosion controls. Ensure that the following materials for emergency erosion control are on site: A supply of sediment control materials (e.g., silt fence, straw bales), and an oil-absorbing, floating boom whenever surface water is present.
   iii. Temporary erosion controls. All temporary erosion controls will be in place and appropriately installed downslope of project activity within the riparian buffer area until site rehabilitation is complete.

k. Temporary access roads.
   i. Steep slopes. To the extent feasible, do not build temporary roads mid-slope or on slopes steeper than 30%.
   ii. Minimizing soil disturbance and compaction. Low-impact, tracked

drills will be walked to a survey site without the need for an access road. Minimize soil disturbance and compaction for other types of access whenever a new temporary road is necessary within 150 ft of a stream, water body, or wetland by clearing vegetation to ground level and placing clean gravel over geotextile fabric, unless otherwise approved in writing by NMFS.

iii. Temporary stream crossings.

1) To the extent feasible, do not allow equipment in the flowing water portion of the stream channel where equipment activity could release sediment downstream, except at designated stream crossings and as necessary during cofferdam construction and removal.

2) Minimize the number of temporary stream crossings.

3) Design new temporary stream crossings as follows:

a) Survey and map any potential spawning habitat within 300 ft downstream of a proposed crossing.

b) To the extent feasible, do not place stream crossings at known or suspected spawning areas, or within 300 ft upstream of such areas if spawning areas may be affected.

c) Design the crossing to provide for foreseeable risks (e.g., flooding and associated bedload and debris) to prevent the diversion of stream flow out of the channel and down the road if the crossing fails.

d) Vehicles and machinery will cross riparian buffer areas and streams at right angles to the main channel wherever possible.

4) Obliteration. When the project is completed, obliterate all temporary access roads, stabilize the soil, and revegetate the site. Abandon and restore temporary roads in wet or flooded areas by the end of the in-water work period.

l. Vehicles.

i. Choice of equipment. When heavy equipment will be used, the equipment selected will have the least adverse effects on the environment (e.g., minimally sized, low ground pressure equipment).

ii. Vehicle staging. Fuel, operate, maintain, and store vehicles as follows:

1) Complete vehicle staging, cleaning, maintenance, refueling, and fuel storage, except for that needed to service boats, in a vehicle staging area placed 150 ft or more from any stream,

water body, or wetland, unless otherwise approved in writing by NMFS.

2) Inspect all vehicles operated within 150 ft of any stream, water body, or wetland daily for fluid leaks before leaving the vehicle staging area. Repair any leaks detected in the vehicle staging area before the vehicle resumes operation. Document inspections in a record that is available for review on request by FERC or NMFS.

3) Before operations begin and as often as necessary during operation, steam clean all equipment that will be used below the bankfull elevation until all visible external oil, grease, mud, and other visible contaminates are removed. Any washing of equipment must be conducted in a location that will not contribute untreated wastewater to any flowing stream or drainage area.

4) Diaper all stationary power equipment (e.g., generators, cranes, stationary drilling equipment) operated within 150 ft of any stream, waterbody, or wetland to prevent leaks, unless suitable containment is provided to prevent potential spills from entering any stream or water body.

5) At the end of each work shift, vehicles must not be stored within or over the waterway. If necessary, vehicles may remain in the dewatered area between the cofferdams for longer periods during dam removal or other decommissioning actions. The contractor should remove all equipment from the 2-year floodplain if there is imminent threat of a high-water event that could affect cofferdam integrity or cause water to contact construction equipment.

m. Site preparation. Conserve native materials for site rehabilitation.

i. If possible, leave native materials where they are found.

ii. If materials are moved, damaged, or destroyed, replace them with a functional equivalent during site rehabilitation.

iii. Stockpile any large wood, native vegetation, weed-free topsoil, and native channel material displaced by construction for use during site rehabilitation.

n. Isolation of in-water work area. If adult or juvenile fish are reasonably certain to be present, or if the work area is less than 300 ft upstream of spawning habitats, completely isolate the work area from the active flowing stream using inflatable bags, sandbags, sheet pilings, similar materials, or

natural materials, unless otherwise approved in writing by NMFS.

o. Earthwork. Complete earthwork (including drilling, excavation, dredging, filling, and compacting) as quickly as possible.

i. Excavation. Material removed during excavation will only be placed in locations where it cannot enter sensitive aquatic resources. Whenever topsoil is removed, it must be stored and reused on site to the greatest extent possible. If culvert inlet/outlet protecting riprap is used, it will be class 350 metric or larger, unless otherwise approved in the Construction Plan. In addition, to the extent possible, PacifiCorp will revegetate riprap areas in accordance with the Revegetation and Mitigation Plan referenced in section 3.4 of Appendix B of the Settlement Agreement.

ii. Drilling and sampling. If drilling, boring, or jacking is used, the following conditions apply.

1) Isolate drilling operations in wetted stream channels using a steel pile, sleeve, or other appropriate isolation method to prevent drilling fluids from contacting water.

2) If it is necessary to drill through a bridge deck, use containment measures to prevent drilling debris from entering the channel.

3) If directional drilling is used, the drill, bore, or jack hole will span the channel migration zone and any associated wetland.

4) Sampling and directional drill recovery/recycling pits, and any associated waste or spoils, will be completely isolated from surface waters, off-channel habitats, and wetlands. All drilling fluids and waste will be recovered and recycled or disposed to prevent entry into flowing water.

5) If a drill boring conductor breaks and drilling fluid or waste is visible in water or a wetland, all drilling activity will cease, pending written approval from NMFS to resume drilling.

iii. Source of materials. Obtain boulders, rock, woody materials, and other natural construction materials used for the project outside the riparian buffer area.

p. Construction Monitoring Reporting. Include in the Final Fish Passage and Construction Plan a protocol for submitting weekly construction site monitoring summaries to NMFS that describe the quality and effectiveness of the erosion control and other environmental protection measures, including the following: discussion of erosion control and other measures and their effectiveness, discussion of any instances where sediment or other

construction discharges entered the stream, the extent of the discharges, an assessment of any damage to the stream or aquatic resources, and corrective actions taken, including measures to prevent further problems.

The licensee shall solicit NMFS' review of the detailed construction plans to advise the licensee regarding whether or not those plans are likely to meet the BMPs articulated in these Incidental Take Statement terms and conditions, or such additional BMPs that NMFS deems appropriate.