

STATE OF OREGON  
COUNTY OF CLACKAMAS  
CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO:

PORTLAND GENERAL ELECTRIC CO. (PGE)  
121 SW SALMON ST.  
PORTLAND, OR 97204

for the right to use the waters of: Timothy Lake, Lake Harriet, Oak Grove Fork of the Clackamas River, Three Lynx Creek, North Fork Reservoir, Faraday Lake, Estacada Lake, and the Clackamas River for the Development of Hydroelectric Power and incidental uses related to the Hydroelectric Project, as more fully described in Exhibit 1, which is attached and incorporated into this certificate.

This certificate amends water right certificate number 86764 which reauthorized the hydroelectric project developed under HE 186, HE 202, HE 203 and HE 220. The project has also operated with water under Surface Water Registrations (SWR) 386, 387, and 388. This certificate confirms the prior certificate and includes amendments numbered #1 and #2 to allow the installation of five small turbines within the Project.

This right allows:

storage of 69,000 acre feet of water with a priority date of March 18, 1953, in Timothy Lake, located in the NE  $\frac{1}{4}$  NE  $\frac{1}{4}$  Section 27, Township 5 South, Range 8 East, W.M.;

release of water from Timothy Lake at a rate not to exceed 300 cfs above inflow, for instream purposes and for power purposes at Timothy Lake, Oak Grove, North Fork, Faraday and River Mill powerhouses;

10 cfs of water released from Timothy Lake with a priority date of March 18, 1953, for 108 theoretical horsepower for backup power supply at Timothy Lake lodge;

storage of 300 acre feet of water with a priority date of October 22, 1998, in Lake Harriet located in the NW  $\frac{1}{4}$  SW  $\frac{1}{4}$  Section 4, Township 6 South, Range 7 East, W.M., (this right duplicates SWR 387);

600 cfs of water with a priority date of October 22, 1998, diverted from Oak Grove Fork at Lake Harriet, located in the NW  $\frac{1}{4}$  SW  $\frac{1}{4}$  Section 4, Township 6 South, Range 7 East, W.M.; for power purposes at Oak Grove powerhouse, (this right duplicates SWR 387);

2.5 cfs of water with a priority date of October 22, 1998, diverted from Three Lynx Creek, in the SE  $\frac{1}{4}$  SE 14 Section 16, Township 5 South, Range 6 East, W.M., for fire protection and station use at the Oak Grove powerhouse, (this right duplicates SWR 387);

**APPEAL RIGHTS**

**This is a final order in other than contested case. This order is subject to judicial review under ORS 183.484. Any petition for judicial review must be filed within the 60 day time period specified by ORS 183.484(2). Pursuant to ORS 536.075 and OAR 137-004-0080 you may either petition for judicial review or petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied.**

water for power purposes to replace water assigned to instream bypass flows from Lake Harriet to the Oak Grove Powerhouse in the SW ¼ NW ¼ Section 22, Township 5 South, Range 6 East, W.M. with a priority date of October 22, 1998, in the amounts of: 70 cfs from January 1 to March 31, 80 cfs from April 1 to September 30, 100 cfs from October 1 to October 15, 80 cfs from October 16 to December 15, and 70 cfs from December 15 to December 31.;<sup>1</sup>

65 to 150 cfs of water assigned to instream bypass flows and hydroelectric use at the Crack-in-the-Ground energy dissipater in the NE ¼ SE ¼ Section 5, Township 6 South, Range 7 East, W.M.;

storage of 252 acre feet of water, with a priority date of March 18, 1953, in Frog Lake located in the NE ¼ SW ¼ Section 35, Township 5 South, Range 6 East, W.M.;

19,500 acre feet of storage with a priority date of September 26, 1955, in North Fork Reservoir located in the NW ¼ NE ¼ Section 11, Township 4 South, Range 4 East, W.M.;

5400 cfs of water with a priority date of September 26, 1955, from Clackamas River at the North Fork Dam in the NW ¼ NE ¼ Section 11, Township 4 South, Range 4 East, W.M., and to impound all, or any part of said water in the North Fork Reservoir;

654 cfs of water with a priority date of October 22, 1998, from the Clackamas River at the North Fork Dam in the NW ¼ NE ¼ Section 11, Township 4 South, Range 4 East, W.M., and to impound all, or any part of said water in the North Fork Reservoir;

25 to 35 cfs of return flows from the downstream migrant floating surface collector and the adult fish trapping facility for hydroelectric use below the North Fork Dam in the NE ¼ NW ¼ Section 11, Township 4 South, Range 4 East, W.M.;

2650 cfs of water with a priority date of September 26, 1955, water from the Clackamas River at Faraday Diversion Dam in the SW ¼ NE ¼ Section 3, Township 4 South, Range 4 East, W.M. and to impound all, or any part of said water in the Faraday Diversion Dam reservoir;

684 cfs of water with a priority date of October 22, 1998, from the Clackamas River at Faraday diversion Dam in the SW ¼ NE ¼ Section 3, Township 4 South, Range 4 East, W.M. and to impound all, or any part of said water in the Faraday Diversion Dam reservoir;

2370 cfs of water with a priority date of October 22, 1998, from the Clackamas River at Faraday diversion dam, and to impound all, or any part of said water in the Faraday Diversion Dam reservoir, (this right duplicates SWR 388);

205 to 225 cfs of flows for fish ladder attraction water, instream flows and hydroelectric purposes below the Faraday Diversion Dam in the SW ¼ NE ¼ Section 3, Township 4 South, Range 4 East, W.M.;

4641 cfs of water with a priority date of October 22, 1998, from the Clackamas River at River Mill Dam in the NW ¼ of the NW ¼ of Section 20, Township 3 South, Range 4 East, W.M. and to impound all, or any part of said water in Estacada Lake, (this right duplicates SWR 386);

950 cfs of water with a priority date of March 4, 1960, from the Clackamas River at River Mill Dam, and to impound all, or any part of said water in Estacada Lake.

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<sup>1</sup> This right represents a commitment by PGE to assign a portion of its Pre-1909 Surface Water Registration Claim SWR 387 to an instream right to enhance instream fish habitat. This right will replace the instream water assignment at a junior priority status.

## Settlement Agreement

On March 29, 2006, PGE filed with FERC a Settlement Agreement that it had reached with 32 other parties on proposed environmental measures to be implemented as part of any new license for the project. The 32 settlement parties included federal, state, and local government agencies, Indian tribes and non-governmental organizations. The settlement contains 55 proposed license articles recommended for inclusion in a new FERC license (Exhibit A to the Settlement Agreement), and a Water Rights Agreement addressing issuance of the water right certificate (Appendix A to the Settlement Agreement). The proposed license articles are set out in Attachment 1 to this document. The entire Settlement Agreement is available for review at the OWRD office in Salem.

Settlement Agreement parties (March 2006):

Portland General Electric Company, Bureau of Land Management, US Fish & Wildlife Service, National Marine Fisheries Service, USDA Forest Service, Oregon Department of Environmental Quality, Oregon Department of Fish And Wildlife, Oregon Parks and Recreation Department, Oregon State Marine Board, Oregon Water Resources Department, Confederated Tribes of The Grand Ronde Community of Oregon, Confederated Tribes of Siletz Indians of Oregon, Confederated Tribes of The Warm Springs Reservation of Oregon, City of Estacada, Clackamas River Basin Council, Clackamas River Water, Sunrise Water Authority, South Fork Water Board, North Clackamas County Water Commission, Oak Lodge Water District, Alder Creek Kayak and Canoe, All Star Rafting, American Rivers, American Whitewater, Association of Northwest Steelheaders, Blue Sky Rafting, Destination Wilderness, The Native Fish Society, Oregon Trout, Playboatingnorthwest.Com, River Drifters Whitewater Tours, Trout Unlimited, and WaterWatch Of Oregon

The Settlement Agreement is a comprehensive settlement resolving all issues raised by all parties to this proceeding. The Settlement Agreement includes a number of exhibits, which reflect the specific substantive agreements of all Parties and which are incorporated into and made a part of the agreement itself. These are as follows:

- Exhibit A - Proposed License Articles
- Exhibit B - Interim Measures
- Exhibit C - Project Operating Plan
- Exhibit D - Fish Passage and Protection Plan
- Exhibit E - Terrestrial Resources Plans
  - E-1 Terrestrial Resources Management Plan
  - E-2 Vegetation Management Plan
- Exhibit F - Blue-Green Algae Monitoring Plan
- Exhibit G - Recreational Resources Management Plan
- Exhibit H - Clackamas River Hydroelectric Project Mitigation and Enhancement Fund Implementation Plan
- Exhibit I - Wetlands Mitigation Measures
- Exhibit J - Historic Properties Management Plan

- Exhibit K - Hatchery Term Sheet
- Exhibit L - Project Boundary
- Exhibit M - Implementation Committees
- Exhibit N - Authorized Representatives of the Parties

As noted, Exhibit A to the Settlement Agreement sets out proposed license articles, which are an integral part of the Settlement Agreement. They implement the substantive agreements of the Parties and are intended to be included in the FERC license and to become license obligations enforceable by FERC.

The Settlement Agreement also includes a number of Appendices. The Appendices reflect obligations imposed on the Joint Licensees by Governmental Parties or to be assumed by the Joint Licensees pursuant to agreements that will not be entered into by all Parties. The appendices are as follows:

- Appendix A - Water Rights Agreement
- Appendix B - Water Providers Storage Term Sheet
- Appendix C - Fish Passage Waiver Agreement
- Appendix D - NOAA Fisheries Service Best Management Practices
- Appendix E - Road Maintenance Term Sheet

The Settlement Agreement is on file at the Oregon Water Resources Department. In the event of any inconsistency between the terms of the FERC License and the Settlement Agreement, the terms of the FERC License control. However, pursuant to the Settlement Agreement, any provisions of the Settlement Agreement that are not addressed in the FERC License and are not otherwise inconsistent with the License remain in effect as agreements of the Parties that are not enforceable by FERC.

### **CERTIFICATE CONDITIONS**

Use of water under this Certificate shall be subject to the following conditions:

1. PGE shall implement proposed license articles 1 through 3 in Exhibit A of the Settlement Agreement (included in Attachment 1 of this document).
2. Water may be stored in Timothy Lake during a 12 month period beginning April 1 and ending March 31 of each year.
3. The Project shall be operated according to the Project Operating Plan (Exhibit C of the Settlement Agreement) and proposed license articles 6 through 13, and 15 through 16 in Exhibit A of the Settlement Agreement and Proposed Article 14 as modified July 21, 2008.
4. Notwithstanding the subordination clause of Instream Water Right Certificate 59491, the 684 cfs of additional water at Faraday may not be diverted unless the flows defined in Instream

Water Right Certificate 59491 are first fully satisfied. (See proposed license article 13 in the Settlement Agreement).

5. This water right represents the total authorized hydraulic capacity of the Project as of the date of this certificate. A portion of this right duplicates the pre-1909 Surface Water Registration Claims, SWR-386, 387, and 388, filed by the Portland General Electric Company according to ORS 539.240. The duplicative portion of this right shall not be additive to water used or claimed under SWR 386, 387, or 388. To the extent that those claims are allowed in a future adjudication, the duplicative junior water rights shall be canceled at the time of the final decree, so that the total water allowed under all rights does not exceed the total hydraulic capacity of the Project as of the date of this certificate. This right, together with any other right for the use of these Project waters shall not exceed the quantity (in cfs) of water allowed as of the date of this certificate. Upon adjudication, the duplicative water rights can only be cancelled and cannot be used, sold or transferred.

6. This certificate acknowledges the assignment of a portion of SWR 387 to an instream right in the Oak Grove Fork of the Clackamas River. Any other assignment or amendment of Surface Water Registrations SWR 386, 387, or 388 shall be consistent with ORS 539.240 and OAR 690-28, and shall require, at the same time, a review to determine if modification should be made to this water right to be consistent with the terms of the Settlement Agreement.

7. If PGE intends to decommission the Faraday Development of the Clackamas Project as provided under ORS 543A.300 *et seq*, or to change the type of use from hydroelectric prior to adjudication of the SWR, PGE shall first assign to ODFW a portion of SWR 388 equal to the amounts currently protected under Instream Water Right 59491. The assignment shall be filed prior to or simultaneously with commencement of the decommissioning or change of use.

8. In consideration of this certificate and of the benefits and advantages accruing hereunder to the certificate holders, it is expressly agreed by the certificate holders that the Project, Project area, and Project works located within the State of Oregon as designated and described above whether or not upon the lands of the United States, shall be subject to all provisions, terms and conditions of this certificate. Should the certificate holder be prevented from compliance with any provisions of this certificate or of ORS 543 by the operation of any valid Federal law, or the lawful order, rule or regulation of any federal governmental agency exercising exclusive jurisdiction in the premises, or by *force majeure* as described in the Settlement Agreement, it shall not be deemed to be in default or under liability to the Water Resources Department for failure to perform the same during the period of such disability.

9. The right to the use of the water for the above purpose is restricted to beneficial use without waste on the lands or place of use described

10. This certificate is effective as of the date of its issuance and will terminate simultaneously with the FERC license for the Project unless extended by the Department pursuant to ORS 543A.150 in connection with subsequent reauthorization of the Project,

11. If water use for hydroelectric purposes ceases for a period of five years, the water right is subject to conversion to an instream water right as provided under ORS 543A.305(3).

12. Subject to the OWRD Director and authorized agents and employees following reasonable safety and security procedures when on the project, the certificate holders shall allow the OWRD Director and authorized agents and employees free and unrestricted access, upon reasonable notice, in, through, and across the project in the performance of their official duties, and, subject to applicable provisions of the Oregon Public Records Law, shall allow free access to all reports, accounts, records, and other data relating to said project.

13. The water right holder may not operate the Project under a final Oregon water right certificate unless also authorized to operate the Project by the FERC. As allowed under ORS 543A.145(4), the Department may amend the conditions and limitations of this certificate to conform to the federal license for the project.

14. Public Health and Safety: To assure public health and safety, the certificate holders shall take such measures as are required by the Settlement Agreement to keep roads and bridges within the project boundary in good repair and useable by the public. The certificate holders must employ reasonable measures to protect the project from seismic and geologic hazards and meet all dam safety standards set by the FERC. The Director of the Department reserves the right to reopen this certificate if the Director makes a clear showing of significant threat to the public health, safety or the environment that was not identified and addressed during the project reauthorization proceeding. (ORS 543A.145 (5))

15. Failure to comply with any of the provisions of this certificate may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the certificate. For conditions 1, and 3, that incorporate license articles of the Settlement Agreement, OWRD shall not undertake independent enforcement action under this certificate unless OWRD determines the action relates to protection of senior water rights, use of water without waste, public health and safety relating to the water right or other requirements of Oregon water law administered by OWRD. Any other enforcement action by OWRD, in connection with license articles of the Settlement Agreement shall be taken in accordance with the applicable provisions of the FERC license or Settlement Agreement.

16. By law, the land use associated with this water use must be in compliance with statewide and-use goals and any local acknowledged land-use plan.

17. The certificate holders shall notify the Department of any change in ownership of the hydroelectric project.

18. Project Maps: The project facilities are more particularly described and shown on the maps filed to accompany the August 2004 relicense application and designated as Exhibit A in that application. This exhibit is hereby approved by the Director and made a part of this certificate. No substantial change shall be made unless approved by the Director and incorporated into this certificate by appropriate amendment or special order.

19. Annual Fees: An annual license fee of \$0.405 per theoretical horse power (THP) for 278,487 THP shall be paid on or before January 1 of each calendar year with adjustments for cost of living as provided in ORS 543.078 and ORS 543.085. Should the terms and conditions of this water right certificate be extended or reauthorized at its expiration, the certificate holder shall pay such annual fees as the Director or its successor having jurisdiction in the matter at the time shall fix.

20. Construction, Operations and Maintenance: The certificate holders shall construct any additions or modifications to the Project according to maps, plans, and specifications filed with and approved by the FERC.

Operations of the Project, so far as they affect the use, storage, and discharge from storage of waters affected by the water right certificate, shall at all times be controlled by such reasonable rules as the Water Resources Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes. The certificate holders shall release water from the Project reservoirs at such rate in cfs, or such volume in acre-feet per specified period of time, as the Water Resources Commission may prescribe. (ORS 543.300(3))

The certificate holder shall maintain the Project, and each part thereof, in good order and repair and in efficient operation, for the development and transmission of electricity to its reasonable capacity; shall make all necessary renewals and replacements as required; and shall maintain and operate the Project, and all parts thereof, conformably to applicable FERC rules. (ORS 543.300(4))

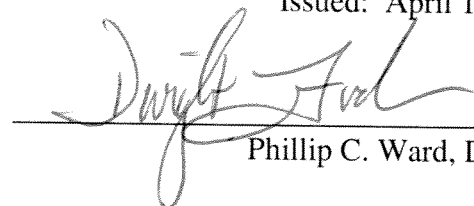
PGE shall construct, operate, and maintain minimum flow turbines downstream of Timothy Lake Dam, Lake Harriet Dam at Crack-in-the-Ground, North Fork Dam, and Faraday Diversion Dam as approved under amendments #1 and #2 onfile with the Department and as approved in FERC docket p-2195-088.

The Director finds that the proposed use of water described by this certificate, as conditioned, will not impair or be detrimental to the public interest and is well adapted to the development and utilization of the water power involved.

This Certificate supersedes Water Right Certificate number 86764 and includes amendments #1 and #2 to the Clackamas River Hydroelectric Project.

WITNESS the signature of the Water Resources Director,

Issued: April 10, 2014

  
Phillip C. Ward, Director

Recorded in State Record of Water Right Certificates numbered 89174

## Exhibit 1

### PROJECT DESCRIPTION

#### Project Components

The word "Project" as used in this document means the complete unit, improvement and development including the dams and appurtenant works and structures, storage reservoirs, and miscellaneous works, powerlines, and structures used in connection with the unit or any part thereof, rights of way, lands, flowage rights and all other properties, rights and structures necessary or appropriate in the use, operations and maintenance of the project.

The Project is located in Clackamas County, Oregon, near the city of Estacada, on the Clackamas River and Oak Grove Fork of the Clackamas River. It consists of four developments. From upstream to downstream, the developments are the Oak Grove Development, the North Fork Development, the Faraday Development, and the River Mill Development.

After amendments #1 and #2 are implemented the Project developments will have a combined maximum generating capability of 140.61 megawatts (MW), including: 1.98 MW at Timothy Lake, 41.825 MW at the Oak Grove Development, 40.935 MW at the North Fork Development, 36.77 MW at the Faraday Development, and 19.1 MW at the River Mill Development.

#### Oak Grove Development

The Oak Grove Development includes a system of storage reservoirs and pipelines. Timothy Lake, the most upstream component of the Oak Grove Development, has a storage capacity of 69,000 acre-feet with flashboards. The dam is about 105 feet high, 635 feet long and 40 feet wide on top. Surface area of the reservoir is about 1430 acres. A 25 kW hydroelectric generator is located at the toe of the Timothy Lake Dam to supply backup power for the Timothy Lake Lodge complex and station service. Two new turbines will use flows up to 300 cfs with head of about 80 feet for a total potential capacity of 2727 theoretical horsepower (300 cfs \* 80 feet of head / 8.8).

Water released from Timothy Lake, plus inflow from the intervening catchment area of 72.5 square miles, flows down the Oak Grove Fork approximately 10 miles to Lake Harriet. Lake Harriet dam is 68 feet high and has a storage capacity of 300 acre-feet of water.

From Lake Harriet, the water is diverted through an intake structure into a 9-foot-diameter steel pipeline that carries it downstream 4.1 miles to Frog Lake, an off-stream forebay reservoir with a gross storage capacity of 252 acre-feet for the Oak Grove Powerhouse. From Frog Lake, a 9-foot-diameter pipeline conveys the water 2.3 miles to a surge tank located just above the powerhouse. From here, the water flows down two riveted steel penstocks into the Oak Grove Powerhouse to operate two Francis-type turbines. The hydraulic capacity of the turbines is 740 cfs. The Oak Grove Development is Portland General Electric's (PGE's) highest head hydroelectric facility (880 feet), requiring only 15 cfs for each MW of generating capacity. The



total theoretical horsepower for the Oak Grove Development is 60,250 THP ( $602.5 \text{ cfs} * 880 \text{ feet of head} / 8.8$ ). One new 1 MW turbine will be installed at Crack-in-the-Ground to act as an energy dissipater for the instream flows of 65 to 150 cfs with 97 feet of head. Total theoretical horsepower for the small turbine is 1653 THP ( $150 \text{ cfs} * 97 \text{ feet of head} / 8.8$ ).

### **North Fork Development**

The North Fork Development is the uppermost of three developments on the Clackamas River. The North Fork Dam is located on North Fork Reservoir with an approximate gross storage capacity of 18,630 acre-feet. The dam is 207 feet high, 676 feet long and 8 feet wide at the crest. Two penstock intake gates are located on the upstream face of the dam. These direct flow to the two 14-foot-diameter penstocks, which extend horizontally through the dam to the two Francis-type turbine generator units within the North Fork Powerhouse. The maximum plant output is at about 130 feet of head. The hydraulic capacity of the plant is 6054 cfs. The total theoretical horsepower for the North Fork Development is 89,434 THP ( $6054 \text{ cfs} * 130 \text{ feet of head} / 8.8$ ). One new turbine 0.135 MW will be installed to utilize 25 to 35 cfs of return flows from the downstream migrant floating surface collector and the adult fish trapping facility. Total theoretical horsepower is 238 THP ( $35 \text{ cfs} * 60 \text{ feet of head} / 8.8$ ).

### **Faraday Development**

The Faraday Development has an output of 35.92 MW. Water releases from North Fork Dam flow down the Clackamas River approximately 1.6 miles to the Faraday Diversion Dam, which impounds a reservoir with a gross storage capacity of approximately 1,200 acre-feet. The diversion dam is 55 feet high and 407 feet in length. A gated intake diverts part of the river flow through a 1/2-mile-long, 23-foot-diameter tunnel and a 0.75 mile-long canal into Faraday Lake, the forebay for the Faraday Powerhouse. The dam at the lake is 33 feet high and 1200 feet long. Faraday Lake has a storage capacity of approximately 430 acre-feet. A concrete intake structure and an emergency spillway are located at the downstream end of the forebay. Intake gates are provided for each of the six penstocks serving the six turbine-generator units. Five 8-foot-diameter riveted steel penstocks lead to the original five-unit powerhouse to operate the five horizontal Francis-type turbines. The hydraulic capacity of these five units is 2370 cfs under a head of 130 feet. A sixth 14-foot-diameter welded steel penstock leads to the newer semi-outdoor portion of the powerhouse to operate a vertical Francis-type turbine. The hydraulic capacity of the 6th Unit is 3334 cfs, also under a head of 130 feet. The Faraday powerhouse discharge joins flow in the bypass reach below the Faraday Diversion Dam. The total theoretical horsepower at Faraday is 84,253 THP ( $5704 \text{ cfs} * 130 \text{ feet of head} / 8.8$ ). One new turbine 0.85 MW will be installed to utilize 225 cfs of attraction water flows for the fish ladder at the Faraday Diversion dam. Total theoretical horsepower is 1278 THP ( $225 \text{ cfs} * 50 \text{ feet of head} / 8.8$ ).

## River Mill Development

The River Mill Development has an output of 19.1 MW. Discharge releases from the Faraday Powerhouse combine with flow from the Faraday Diversion Dam bypass reach and proceed down the Clackamas River to Estacada Lake, the reservoir behind River Mill Dam. The storage capacity of Estacada Lake is 2,300 acre-feet. The dam is 85 feet high and 936 feet long. The powerhouse section of the dam is 173 feet long. Intake gates are located on a sloping face behind trash racks on the upstream face of the powerhouse. The gates lead to 11-foot-diameter penstocks, which supply each of the five turbine-generator units. The hydraulic capacity of the plant is 4840 cfs with 81 feet of head. The total theoretical horsepower at River Mill is 44,550 THP ( $4840 \text{ cfs} * 81 \text{ feet of head} / 8.8$ ).