Hydroelectric Projects Status Report

Pelton reregulating development, Pelton-Round Butte Hydroelectric Project

Oregon Department of Fish and Wildlife

Hydropower Program
Water Quality and Quantity/Fish Division
Oregon Department of Fish and Wildlife
4034 Fairview Industrial Drive SE, Salem, Oregon 97302

October 2019
# ODFW area offices with Hydropower Program staff

<table>
<thead>
<tr>
<th>Office/Area</th>
<th>Staff</th>
<th>Title</th>
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<tbody>
<tr>
<td>Salem – Headquarters</td>
<td>Anna Pakenham Stevenson</td>
<td>Water Program Manager</td>
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<td>Salem – Headquarters</td>
<td>Ken Homolka</td>
<td>Hydropower Program Leader</td>
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<td>Newport – Marine Area</td>
<td>Delia Kelly</td>
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<td>La Grande – Northeast Area</td>
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<td>Roseburg – Southeast Area</td>
<td>Jason Brandt</td>
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<td>Clackamas – Northwest Area</td>
<td>John Zauner</td>
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<td>Bend – High Desert Area</td>
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<td>Jason Brandt</td>
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## High Desert Watersheds

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Northeast Watersheds

Active FERC/WRD Project/Applications

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Inactive FERC/WRD Projects/Applications

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<td>Upper Little Sheep Creek – Consolidated Hydro, Inc.</td>
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- PC 535  Baker, City of – Powder River, Consolidated
- HE 525  Bowen, Robert and June
- HE 570  Dexter Creek – Dexter Clark
- HE 495  Heizer, William
- HE 524  La Grande Reservoir – City of La Grande
- HE 346  Lathrop, Earl and Dixie
- HE 349  Letosky, Joseph C. and Deborah
- HE 599  Madison Farms
- HE 362  Olson, Kenneth
- HE 271  Racey, Andrew
- HE 428  Reed, Randy
- HE 594  Wheelhouse, Jay and Jan
- HE 331  Wiggins, Duane
- HE 612  SPS of Oregon Vern Spaur

Northwest Watersheds

Active FERC/WRD Project/Applications

- 11509  Albany Hydroelectric Project – City of Albany
- 2821  Bull Run – City of Portland
- 6414  Canyon Creek
- 2242  Carmen-Smith – Eugene Water and Electric Board (EWEB)
- 2195  Clackamas River Hydroelectric Project – Portland General Electric (PGE)
- 14371  Crandall Reservoir – City of Hillsboro
- 11945  Dorena Dam – Dorena Hydro, LLC
- 6661  Falls Creek – Eagle Creek Renewable Energy
- 6648  Lacombe – Lacombe Irrigation District (LID)
- 2496  Leaburg/Walterville – Eugene Water and Electric Board (EWEB)
- 14498  Lucid Energy, Inc. and the Portland Water Bureau
- 5264  Stone Creek – Eugene Water and Electric Board (EWEB)
- 13732  Vernon Station - Portland Water Bureau
- 6943  Water Street – Santiam Water Control District (SWCD)
- 14383  Whitewater – Whitewater Green Energy LLC
- 2233  Willamette Falls Hydroelectric Project – Portland General Electric (PGE)
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<td>Belknap Creek – George Wheeler</td>
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<td>Blacklaw - William Blacklaw</td>
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<td>Boulder Creek/McKenzie River - Gary Keable</td>
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<td>Breitenbush River - Breitenbush Retreat Center</td>
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<td>Bronson Creek - Robert and Robin Stern</td>
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HE 318  Deep Creek/Tributary to Clackamas River - Angela Porter  85
HE 579  Digger Mountain - Digger Mountain Forestry LLC  85
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HE 287  Martin Rough Creek - Lynn Martin  88
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Hydropower Coordinator:
Ted Wise
Oregon Department of Fish and Wildlife
61374 Parrell Road
Bend, OR  97702

Voice: 541- 633-1115   Fax: 541-388-6049   email:  ted.g.wise@state.or.us

13817  45 Mile Hydroelectric Project – Apple Inc.
Contact: William Ritthaler (408) 783-1599
WRD – PC 895, Certificate #88994 (supersedes 87595)
FERC - Exemption - no expiration

North Unit Irrigation District Main Canal/Deschutes – This is a 5000 kW conduit exemption project located in Jefferson County utilizing water conveyed by the North Unit Irrigation District (NUID). The project is located at an existing concrete drop structure on NUID’s main canal, approximately 45-miles north of the diversion of water into the canal from the Deschutes River, in Bend. EBD Hydro filed an application with FERC on July 10, 2010 for an Exemption for a small conduit facility. On November 30, 2010 ODFW submitted Notice of Intervention and two fish and wildlife conditions pursuant to Section 30 (c); 1) notification of ODFW if fish and wildlife are being harmed, and 2) reservation to modify terms and conditions in the future. EBD was seeking to add this hydroelectric use under ORS 543.765 to an existing water right, i.e. NUID’s water right. Under this statute the certificate requires a condition for fish screening. ODFW and NUID reached a settlement agreement on October 21, 2013, which provides for installation of a new fish screen at the diversion point of the North Unit Main Canal by 2023. Under a separate agreement with ODFW, NUID, SID and COID a fish ladder was constructed in 2016 at North Canal Dam, the diversion point for these irrigation districts. FERC issued a Notice of Transfer of Exemption on March 31, 2014 acknowledging that EBD Hydro transferred the exemption to Apple Inc.

14791  Bowman Dam – Ochoco Irrigation District (OID)
Contact: Russell Rhoden, Manager, Ochoco Irrigation District, 541 447-6449.
WRD – No project number assigned
FERC - issued a Preliminary Permit in December 2016 for a period of 36-months.

Crooked River/Deschutes- OID’s proposed Bowman Dam Project would operate in a run-of-release mode within the constraints of the Reclamations’ operating procedures. The project would use Reclamation’s existing intake structure at the Bowman Dam and Prineville Reservoir.
The project would consist of the following new facilities: (1) a 10-foot-diameter, 310-foot-long steel pipe inserted into Reclamation’s existing intake tunnel; (2) a valve chamber; (3) a 9-foot-diameter, 108.44-foot-long steel penstock; (4) a powerhouse constructed on the bank adjacent to Reclamation’s existing spillway containing two Francis turbine/generator units for a total capacity of 4 megawatts (MW); (5) a tailrace; and (6) an approximately 15-mile-long, 24.5-kilovolt (kV) transmission line interconnecting to the existing Central Electric Cooperative facilities. The average annual generation of the project is estimated to be 17.6 megawatt-hours (MWh). The project would occupy one acre of federal land administered by Reclamation. The major fisheries issues include addressing fish passage, fish screening, and water quality (primarily TDG). In March 2017, ODFW met, and coordinated with the City of Prineville, OID, and the Governor’s Office Regional Solutions representative to discuss fish passage issues associated with the hydropower project proposal. In October 2018, OID filed its PAD with FERC and request for the use of the TLP. In February 2019, ODFW sent its comments on the “Predicted Impacts of Bowman Dam Fish Passage and Remediation of Gas Bubble Disease on Redband Trout Production in the Crooked River Basin” to OID’s consultant-author. OID scheduled it joint meeting and site visit in April 2019. In June 2019, ODFW filed its comments on the PAD and study requests with OID and FERC. Study requests include; determining effects of construction on redband productivity, entrainment study, turbine passage analysis, invertebrate study, evaluation of fish passage options, evaluation of anadromous fish habitat above the dam, ramping and fluctuations evaluation, wildlife surveys. In August 2019, ODFW hydro, district, and fish passage staff met with OID, the City, and consultant to discuss the process and expectations for fish passage or waiver.

3571 Central Oregon Siphon-Central Oregon Irrigation District (COID)
Contact: Craig Horrell (541) 548-6047
WRD - PC 881, Certificate 65215
FERC - License Expires – August 2037

COID Canal/Deschutes - The project uses flow from Deschutes River via COID canal near its intake from the Deschutes River at Bend. The project works consist of: (1) an existing diversion structure containing two 12-foot wide, 8-foot high radial gates; (2) an existing 5,996-foot-long, 10-foot-diameter siphon; (3) an existing 1,400-foot-long, 10-foot-wide canal; (4) an 18-foot-high reinforced concrete side channel intake structure; (5) a 16-foot-high, 7-foot-wide sluice gate; (6) two 800-foot-long, 84-inch-diameter penstocks; (7) a powerhouse containing two turbine-generator units with a total rated capacity of 5.5 MW; and other facilities. A 50-year FERC license was issued September 29, 1987. An evaluation study of the fish louvers indicated a fish guidance of 50 -60%. COID submitted a screen design alternatives plan to FERC on April 1, 1993. COID finalized screen designs December 13, 1994 which ODFW verbally approved. In 1995 FERC issued its approval and the screens installed. In May 1996 FERC approved a one-year extension to conduct a biological fish screen evaluation and develop a completion report. In May 1997 COID completed screen evaluation report and ODFW filed written comments stating that the screen functions well, although some fish were found behind the screen with source of leak unidentified. In January 1998, FERC issued an order approving recommendations for a fish bypass evaluation study. A mark-recapture study implemented that showed good results using wild redband trout and poor results using hatchery fish. Additional sampling was scheduled for October 1998 to test modifications to the screens. In January 1999, the final fish screen evaluation report indicated good survival of wild redband trout, brown trout and hatchery
rainbow trout. Kokanee less than 80 mm and stickleback had poorer survival. In May 1999, FERC issued an order allowing extension of the fish evaluation effort. Sampling efforts through 1999 included: installation of a screw trap at the outlet of the siphon pipe, monitoring of the pool downstream of the penstock intake after stock water deliveries, and evaluation of the first ten miles of the canal and the Arnold District lateral. A final report of the evaluation of the fish protection at the project was submitted by COID in January of 2001. The project is now operating in compliance with FERC specified conditions. COID contributes annually to mitigation fund as part of conditions for operation. The agreement for the fund is due to sunset in 2021, ODFW and COID are working to develop the terms of a new agreement. The project was approved for issuance of a low impact certificate by the Low Impact Hydropower Institute (LIHI) on October 28, 2015. The expiration of the LIHI certification is October 28, 2020.

7350 Denny Creek
Contact: Cameron Curtiss (541) 882-1953
WRD – HE 332, Certificate 80610, expires December 2023
FERC - Exemption - no expiration

Denny Creek /Klamath – An Exemption was issued by FERC on June 20, 1985. The project consists of: (1) a 6-foot-high, 200-foot-long existing diversion dam on Denny Creek; (2) a 1,690 foot-long, 2-foot-diameter penstock; (3) a powerhouse with a generator rated at 50 kW with 70-feet of head; and other facilities. During a FERC inspection in August 1990 ODFW identified inadequate screen mesh, which was previously approved by ODFW, but did not meet current fish protection criteria. State license, HE 332, expired December, 2001. The reauthorized state license issued in 2003 required screening if redband trout are found upstream of the forebay pool. Subsequent to issuance of the license, redband were found upstream of the forebay; and ODFW requested a new screen. ODFW cost-shared the fabrication and installation of screen, which was installed in fall of 2012. As per agreement, ODFW is responsible for maintenance of the fish screen. Within two years of reauthorization the water right holder was required to install a weir to measure the flow over the dam and provide a minimum of 1.5 cfs of flow at all times. ODFW will supply the information on weir construction, which must also pass fish. There is also a requirement to install a pipe at the base of the dam to supply 0.5 cfs at all times.

7532 Farmers Irrigation District (FID) Lowline Canal (Plant 2)
Contact: Les Perkins (541) 387-5261
WRD – PC 874, Certificate 67266
FERC - Exemption - no expiration

Green Point Creek/Hood – The project is located SW of the City of Hood River, adjacent to the Hood River, near river mile four. The project consists of: (1) a 6-foot-high concrete diversion and intake structure diverting water from Farmers Ditch; (2) A 6,900-foot-long, 42-inch-diameter steel penstock; (3) a powerhouse containing two generating units rated at 1.0 MW and 2.0 MW at a head of 381 feet; and other facilities. An Exemption was issued by FERC in February 1983 and amended August 1988 and January 1991. ODFW submitted revised terms and conditions in October 1990 that included passage, habitat improvements, flow monitoring, and conversion of canal to buried pipes. FID submitted Monitoring and Evaluation Plan for stream restoration for ODFW review in September 1993. FID completed analysis of fish habitat restoration measures and instream flow studies in December 1994. ODFW sent a letter to FID Board dated December
20, 1994 adopting FID’s minimum flow proposal and commending FID on its fish restoration actions. In March 2009 FID submitted an application to the Low Impact Hydropower Institute (LIHI) to certify the project (both Plant 2 and Plant 3) as low impact. The project was certified as low impact for a five year term, expiring in March 2014. In January 2014 FID submitted an application for a second term of certification, which has been granted by LIHI through March 2019.

6801 Farmers Irrigation District (FID) Project #3 Low Line Ditch Powerhouse (Plant 3)
Contact: Les Perkins (541) 387-5261
WRD – PC 882, Certificate 67267
FERC - Exemption - no expiration

Hood River/Hood - Project located two miles SW of the City of Hood River. The project consists of: (1) a diversion structure in the Low Line Ditch; (2) a 30-inch-diameter, 21,500-foot-long penstock; and (3) a powerhouse to contain a turbine-generating unit with a rated capacity of 1.8 MW operating under a head of 646 feet. Water is discharged from the powerhouse into the forebay of Copper Dam. An Exemption issued by FERC in April 1984. ODFW submitted terms and conditions in November 1983 that prescribe minimum stream flows, upstream passage, screening and post-operation evaluation of fish protection facilities. Water from project #3 also flows through project P-7532, also known as plant 2. FID diverts its project water through self-cleaning, horizontal fish screens, a technology developed by FID that keeps fish out of the project water supply. FID maintains year-round minimum flows in Green Point Creek, an anadromous fish-bearing stream that is one of the sources of water for the Plant 3. Plant 3 is operated at reduced capacity if Green Point Creek flow drops below 250 cubic feet per second (cfs) for three consecutive days, and the plant typically does not run at all during the summer months. In March 2009 FID submitted an application to the Low Impact Hydropower Institute (LIHI) to certify the project (both Plant 2 and Plant 3) as low impact. The project was certified as low impact for a five year term, expiring in March 2014. In January 2014 FID submitted an application for a second term of certification, which has been granted by LIHI through March 2019.

13607 Juniper Ridge - COID
Contact: Craig Horrell, District Manager (541) 548-6047
WRD – PC 890, Certificate 86026
FERC - conduit exemption - no expiration

Pilot Butte Canal / Deschutes - On October 19, 2009, and supplemented on November 30, 2009, the Central Oregon Irrigation District (COID) filed an application to exempt the proposed 5,000-kilowatt (kW) Juniper Ridge Hydroelectric Project (project) from the licensing requirements set forth in Part I of the Federal Power Act. The small conduit hydropower project is located on COID’s Pilot Butte Canal near the City of Bend, in Deschutes County. The project is located on a modified portion of COID’s existing Pilot Butte Canal (Canal), which is used to deliver water for irrigation. Currently, the Canal diverts water from the Deschutes River in Bend, Oregon (approximately 6.25 miles northeast of the project’s location). From the diversion, water travels about 3.68 miles through the Canal to an open irrigation ditch, where water travels 2.57 miles to be discharged into irrigation laterals. COID applied to OWRD for a certificate to use water for hydroelectric purposes in an artificial delivery system under its existing water right (ORS
543.765). As of 2013, the North Canal Dam diversion screening facilities for COID (and Swalley Irrigation District) have been constructed to meet ODFW and NMFS criteria and an agreement for achieving fish passage at the North Canal Dam has been implemented. On December 30, 2009, ODFW submitted to FERC a Motion to Intervene (out of time) and two fish and wildlife conditions pursuant to Section 30 (c); 1) notification of ODFW if fish and wildlife are being harmed, and 2) reservation to modify terms and conditions in the future.

2082 Klamath - PacifiCorp
Contact: Tim Hemstreet (503) 813-6170
WRD – HE 180 (J.C. Boyle), Certificate 24508
KA 167 (Westside), KA 168 (Eastside), KA 218 (Spring Creek)
FERC - license expired – March 1, 2006

Klamath River/Klamath - The project currently consists of seven mainstem hydroelectric developments on the upper Klamath River and one tributary development with an approximate cumulative capacity of 160 MW. PacifiCorp owns and operates the project under a single license issued in 1956 by FERC. The 50-year license expired on March 1, 2006. Link River dam and the associated East Side (3.2 MW) and West Side (0.6 MW) powerhouses are the most upstream facilities, located near RM 254. The US Bureau of Reclamation (USBR) owns Link River dam and PacifiCorp operates it under USBR’s directive; therefore the dam is not considered part of the licensed project. The dam was built to supply water to both USBR’s Klamath Irrigation Project and PacifiCorp’s two powerhouses. Keno dam, a 24 foot high reregulating facility with no generation capability, is the next facility, 20 miles downstream at RM 233. The next facility is the 60 foot high J.C. Boyle (80 MW). The dam is at RM 224.7 and the powerhouse is several miles downstream at RM 220.4. The California projects includes the 120 foot high Copco 1 (20 MW), the 25 foot high Copco 2 (27 MW), and the 162 foot high Iron Gate (18 MW) located at RM 198.6, RM 196.8, and RM 190 respectively. Fall Creek a tributary, flows through a small powerhouse (2.2 MW) (which also uses water captured from Spring Creek in Oregon) and then into Iron Gate reservoir.

ODFW initiated internal scoping of project-related fish and wildlife issues and prioritization of needed studies prior to relicensing in July 1996. In February 1997, ODFW met with PacifiCorp to discuss early relicensing study needs. In May 1997, ODFW met with California Department of Fish and Game to begin coordinating Klamath relicensing issues. ODFW met with PacifiCorp in February 1998 to discuss relicensing studies. ODFW’s main issues of concern were water quality, ramping, bypass flows, and upstream and downstream fish passage. Ultimately, in response to PacifiCorp’s filing of the Final License Application (February 2004) with FERC, the federal fisheries agencies filed fish passage prescriptions for upstream and downstream passage at all of PacifiCorp’s mainstem dams. ODFW and CDFW filed 10(j) recommendations for fish passage at the dams. The Energy Policy Act of 2005 (EPAct 2005) allowed for trial-type hearings and the consideration of alternative conditions and fishway prescriptions. PacifiCorp initiated the first ever trial-type hearing administrative hearing challenging a fishway prescription under EPAct 2005. The Administrative Law Judge decision ensured that the federal fisheries agencies retained full discretion to continue to develop a plan for reintroduction of anadromous fish in historic habitat. Subsequent to the ALJ decision, PacifiCorp initiated settlement discussions with the parties.
For over a decade, many parties worked collaboratively to find and implement the means to address and promote their respective interests and the interests of other parties. The efforts of the parties resulted in three agreements. Two of these, the Klamath Basin Restoration Agreement (KBRA) and the Klamath Hydroelectric Settlement Agreement (KHSA), took effect on February 18, 2010, and included the United States, the States of California and Oregon, PacifiCorp, Tribes, and a number of other stakeholder groups. The third agreement, the Upper Klamath Basin Comprehensive Agreement (UKBCA), took effect on April 18, 2014. Federal legislation authorizing all three agreements was proposed, but not enacted by the end of 2015. Under its terms, the KBRA expired due to the lack of timely federal authorizing legislation. The KHSA was subsequently reaffirmed through amendment in April of 2016 and further amended in November of 2016 by the states of Oregon and California, the United States, and PacifiCorp and other parties to provide for transfer of the FERC license for JC Boyle, Copco 1 and 2, and Iron Gate to the Klamath River Renewal Corporation (KRRC) to plan and initiate dam removal, restoration of inundated lands, and implement mitigation measures. Keno and Link river dams are not part of the KRRC project. PacifiCorp will transfer Keno dam to the USBR under the amended KHSA, but both dams will remain operational. The anticipated project timeline calls for dam removals to be conducted in 2021. FERC is currently evaluating the application for transfer of license from PacifiCorp to KRRC.
Middle Fork Hood River/Hood – The project located within existing MFID irrigation canal. Water is diverted from Coe and Elliot Creeks, which are tributaries to the Middle Fork of the Hood River, and Laurance Lake, an irrigation storage reservoir on the Middle Fork of the Hood River. The project consists of the following: (1) an existing 110-foot-high dam on Clear Branch, and two exiting dams on West Evans Creek, 16 feet high and 15 feet high; (2) an existing reservoir on Clear Branch with a surface area of 130 acres and storage capacity of 3,540 acre-feet; (3) two existing sediment basins on West Evans Creek; (4) three existing penstocks totaling 27,462 feet in length; (5) an existing 10-foot-high 90-foot-long diversion structure on Eliot Branch; (6) two existing trapezoidal canals totaling 14,784 feet in length on Coe and Elliot Branches respectively; (7) a 10-foot-high, 90-foot-long diversion structure on Coe Branch; (8) four penstocks totaling 24,720 feet in length; (9) three powerhouses with a combined rated capacity of 3,250 kw and are operated year round. An exemption was issued by FERC on April 6, 1984. FERC ordered new spillway constructed at Laurance Lake in 1992. NMFS and ODFW, incorporated downstream passage at spillway. In November 1993, ODFW and MFID discussed alternative water use practices to improve bull trout passage at Clear Branch Dam spillway. FERC approved amendment of exemption to construct a fish trap at Clear Branch Dam. Bull trout passage was resolved by implementing trap and haul (US Forest Service) in 1996. During the permitting process for the construction of Clear Branch Dam, a stipulation to application numbers R-37284 and S-37285 was signed on March 21, 1962 by Middle Fork Irrigation District, the Oregon State Game Commission and the Fish Commission of Oregon. That stipulation sets a minimum reservoir pool of 150 acre feet (surface area ~ 11.5 acres) and minimum stream flows in Clear Branch below the dam. In 1982, that stipulation was modified by MFID and ODFW during the permitting process for the hydroelectric facilities to state actual stream flow up to 30 cfs will be passed from September 16 throughout the remainder of the non-irrigation season. On May 15th stream flow can be reduced to 3 cfs. The minimum flow agreement was further modified through the development of the MFID Fisheries Management Plan in 2007. The 2007 modification provides for a voluntary 5 cfs minimum flow rate below Coe and Eliot diversions and modifies the rate and timing of flow releases below Clear Branch dam. The Coe diversion was upgraded in the fall of 2009. The dam and drop inlet grate structure was removed and replaced with a 25 ft long angled concrete water entry wall, fish bypass channel and drop pools. An agency approved 50 foot FCA horizontal flat plate dual stage screen was installed. In November 2006, a debris flow completely destroyed the Eliot diversion. The Diversion facilities were rebuilt with a side channel inlet and criteria fish screen in the spring of 2007. The project was approved for issuance of a low impact certificate by the Low Impact Hydropower Institute (LIHI) on February 1, 2018. The expiration of the LIHI certification is January 31, 2028.
5357 Mitchell Butte Lateral – Owyhee Irrigation District  
*Contact: Jay Chamberlin (541) 372-3540*  
*WRD – PC 880, Certificate 75819*  
*FERC - license expires 2034*

**Owyhee River/Owyhee** – A 50-year license was issued by FERC in December, 1984. The project consists of: (1) a 10-foot-long concrete inlet structure; (2) a 525-foot-long, 36-inch diameter concrete penstock; (3) a powerhouse containing a single generating unit with an installed capacity of 1,800 kw; and (4) a 4-mile-long, 69-kv transmission line. The project is operated using water released for irrigation from Owyhee Dam. Raptor protection applied to transmission lines in May 1988. No other fish or wildlife concerns identified by the agencies.

14430 Monroe Drop Small Conduit – Apple Inc.  
*Contact: Nathan Fleisher, P.E. (408) 783-1599*  
*WRD – PC 899, Certificate 89653*  
*FERC - exemption – no expiration*

**Deschutes and Crooked/Deschutes** – An exemption (conduit) was issued to Monroe Hydro, LLC by FERC in August 2014. The exemption was transferred to Apple Inc. on February 18, 2015. The project is located on the U.S. Bureau of Reclamation’s (Reclamation) North Unit Irrigation District’s Main Canal (Main Canal) near the town of Culver in Jefferson County. The project consists of: (1) a proposed 16.19-foot-long, 12-inch-diameter intake pipe; (2) a proposed powerhouse, containing one generating unit with an installed capacity of 300 kW; and (3) a proposed 9.42-foot-long, 12-inch-diameter discharge pipe. The project operates using existing irrigation flows during irrigation season. Monroe Hydro, LLC (now Apple Inc.) applied to OWRD for a certificate to use water for hydroelectric purposes in an artificial delivery system under existing water rights (ORS 543.765). On February 20, 2013 ODFW filed a Notice of Intervention. On February 27, 2014, ODFW filed two terms and conditions pursuant to section 30(c) of the FPA that: (1) require the exemptee to take action to minimize harm to fish and wildlife resources under emergency situations and subsequently notify Oregon DFW and (2) reserve Oregon DFW’s authority to modify the conditions.

6552 North Fork Sprague River – Sprague Hydro, LLC  
*Contact: Ted Sorenson (208) 522-8069, or plant manager, Dean Lawrence: (541) 353-2347.*  
*WRD – HE 404 – Expires 2021*  
*FERC - license expires - 2035*

**North Fork Sprague River/Klamath** – A 50-year license was issued by FERC in December, 1985. The project consists of a 2-foot-high, 30-foot-long gabion weir; an intake structure; a 4,800-foot-long flume; a forebay; a 42-inch-diameter, 325-foot-long penstock; a powerhouse containing three generating units with a combined capacity of 1,119 KW; a tailrace; and a 6-mile-long transmission line. In 1987 FERC approved the transfer of the license from Frederick Ehlers to HDI Associates V. In July 1988, article 23 of the license was amended to the current minimum bypass flow requirements of: 30 cfs from October 1 through July 31 and 25 cfs from August 1 through September 30. Due to several occurrences in the early 1990’s where the minimum flow requirements were not met, ODFW alerted FERC and requested that U.S. Geological Survey...
(USGS) be placed in charge of all stream flow gauging and a real-time radio transmission gauge be installed. FERC issued order on April 6, 1994 approving licensee’s stream flow gauging plan. In June 1998, district biologist reported that bull trout are found in North Fork Sprague River within two miles of facility. Discussions were initiated with U.S. Fish and Wildlife Service to assess screening and adult passage for bull trout at the site. FERC issued an Order Approving Transfer of License to Mr. Ted S. Sorenson, Sprague Hydro, LLC, on February 28, 2011. ODFW (Ted Wise) attended a site visit with FERC on June 21, 2013 and noted that the agreement with USGS had been cancelled and the license requirement for flow monitoring was not being met. On February 10, 2017, ODFW submitted a letter to FERC’s Office of Energy Projects in Portland describing the non-compliance with the flow monitoring articles of the license. Mr. Sorenson subsequently followed up with ODFW and the USFWS to develop a new streamflow monitoring and reporting plan. On July 26, 2017 Mr. Sorenson acknowledged in a letter that he had set up a monitoring system to allow remote access to review bypass flows, and an internet connection to the plant to log bypass flow. ODFW acknowledged that the alternative flow monitoring proposal was acceptable. During the onsite meeting to discuss flow monitoring, staff from ODFW’s Screening and Passage and staff from USFWS discussed upgrading/replacing the existing screen to meet ODFW and NOAA fisheries criteria. Discussions with Mr. Sorenson on upgrading the fish screen are ongoing at this point; however, it is unlikely that any action will occur prior to the expiration of the state hydroelectric license in 2021. ODFW expects that screening and passage will be addressed during the state reauthorization process.

14235 Oak Springs Hatchery Hydroelectric Project
Contact: Ted Wise 541-388-1115, Oregon Department of Fish and Wildlife
WRD – PC 893, Certificate 87314
FERC - Exemption – No expiration

Deschutes River/Deschutes - The Oak Springs small conduit hydroelectric project has an average generation of 680 megawatt hours. It is the first of its kind in Oregon, with regards to being owned and operated at an ODFW fish hatchery. The project includes a bifurcated pipeline and a concrete powerhouse with turbine. Spring water is conveyed through the new pipeline, through the turbine and powerhouse, discharged through a concrete tailrace and then back into the existing pipeline, which distributes water to the hatchery’s rearing ponds.

July 2011, ODFW filed an Application for Conduit Exemption at Oak Springs Fish Hatchery under P-14235. Order granting exemption from licensing issued in October 2011. In February 2012, the final construction report was filed with FERC. Project is complete and is currently operating. The source of water is fishless, and no fish or wildlife issues have been identified.

5891 Opal Springs - Deschutes Valley Water District (DVWD)
Contact: Edson Pugh (541) 546-6141
WRD – PC 869, Permit S 55026
FERC - license expires - 2032

Crooked River/Deschutes - A 50-year license was issued by FERC on November 2, 1982. The project dam is located at river mile 7.0 on the Crooked River and can utilize up to 1,772.5 cfs for hydroelectric generation. The project consists of (as amended in 2018); (1) a 21-foot-high, 200-foot-long concrete capped rockfill diversion dam, controlled with a single, fixed flashb
creating a pool with a storage capacity of 119 acre-feet and an area of 14.4 acres at a maximum pool elevation of 2007.21 feet; (2) a 30-cfs vertical slot ladder; (3) a 44-foot by 33-foot rectangular concrete intake structure 34 feet tall located on the left abutment of the diversion dam; (4) two 12.5-foot diameter, 1,157-foot-long buried corrugated metal conduits; (5) a 30-foot-diameter, steel bifurcator in the surge tank; (6) a 16-foot-diameter, 160-foot-long steel penstock; (7) two existing turbine-driven irrigation pumps, one rated at 175 and the other at 480 horsepower; (8) a powerhouse containing one 4.3 megawatt (MW) generating unit; and (9) a 250-foot-long, overhead transmission line. ODFW and DVWD agreed that: (1) a minimum flow of 50 cfs would be maintained near the base of the diversion structure; (2) DVWD would evaluate fish mortality caused by power generation within the first year; (3) DVWD would annually replace the amount of fish lost through power generation as determined in the evaluation; and (4) DVWD would maintain such habitat enhancement features ODFW agrees would compensate for any fish mortality. ODFW and DVWD developed an MOU to provide hatchery mitigation onsite, which has been updated periodically to reflect fish management objectives for the basin. The project was originally constructed without fish screens or a fish ladder.

As a result of the new PRB project facilities and reintroduction of anadromous fish in the upper Deschutes basin, fish began returning to the upper Deschutes in 2011. Based on a request by ODFW, DVWD began voluntarily passed fish above its project via a trap and haul. DVWD, agencies, and other interested stakeholders began settlement discussions with the purpose of filing a license amendment to construct permanent fish passage at its dam. These efforts began in 2008 and culminated in a license amendment in 2018. The 2015 Settlement Agreement includes requirements that the licensee: 1) construct a fish ladder to provide passage into the Crooked River for anadromous and migratory fish; 2) raise the maximum operating reservoir elevation; 3) establish a water credit system; 4) implement a monitoring and evaluation program for assessing fish passage performance; 5) adaptively manage the project to meet fish passage performance objectives; 6) implement a Fish Passage and Protection Plan; 7) provide annual reports; 8) provide inspection rights to members of a fish passage work group; and 9) comply with construction requirements. FERC issued the license amendment on May 9, 2018. Construction is anticipated to start in April of 2018 and be completed by the end of 2019. The construction is expected to cost about $11 million. Funding sources include grants from OWEB, OWRD, BLM and Trout Unlimited, as well as ODFW/ODOT funds, and DVWD. The project was approved for issuance of a low impact certificate by the Low Impact Hydropower Institute (LIHI) on April 25, 2018. The expiration of the LIHI certification is April 24, 2028.

4354 Owyhee Dam - Owyhee Project Irrigation Districts
Contact: Jay Chamberlin (541) 372-3540
WRD – PC 872, Certificate 75820
FERC - license expires - 2034

Owyhee River/Snake – A 50-year license was issued by FERC on May 9, 1984. The project consists of: (1) a 250-foot-long, 84-inch diameter concrete lined tunnel located at the end of an existing tunnel; (2) a 150-foot-long, 72-inch diameter steel penstock; (3) a powerhouse containing a single generating unit with a capacity of 3,500 KW; (4) a 50-foot-long tailrace; (5) a switchyard; and (5) a 0.5 mile-long transmission line. Project uses spill and irrigation releases up to 225 cfs from Owyhee Dam. Powerhouse discharges into Owyhee River. Post-construction
temperature and fish population monitoring completed. No negative effects were identified in this monitoring. In December 1993, ODFW sent a comment letter to Bureau of Reclamation regarding Resource Management Plan and draft Environmental Assessment (EA). On May 28, 2013, ODFW staff (Elizabeth Moats, NE Area Hydropower Coordinator) attended the FERC site visit and inspection for Owyhee Dam Project (FERC P-4354), Owyhee Tunnel Project (FERC P-4359) and Mitchell Butte Hydro Project (FERC P-5357). She met Jay Chamberlin and Tom Zittercob from the Owyhee Irrigation District at the district office in Nyssa, Oregon. Elisabeth Matt, Civil Engineer with FERC, performed the FERC inspection. The inspections were of the powerhouses only. The entire facilities (i.e. dams, in-takes, screens, canals, transmission lines, etc.) were not inspected.

The primary concern that arose during the inspection was a road that the Owyhee Irrigation District (OID) maintains to the Owyhee Dam Project. It runs from the end of the BOR/OID property on the north/west side of the river to the powerhouse. It runs along the base of the steep canyon wall, essentially in the river below the dam. It appears to have been built by filling the river to create the road base. The OID representatives said the FERC license requires them to maintain the road and they are happy to do so. However, when inquiry was made as to whether they had to get permits, they said they do not. This was a concern because it is fill in a waterway, which one would assume to be a permitted action.

14786 Owyhee Pumped Storage Project – Gridflex Energy as Owyhee Hydro LLC
Contact: Matthew Shapiro (208) 246-9925
WRD –No project number at this time
FERC - Preliminary Permit issued on September 7, 2016 for 36-months.

Owyhee River/Snake- On June 30, 2016, Owyhee Hydro LLC filed a revised application for a preliminary permit with FERC, proposing to study the feasibility of the Owyhee Pumped Storage Project (Owyhee Project or project) to be located on Lake Owyhee near Adrian in Malheur County. The project is proposed as an open-loop system using the USBR’s Owyhee Reservoir as the lower project reservoir. ODFW filed a Notice of Intervention on August 16, 2016. FERC issued the Preliminary Permit on September 7, 2016 for a period of 36-months. The proposed project would consist of the following: (1) a new 1,200-foot-long zoned earth and rockfill or concrete-face rockfill dam forming a lined upper reservoir with a surface area of 109 acres and a storage capacity of 4,035 acre-feet at a maximum surface elevation of 4,320 feet mean sea level (msl); (2) a new 14,100 foot-long conduit connecting the upper reservoir and the existing Lake Owyhee (lower reservoir) consisting of a 2,200 foot-long, 17.1 foot-diameter concrete lined low-pressure tunnel, a 7,100 foot-long, 17.1 foot-diameter concrete and steel-lined pressure shaft, and a 4,800-foot-long, 20.5 foot-diameter concrete-lined tailrace; (3) a new 80 feet long by 280 feet wide by 120 feet high powerhouse located approximately 4,800 feet east of Lake Owyhee containing four reversible pump-turbine units rated at 125 megawatts (MW) each for a total capacity of 500 MW; (4) either 2.6 or 8 miles of 500-kilovolt transmission line interconnecting with the Boardman-Hemingway Line, depending on design of infrastructure; and (5) appurtenant facilities. The estimated annual generation of the Owyhee Project would be 1,533,000 megawatt-hours. Potential fish and wildlife concerns include permanent inundation of terrestrial habitat by the upper reservoir, entrainment of fish into project pumps from Owyhee Reservoir, and impacts associated with construction of the new transmission line. A six-month progress report was filed with FERC in February 2018.
Owyhee Tunnel-Owyhee Project Irrigation Districts (OID)

Contact: Jay Chamberlin (541) 372-3540
WRD – PC 883, Certificate 75821
FERC - license expires February 2036

Owyhee River/Snake - Project built within existing OID Canal at tunnel intake for irrigation withdrawals from Owyhee Reservoir. FERC issued a 50-year license on February 28, 1986. The project consists of (a) a bifurcation of the existing Tunnel No. 1 from the USBR’s Owyhee Dam; (b) a 12-foot-square, 95-foot-long concrete lined penstock; (c) an underground powerhouse containing a generating unit rated at 8.0 MW under a head of 64 feet and a flow of 1,600 cfs; (d) a 16.6-foot-diameter aby 110-foot-long horseshoe-shaped concrete-lined tailrace conduit connecting back into the existing Tunnel No. 1; (e) transmission equipment; and (f) appurtenant facilities. FERC amended the license to reflect that the capacity of the installed turbine (8,120 kW) exceeded the authorized capacity (8,000 kW). FERC also amended the license to delete license articles 33 (April 1989) and 37 (November 1990). Article 33 required the licensee to develop and implement a plan to minimize bedload movement in the Owyhee River at the site of the return-flow structure, the most environmentally sensitive element of the project. However, the licensee determined that the return flow structure to allow winter (non-irrigation water) to return to the Owyhee River was not economical, and would not be built. Article 37 required the licensee to consult with the agencies to develop ramping rate recommendations associated with the article 33 winter return flows. By not constructing the return flow structure contemplated under article 33, the ramping rates under article 37 became irrelevant. Also, see related update for P-4354.

Pelton-Round Butte - PGE and Confederated Tribes of Warm Springs Reservation

Contact: Jessica Graeber for PGE (503) 464-8133 and Brad Houslet for CTWSR (541) 553-2039
WRD – HE 217 and HE 222, Certificate 82826 terminates 2055
FERC - license expires- 2055

Deschutes River/Deschutes – A 465-megawatt project that consists of three developments: Round Butte, Pelton, and the Re-regulating facilities in the Deschutes River canyon, west of Madras. Round Butte, completed in 1964, is the largest hydroelectric dam wholly within the state of Oregon. The 1,380-foot-long rock-fill structure rises 440 feet from its bedrock foundation. It is approximately 2,500 feet thick at its base and 44 feet thick at the crest. The original FERC license expired on December 31, 2001. In June 1990, ODFW initiated internal scoping of project-related fish and wildlife issues and prioritization of needed studies prior to relicensing. License amendment granted in July 1992 to develop waterfowl nesting and brooding pond near Pelton fish ladder. PGE purchased adjacent lands for wildlife mitigation purposes in January 1995 and PGE started informal relicensing process with meetings and field studies. In June 1995, ODFW worked closely with PGE to ensure early studies applied to project relicensing. ODFW attended PGE coordination meetings. In April 1996, ODFW held intra-agency coordination meetings, attended inter-agency and non-governmental organizations meeting, updated preliminary issues list, and briefed our Commission. Initial Consultation Document (ICD) issued by PGE. Commission briefing in November 1996 and ODFW submitted comments on ICD and participated in additional meetings with PGE on study plan details. Confederated Tribes of Warm Springs Reservation is co-licensee for purposes of operating the CTWS powerhouse at
Pelton re-regulating dam. PGE and the Tribes filed a new joint application in fall of 2000. FERC issued a new 50-year project license to PGE and the Tribes on June 21, 2005. As part of the process of renewing the FERC operating license, PGE and the tribes agreed to spend $130 million for fish-related projects, including fish passage, over the course of a new 50-year operating period. Operation of the selective water withdrawal tower design to fish screening and downstream fish passage in the reservoir behind Round Butte Dam began operating in December 2009. Efforts for the reintroduction of anadromous fish; spring Chinook Salmon, steelhead Trout and Sockeye Salmon are ongoing. The project was approved for issuance of a low impact certificate by the Low Impact Hydropower Institute (LIHI) on October 30, 2014. The expiration of the LIHI certification is October 30, 2022.

14752 Sherman Hydroelectric Project – Rivertec Partners, LLC
Contact: Mark Steinley (480) 435-0846 or Brieanna Dain (480) 435-9846
WRD – No project number assigned
FERC - issued a Preliminary Permit in July 2016 for a period of 36-months.

Columbia River- The Sherman Hydroelectric Project (Sherman Project or project) to be located at the U.S. Army Corps of Engineer’s John Day Dam Juvenile Fish Sampling and Monitoring Facility (Juvenile Fish Facility) on the Columbia River near the City of Rufus in Sherman County. The proposed project would utilize flows at the existing Juvenile Fish Facility, and would consist of the following new features: (1) a 7-foot-diameter, 55-foot-long steel penstock connecting with the Juvenile Fish Facility’s existing screened excess water pipe; (2) a 71.2-foot-long, 26.2-foot-wide, 16.4-foot-high concrete and steel powerhouse; (3) a 4.2-megawatt turbine generator; (4) a 10.6-foot-diameter, 31.8-foot-long steel draft tube returning flows to the Columbia River; (5) either a 1,400-foot-long, 13.8-kilovolt (kV) transmission line interconnecting with the existing John Day Dam transformer, or an approximately 120-foot-long, 4.16-kV or 13.8-kV transmission line interconnecting with the existing Bonneville Power Administration substation; and (6) appurtenant facilities.

On July 13, 2016, ODFW filed a Notice of Intervention. On September 11, 2017, ODFW filed comments on the Preliminary Application Document and Study Requests. On July 10, 2018, FERC issued a letter requesting the overdue six-month progress report, and indicated the Preliminary Permit would be cancelled unless a report was filed within 30-days.

13470 Swalley Irrigation District Hydroelectric Project – Swalley Irrigation District
Contact: Jer Camarata (541) 388-0658
WRD – PC 888, Certificate 86003
FERC - exemption – no expiration

Swalley Main Canal/ Deschutes- On May 21, 2009, and supplemented on December 3, 2009, Swalley Irrigation District (SID) filed an application to exempt the proposed Swalley Irrigation District Project (project) from the licensing requirements set forth in Part I of the Federal Power Act (FPA). The small conduit hydropower project is located on the Swalley Main Canal in Deschutes County. The project consists of a powerhouse containing one generating unit having an installed capacity of 750 kW, and appurtenant facilities. The powerhouse is located at the end of the 5.1-mile piped section of a conduit known as the Swalley Main Canal, which delivers water to local users for irrigation and other water supply purposes. The Main Canal pipeline
begins at the SID’s diversion facility on the Deschutes River at North Canal Dam. After passing through the powerhouse, flows are released into the remaining, unpiped seven mile section of the canal, from which water is delivered to SID's laterals and to other water users. In addition to generating power, the project also aids in dissipating the energy of the water in the piped section of the canal before it is released into the unpiped section.

On October 7, 2009, public notice of the application was issued, establishing December 6, 2009, as the deadline for filing comments and motions to intervene and January 20, 2010, as the deadline for the applicant to file responding comments. ODFW filed a Notice of Intervention on October 29, 2009, followed by the Oregon Water Resources Department (OWRD), on November 30, 2009, and by the Oregon Department of Environmental Quality, on December 3, 2009. On December 1, 2009 ODFW filed two terms and conditions pursuant to section 30(c) of the FPA that: (1) require the exemptee to take action to minimize harm to fish and wildlife resources under emergency situations and subsequently notify ODFW and (2) reserve ODFW’s authority to modify the conditions. SID filed a response to the ODFW’s terms and conditions on December 3, 2009, acknowledging it had received and agreed to the terms and conditions.

SID applied to OWRD for a certificate to use water for hydroelectric purposes in an artificial delivery system under its existing water right (ORS 543.765). As of 2013, the North Canal Dam diversion screening facilities have been constructed to meet ODFW and NMFS criteria and an agreement with ODFW for achieving fish passage at the North Canal Dam has been implemented.

**13318 Swan Lake North Hydro Project- Rye Development LLC**  
*Contact: Erick Steimle 503 (998-0230)*  
*WRD – no application submitted to OWRD, Certificate*  
*FERC - license- issued April 30, 2019 (effective April 1, 2019), expires 2069*

**Ground Water:** Proposed project to be located 11 miles northeast of of Klamath Falls in Klamath County. On April 3, 2012, Swan Lake North Hydro, LLC (Swan Lake) filed an application for a preliminary permit, pursuant to section 4(f) of the Federal Power Act (FPA). The existing preliminary permit for this project is held by Swan Lake North Hydro, LLC. In late fall 2013, EDF Renewable Development, Inc., ("EDF-RD") EDF-RD was the assumed applicant for the management of the Swan Lake Hydro LLC. Rye Development LLC has since taken over control and as of July 13th 2018 the target date for issuance of the FEIS by FERC is September of 2018. With a target date for issuance of the final EIS in January of 2019. ODFW staff was very involved in meeting with the Project Applicants and providing input and comments during all phases of the FERC process. The important fish and wildlife issues to be addressed are those associated with permanent loss of terrestrial habitat by filling and operation of the reservoirs, construction and maintenance of transmission lines and roads, and other ongoing operations associated with the project. Noxious weed control is also of high importance as they can have significant long-term or permanent deleterious effects on the quality of wildlife habitat. The FERC license was issued in April 2019 for 50 years. ODFW staff are currently consulting with Rye Development and its consultants to plan implementation of protection, mitigation, and enhancement measures.
The Dalles Dam North Fishway Hydroelectric Project - N. Wasco PUD
Contact: Roger Kline, General Manager (541) 296-2226
Located in Washington, no OWRD jurisdiction
FERC - license expires - 2037

Columbia River – The Project is located on the north shore fishway on The Dalles Dam in Washington. A 50-year license was issued by FERC on December 31, 1987. The project consists of: (a) a 210-foot-long, 20-foot-wide rectangular concrete intake channel connected to the auxiliary water system to the North fish ladder; (b) a 10-foot-diameter, 85-foot-long steel penstock; (c) a 15-foot by 64-foot powerhouse with a generating unit with an installed capacity of 4200 kW at a design head of 80-feet; and (d) transmission and appurtenant facilities. In July 2013, N. Wasco County PUD proposed to amend the FERC licence to authorize the construction and operation of the “Freedom Project” a 5 MW expansion facility that would be located adjacent to the existing project, using 800 cfs of attraction flow in the north fishway auxiliary water supply system. The amendment process was suspended in April 2015. ODFW was not an intervenor and hydropower staff are not actively involved with this project.

Watson Hydroelectric Project - Three Sisters Irrigation District (TSID)
Contact: Marc Thalacker (541) 549-8815
WRD – PC 897, Certificate 87798
FERC - exemption – no expiration

Whychus Creek/Deschutes - FERC issued a conduit exemption for the project on April 12, 2012. The TSID Hydroelectric Project is located on the main TSID canal, which is located on Whychus Creek. The project averages an annual generation of 3,400 megawatt-hours. ODFW approved fish screen on the main irrigation canal on June 22, 2010. TSID applied to OWRD for a certificate to use water for hydroelectric purposes in an artificial delivery system under its existing water right (ORS 543.765). OWRD issued the certificate on October 26, 2012 which authorizes the use of 56 cfs of Whychus Creek/TSID irrigation water for hydropower use, and includes provisions for maintaining fish screens and passage at diversion point.
The list below includes projects that have had licenses terminated or surrendered, facilities removed, or have had preliminary permits cancelled, denied or surrendered within the last 10 years. Other projects included below are for locations where repeated efforts have been made over the last 30-years which suggests that these locations are likely to be evaluated for project development in the future, e.g. pumped storage or existing dams.

10875 Abert Rim Pumped Storage- Abert Rim Hydroelectric Co.
*Preliminary Permit Expired June 1993*

Mule Lake/Chuwaucan – An application for a preliminary permit was filed in April 1990, a preliminary permit was issued in June 1990.

11074 Abert Rim Pumped Storage- Abert Rim Hydroelectric Co.
*Preliminary Permit Surrendered May 1993*

Mule Lake/Chuwaucan – An application for a preliminary permit was filed in January 1992, a preliminary permit was issued in September 1992.

11419 Abert Rim Pumped Storage- Abert Rim Hydroelectric Association
*Preliminary Permit surrendered- July 1995*

Rabbit Creek/Abert – An application for a preliminary permit was filed in June 1993, a preliminary permit was issued in October 1993.

13054 Abert Rim Pumped Storage- NT Hydro
*Preliminary Permit issued June 2008*
*Preliminary Permit surrendered September 2009*

Lake Abert/Mule Lake - FERC issued a preliminary permit in June 2008. The proposed Abert Rim Pumped Storage Project would consist of: 1) the existing Lake Abert, as the lower reservoir 2) the existing Mule Lake reservoir as the proposed upper reservoir 3) a new powerhouse/pumphouse to be located near the shore of Lake Abert, containing two 67 MW/700 cfs pump-turbines, and 4) a 6,200-foot-long buried pipeline, consisting of two 8-foot-diameter steel pipes with a hydraulic capacity of approximately 700 cfs each, connecting Mule Lake reservoir and Lake Abert.

Numerous natural resource concerns associated with Lake Abert were cited by agencies and NGO’s in comment letters and motions to intervene. Numerous negative comments were filed by the public. In June 2009, GeoSense file a letter with FERC to surrender its preliminary permit.
11925 Bowman Dam Hydroelectric Project – Symbiotics
License Application Rejected August 2001

Crooked River/Deschutes - FERC staff rejected Symbiotics’ application as patently deficient because of the proposed project’s conflict with the Wild and Scenic Rivers Act. FERC stated they would not retain Symbiotics’ application on file. However, the dismissal of the application is without prejudice to its being re-filed should the project site be removed from the Wild and Scenic River System. The Wild and Scenic boundary was moved downstream by congressional action and finalized in the Federal Register on February 29, 2016.

13527 Bowman Dam Hydroelectric Project – Portland General Electric (PGE)
Preliminary Permit Rejected August 2009

Crooked River/Deschutes - PGE filed an application for preliminary permit with FERC in June 2009 under the assumption that FERC could issue the preliminary permit, despite the Wild and Scenic River issues. PGE believed proposed congressional legislation to revise the Wild and Scenic boundary would be signed within the three year duration of the preliminary permit. FERC rejected the preliminary permit application as patently deficient in August 2009.

10234 Bryant Mountain Pumped Storage – BMHA
Preliminary Permit Expired August 1990

Klamath/Klamath – An application for a preliminary permit was filed in December 1986, a preliminary permit was issued in August 1987

10982 Bryant Mountain Pumped Storage – BMHA
Preliminary Permit Denied March 1992

D-Canal/Klamath – An application for preliminary permit was filed in August 1990. Competing application with FERC applications 10991 and 10971

10983 Bryant Mountain Pumped Storage – Russell Canyon Corp
Preliminary Permit Surrendered April 1993

D-Canal/Klamath – An application for a preliminary permit was filed in August 1990, a preliminary permit was issued March 1992. Competing application with FERC applications 10991 and 10971

11413 Bryant Mountain Pumped Storage – BMHA
Preliminary Permit Cancelled June 1996

Groundwater/NA – An application for preliminary permit was filed in May 1993, a preliminary permit was issued in September 1993.
13680 Bryant Mountain Pumped Storage – Bryant Mountain, LLC

Preliminary Permit expired September 2013

D-Canal and J-Canal/Klamath – An application for a preliminary permit was filed in March 2010 for a proposed closed-loop pumped storage project three miles northeast of Malin, a preliminary permit was issued in September 2010. Significant number of public comments filed in opposition.

13858 Cline Falls Hydro – Central Oregon Irrigation District (COID)

WRD – PC 609, Certificate 29582

Preliminary Permit Surrendered October 21, 2013

Deschutes River/Deschutes – This is an unlicensed project on the Deschutes River near Tumalo at RM 145, just below Cline Falls. Project constructed in 1913. There is a non-functional fishway in place at the falls/project. Intake is unscreened and diverts ~350 cfs. The Federal Energy Regulatory Commission ("Commission") issued a preliminary permit to Central Oregon Irrigation District ("District") for the Cline Falls Hydroelectric Project ("Project") on March 21, 2011. COID spent significant resources to assess the Project's potential economic and technical viability in an attempt to move a hydroelectric project forward at the Cline Falls site. The District determined that the Project is not economically or technically feasible and submitted a Notice of Surrender of Preliminary Permit to the Commission pursuant to 18 C.F.R. § 4.84, which detailed the basis for the District's conclusions. The Surrender of the Preliminary Permit goes into effect on October 21, 2013. COID proceeded with removal of the dam, flume, penstock and powerhouse facilities were removed and the river restored to a pre-dam condition in the summer of 2017. The associated OWRD Hydropower certificate to date has not been converted to an instream water right.

13686 Cline Falls – KC Hydro

FERC- Preliminary Permit Application denied

Deschutes/Deschutes - An application for preliminary permit was filed in March 2010. Central Oregon Irrigation District (COID) files competing application in August 2010. ODFW files Motion to Intervene in September 2010, as did several other agencies, as well as COID. FERC issued a preliminary permit to Central Oregon Irrigation District (COID) under docket P-13858, under municipal preference, in March of 2011.

10969 Harpold Pumped Storage – Russell Canyon Corporation

Preliminary Permit Canceled September 1991

Harpold Reservoir and Lost River/Klamath – An application for a preliminary permit was filed in September 1990, a preliminary permit was issued in December 1990. Six month progress report not filed.
13860 Jones Canyon Pumped Storage – Jones Canyon Hydro, LLC and Gridflex Energy, LLC  
**Preliminary Permit expired October 2013**

Jones Canyon/Deschutes River – An application for a preliminary permit was filed in October 2010 for a proposed pumped storage project in Jones Canyon and French Canyon near the Deschutes River in Sherman County.

The last activity by Gridflex Energy, LLC was the filing of the fifth 6-month progress report in August 2013. In June 2015, FERC issues a letter vacating non-essential project power sites withdrawals which includes this project.

12463 Keno Dam Project – Klamath Drainage District  
**Preliminary Permit Application dismissed April 2006**

Keno Dam/Klamath - On July 31, 2003, Klamath Drainage District (Klamath District) filed an application for a preliminary permit for the proposed Keno Dam Project, to be located on the Klamath River, in Klamath County. The applicant proposed to develop generating capacity at the existing Keno Dam, which is included in the license held by PacifiCorp for the Klamath Hydroelectric Project (P-2082). FERC dismissed the application based on impermissible alteration of PacifiCorp’s Klamath Hydroelectric License Project.

13241 Klamath County Water Power Project – Intertie Energy Storage LLC  
**Preliminary Permit Canceled November 2011**

Groundwater / Klamath - Proposed closed loop system pumped storage project. The project would have utilized an area in the Bryant Mountain upland as an upper reservoir area. The lower reservoir would have been located to the northeast of the upper reservoir. The application proposed to obtain groundwater for the closed loop system. Due to changes in project funding, the applicant did not object when FERC issued an order in November 2011 canceling the Preliminary Permit.

10233 Klamath Pumped Storage – BMHC  
**Preliminary Permit Surrendered April 1988**

Klamath River/Klamath – An application for a preliminary permit was filed in December 1987, a preliminary permit was issued in August 1988.

10971 Langell Valley Pumped Storage – EWI for Russell Canyon Corporation  
**Preliminary Permit Canceled October 1992**

Lost River/Klamath – An application for a preliminary permit was filed in July 1990, a preliminary permit was issued in March 1992.
11623  Klamath County Pumped Storage Project – Energy Recycling Company  
*Preliminary Permit expired January 2001*

**Groundwater/Klamath** – An application for preliminary permit was filed in November 1998, a preliminary permit was issued in January 1999. Proposed closed-loop pumped storage using Bryant Mountain as the upper reservoir approximately four miles southeast of Bonanza.

13240  Lorella Pumped Storage Project – BPUS Generation Development LLC  
*Preliminary Permit Withdrawn September 2009*

**Groundwater / Klamath** - BPUS filed a competing application for preliminary permit for the same site as Intertie Energy Storage LLC. However, the application was subsequently withdrawn on September 30, 2009, just prior to FERC’s October 2, 2009 order announcing the results of a random drawing, which awarded priority to BPUS. Due to BPUS’ withdrawal of its Preliminary Permit, another Preliminary Permit was awarded to Intertie Energy Storage LLC, under docket P-13241.

11181  Lorella Pumped Storage-Energy Storage Partners  
*Withdrawal of license application October 1998*

**Groundwater/Klamath** – An application for preliminary permit was filed in August 1991, a preliminary permit was issued by FERC in December 1991. A proposed closed-loop pumped storage project, located near Lorella. The upper reservoir would have been located on Bryant Mountain. FERC conducted scoping meetings in April 1993 and planned to prepare an EIS. Energy Storage Partners filed a license application with FERC in November 1994, and subsequently withdrew the license application in September 1998 citing pending changes in power markets.

*Preliminary permit cancelled March 2015*

**Groundwater/Klamath** – An application for a preliminary permit was filed in May 2012, a preliminary permit was issued in December 2012. A proposed closed-loop pumped storage project located near Lorella. Project would use groundwater to fill the reservoirs. Surface water and groundwater issues in the Klamath and Lost River Basins are major considerations for this project. FERC issued a letter in February 2015 referencing the overdue progress report and indicated that preliminary permit would be cancelled in no less than 30 days.

11385  Malin I Modular Pumped Storage – Peak Power Corp  
*Preliminary Permit Expired June 1996*

**Groundwater/Klamath** – An application for a preliminary permit was filed in February 1993, a preliminary permit was issued in June 1993. A proposed closed-loop pumped storage project approximately 26 miles SE of Klamath Falls. Last correspondence was a progress report filed in August 1995.
11386 Malin II Modular Pumped Storage – Peak Power Corp.  
*Preliminary Permit Expired June 1996*

Groundwater/Klamath – An application for a preliminary permit was filed in February 1993, a preliminary permit was issued in June 1993. A proposed closed-loop pumped storage project to be located approximately 29 miles SE of Klamath Falls. Last correspondence was a progress report filed in August 1995.

11388 Malin III Modular Pumped Storage  
*Application for Preliminary Permit withdrawn in May 1993*

Groundwater/Klamath – An application for a preliminary permit was filed in February 1993. Russell Canyon Corporation, Bryant Mountain Pumped Storage (P-10983) filed a letter in May 1993 to protest the issuance of a preliminary permit for this site because Russell Canyon Corporation already had a valid permit for nearly the same project boundary. The application was withdrawn at the request of the applicant in May 1993.

13639 North Canal Dam – North Unit Irrigation District (NUID)  
*Preliminary Permit Withdrawn May 2013*

North Canal Dam/Deschutes – Competing Preliminary Permit Applications filed by Sierra Energy Co, under docket P-13560, and KC Hydro LLC, under docket P-13617. North Unit Irrigation filed PPA on December 9, 2009. ODFW, as well as other agencies and irrigation districts, filed Motions to Intervene. On June 22, 2010, NUID was granted priority to file license application. On May 24, 2013, NUID submitted a letter to FERC informing them of their decision to not pursue the Project for various reasons with the conclusion that the Project would not be economically feasible.

14283 North Unit Main Canal (NUMC) Hydroelectric Project – Earth by Design (EBD)  
*Preliminary Permit Withdrawn February 2012*

North Unit Main Canal/Deschutes – September 9th, 2011, EBD filed a preliminary permit application with the Federal Energy Regulatory Commission. The project was to be located on the North Unit Main Canal of the U.S. Bureau of Reclamation’s Deschutes (Irrigation) Project near Madras, Jefferson County, Oregon.

6057 Odell Creek – James Jans  
*WRD – HE 451 (expired December 31, 2010)  
FERC Exemption – Surrendered – April 25, 2017*

Odell Creek/Hood River – An exemption was issued by FERC on October 13, 1982. The project was located at river mile 0.4 of Odell Creek, which enters the Hood River at river mile 5.6. The project was authorized to generate up to 0.2 MW and divert up to 45 cfs. The project consisted of a 12-foot-high by 30-foot-wide dam which diverted water through a mechanical fish screen and penstock to the powerhouse. A fish ladder was located on the right bank of the dam. In December 1985 the exemption was transferred from Fredrick Plog to the Odell Creek Hydroelectric Investors, Ltd. The exemption was subsequently transferred in January 2000 to
Ladd Henderson, then in February 2006 to James Jans. The Oregon Water Resources license, HE 451, expired on December 31, 2010. An independent economic study showed that the project would be highly uneconomical due to the low rates of power purchase agreements, and if restarted with all the new requirements for fish screening, fish ladder, and bypass flows it would lose several hundred thousand dollars a year. Based on the economics, including the need to replace the fish screen and upgrade the ladder, Mr. Jans decided he would rather decommission the project. The decommissioning process was complicated by a dispute over the land ownership and the ability of the license to move ahead and work with interested parties to decommission the site. ODFW Hydropower staff were very involved in working with the owner and other stakeholders on this project to see it through to decommissioning and site restoration. The physical dam removal and stream restoration began on July 11, 2016 and was competed on September 15, 2016. The upper end of the penstock was plugged with concrete and buried. In addition, the penstock was crushed at several locations to prevent water or wildlife from entering the penstock, FERC acknowledged the surrender of the project effective on April 25, 2017.

14109 Oregon Winds Pumped Storage – Oregon Winds Hydro, LLC and Gridflex Energy, LLC

Preliminary Permit withdrawn June 2011

Ferry Canyon Creek/John Day River – An application for a preliminary permit was filed in March 2011 for a proposed pumped storage project near the John Day River in Gilliam County. Ferry Canyon Creek is used by ESA listed steelhead and is designated critical habitat.

14060 Owyhee Pumped Storage Project – Gridflex Energy, LLC

Preliminary Permit expired September 2014

A proposed open loop pumped storage project that would consist of a new reservoir on Owyhee Ridge and utilize the existing Owyhee Reservoir as the lower reservoir. FERC issued a Preliminary Permit in September 2011 for 36 months. Potential fish and wildlife issues include permanent loss of terrestrial habitat under the new reservoir, interference with wildlife migration along the penstock route, and entrainment of fish from Owyhee Reservoir. In February 2014, Gridflex files last progress report, and in June 2015 FERC issues a letter vacating non-essential project power sites withdrawals which include this project.

2659 Powerdale – PacifiCorp

WRD – PC 21, Certificate 46965

FERC license surrendered 2013

Hood River/Hood - Project diverted flows from Hood River at RM 4, down power canal to powerhouse, just above confluence of Hood and Columbia Rivers. First license issued March 1, 1980; dam built in early 1900’s. License expired March 1, 2000. ODFW comments identified minimum flows, upstream fish passage, and fish screening as major issues. FERC confirmed its jurisdiction of the project in September 1996.

PacifiCorp agreed to decommission and remove the project in accordance with the 2003 Powerdale Hydroelectric Project Settlement Agreement. On June 16, 2003, PacifiCorp filed an application with the Commission to surrender its license and FERC issued a Surrender Order in
2005. The project had not been producing electricity since November 2006, when a flood on the Hood River caused severe project damage. The powerhouse had not been operable since then and the main electrical transformers were removed from the switchyard adjacent to the powerhouse.

Decommissioning work began in April 2010 and was completed in October 2010. Steps involved in decommissioning the Powerdale Hydroelectric Project included removing the dam, the adjacent ODFW fish facility, the intake structure, the power canal, the steel flume, the sand settling basin, the transition structure and the concrete saddle supports for the previously removed wood stave flow line segments. The steel flow line segments and berm remain in place. While the original powerhouse remains in place, certain nearby structures were removed, as well as some equipment inside the powerhouse. On June 16, 2003, PacifiCorp, licensee for the Powerdale Hydroelectric Project (FERC P-2659), filed an application with the Commission to surrender its license. The Commission granted PacifiCorp’s surrender application in an order issued November 22, 2005 (the 2005 Order). Paragraph (A) of the order states that “upon the completion of environmental protection, mitigation, and removal measures, and upon securing project works, the surrender shall become effective.” On August 30, 2011, staff from the Commission’s Portland Regional Office inspected the project to verify that PacifiCorp had dismantled and abandoned the project’s facilities in accordance with the 2005 Order. By letter, dated April 26, 2013, the Commission’s Portland Regional Engineer confirmed the completion and removal of project structures.

Accordingly, PacifiCorp’s surrender of its license for the Powerdale Project, as specified in the 2005 Order, was deemed effective the May 22, 2013. The status for conversion of the hydroelectric water right to an instream water right pursuant to ORS 543A.305 is on hold until OWRD, which has convened a Rules Advisory Committee, can develop rules for implementation.

![Powerdale hydropower project, in the Hood River basin, prior to its decommissioning and removal.](image)
10998  Prineville Power – Ochoco Irrigation District (OID)  
*Preliminary Permit Surrendered November 1993*

**Crooked River/Deschutes** – Application for preliminary permit filed in August 1990 for proposed hydropower retrofit on BOR’s Bowman dam.

14453  Prineville Pumped Storage Project – Gridflex Energy as Prineville Energy Storage, LLC  
*Preliminary Permit issued in July 2013, a successive Preliminary Permit denied*

**Crooked River/Deschutes** - Prineville Energy Storage, LLC (PES) was evaluating a proposed open-loop pumped storage project associated with Prineville Reservoir, away from Bowman Dam. PES filed an application for a successive Preliminary Permit for the proposed pumped storage project on July 1, 2016.

Ochoco Irrigation District (OID) filed an application for a preliminary permit for a proposed hydropower retrofit on Bowman on July 1, 2016.

FERC issued a notice of Competing Preliminary Permit Applications Accepted for Filing and Soliciting Comments, Motions to Intervene, and Competing Applications in September 2016. On December 22, 2016, FERC issues an Order Issuing Preliminary Permit, Denying Application, and Granting Priority to File License Application, which granted OID a Preliminary Permit for the Bowman Dam project and denied a Preliminary Permit for PES pumped storage project. FERC decide it was not able to issue both Preliminary Permits because they competed for the for the same water source, Prineville Reservoir. The reasons for issuing the Preliminary Permit to OID were; 1) OID is a municipality (preference); 2) and PES did not exercise due diligence in carrying out its first Preliminary Permit.

10897  Russell Canyon Pumped Storage – Russell Canyon Corporation  
*Preliminary Permit terminated November 1992*

**Lost River/Klamath** – An application for a preliminary permit was filed in July 1990 for a proposed closed-loop pumped storage project in Russell Canyon in Klamath County. Two alternative schemes were considered on a site near Malin and Lorella. Russell Canyon Corp submitted a petition to FERC to surrender its preliminary permit in October 1992.

10970  Smith Hydro Pumped Storage - Russell Canyon Corporation  
*Preliminary Permit Canceled August 1991*

**Lost River/Klamath** – An application for a preliminary permit was filed in July 1990 for a proposed pumped storage project on the Lost River near Lorella and Malin.

11136  Stukel Mountain Pumped Storage – Russell Canyon Associates  
*Preliminary Permit Canceled January 1993*

**D- Canal/Klamath** – An application for a preliminary permit was filed in May 1991, a preliminary permit was issued in November 1991. A proposed closed-loop pumped storage project to be located on the BOR’s D-canal near the town of Merrill. FERC issued a letter advising the

11138 Stukel Mountain Pumped Storage – Stukel Mountain Hydroelectric Associates  
*Application for Preliminary Permit Denied November 1991*

**Klamath Lake/Klamath** – An application for a preliminary permit was filed in May 1991. The filing was a competing application for the same site as Russel Canyon (FERC 11136). A proposed closed-loop pumped storage project to be located on the BOR’s D-canal near the town of Merrill. FERC issued the preliminary permit to Russel Canyon Associates and denied the application by Stukel Mountain.

10518 Stukel Mountain Pumped Storage – Stukel Mountain Hydro Co.  
*Preliminary Permit Expired May 1991*

**Klamath Lake/Klamath** – An application for a preliminary permit was filed in November 1987, a preliminary permit was issued in May 1988. Stukel Mountain Hydro Co. files sixth semiannual progress report in May 1991. No FERC activity for this docket since July 1991. No notice of expiration or cancellation of preliminary permit; however, it should have expired in May 1991.

13050 Summer Lake Pumped Storage – NT Hydro  
*Preliminary Permit Surrendered November 2009*

**Summer Lake** – An application for a preliminary permit was filed in October 2007, a preliminary permit was issued in May 2008. A proposed pumped storage project on Summer Lake and Winter Ridge. Substantial negative public comments received.

10991 Tule Valley Pumped Storage – Russell Canyon Corporation  
*Preliminary Permit Surrendered October 1992*

**Highline Canal/Klamath** – An application for a preliminary permit was filed in August 1990, a preliminary permit was issued in March 1992. A proposed closed-loop pumped storage project to be located on the Highline Canal near Malin. Competing application with FERC applications 10982, 10983, and 10971. Russell Canyon Corporation petitions FERC to surrender its preliminary permit in August 1992. FERC issues notice of the surrender in October.

13570 Warmsprings Dam Hydroelectric Project - Warmsprings Irrigation Dist.  
*FERC license application withdrawn – April 2015*

**Malheur River/Snake** – Warmsprings Irrigation District (WID) proposes to construct and operate a 2.7 MW hydropower facility at the existing Warmsprings Dam in Malheur County, Oregon. Warmsprings Dam is a 106 foot concrete arch structure constructed in 1919 and modified in 1930 and 1939. The water stored behind Warmsprings Dam forms Warmsprings Reservoir, and is released by Warmsprings Irrigation District. Project facilities will include a steel liner and transition on one of the two existing outlet structures, a 150-foot long penstock, powerhouse, tailrace, and transmission line and substation. Hydro project operation will utilize irrigation releases during the irrigation season (15-April to 15-October). WID submitted a Preliminary

WID filed a Final License Application in April 2013. WID has filed a Fish Screening Exemption Request and a Fish Passage Waiver Application with ODFW. Both were approved by the Oregon Fish and Wildlife Commission at its February 2014 meeting.

The WID withdrew its application for license with FERC on April 6, 2015 because the project became economically infeasible due to the high cost of transmission line upgrades. Previous FERC number for this Project was P-12562.

**13833  White River Falls – Northern Wasco County People’s Utility District**  
*Preliminary permit surrendered May 2011*

**White River/Deschutes** - An application for a preliminary permit was filed in August 2010, preliminary permit issued in January 2011. A proposed run-of-the-river project that would be located in association with a natural water fall on White River near Maupin. NWCPUD submits a petition to FERC in May 2011 to surrender its preliminary permit due to uncertain project costs and long-term power prices that were predicted to remain low.

**11491  White River – White River Falls Hydro Inc**  
*Preliminary Permit Expired March 1998*

**White River/Deschutes** – An application for a preliminary permit was filed in July 1994, preliminary permit was issued March 1995. Project would reactivate old power site at White River Falls, just upstream from the Deschutes River.

**12965  Wickiup Hydroelectric Project - Wickiup Hydro Group LLC**  
*WRD – No application filed with state*  
*FERC - license not issued, License Application Dismissed January 2018*

**Deschutes River** - The location of the proposed project would have been the Wickiup Dam on the Deschutes River, near La Pine, in Deschutes County. ODFW provided comments on the Draft License Application on December 6, 2010. On September 6, 2011 FERC issued a Notice Application Accepted for Filing, Soliciting Motions to Intervene and Protests, Ready for Environmental Analysis, And Soliciting Comments, Recommendations, Preliminary Terms and Conditions for, and Preliminary Fishway Prescriptions. ODFW filed Notice of Intervention and Response to FERC’s Section 10(j) Preliminary Determination of Inconsistency Letter, dated April 25, 2012. ODFW comments to FERC’s April 24, 2012 Draft Environmental Impact Statement were submitted on August 27, 2012. ODFW identified fish screens and upstream fish passage as the major concerns. Wickiup Hydro Group, LLC (Wickiup Hydro) applied to the Oregon Department of Environmental Quality (Oregon DEQ) for certification for the Project, which Oregon DEQ received on April 25, 2011. Each year since then, Wickiup Hydro has provided documentation that it has withdrawn and refiled its application, with the most recent filing
having occurred on February 9, 2017. However, on December 20, 2017, Oregon DEQ filed a letter indicating that Wickiup Hydro had withdrawn its certification application and would not refile a revised application until it had addressed deficiencies in the application that were identified by Oregon DEQ. FERC gave Wickiup Hydro 15-days to file documentation of the 401. No response was submitted by Wickiup Hydro and FERC issued a Notice of Dismissal of the License on January 22, 2018.

11447 Wickiup Dam Hydroelectric Project – North Unit Irrigation District (NUID)

*Preliminary Permit Canceled November 1995*

**Deschutes River/Deschutes** – An application for a preliminary permit was filed in November 1993, preliminary permit issued by FERC in March 1994. Project to be located at Wickiup Dam on the Deschutes River. ODFW identified fish screens, upstream fish passage and minimum flows as issues. March 1994 FERC issued preliminary permit. In October 1995 NUID requested that its preliminary permit be terminated.

3560 Wickiup Dam – NUID

*License application surrendered in May 1988*

**Deschutes River/Deschutes** – An application to license a major project at an existing dam was filed in March 1983. The license application was surrendered in May 1988.

10978 Wickiup Power Project – NUID

*FERC - Preliminary Permit Expired November 1993*

**Deschutes River/Deschutes** – An application for a preliminary permit was submitted in July, 1990, a preliminary permit was issued by FERC in November 1990. Replaced proposed project FERC P-3560.
High Desert Watersheds
Active State Licensed Projects (Non-FERC)

PC 129  Bend Project – PacifiCorp
Contact: Todd Olson, Director, Compliance PacifiCorp (503)813-6657
WRD - Certificate 29581

Deschutes River/Deschutes – Formerly FERC project P-2643. Constructed in 1913 on the Deschutes River within City of Bend; dam creates Mirror Pond. PacifiCorp holds a 1905 power claim for 1,325 cfs. The project has a capacity of 1.1 megawatts. The FERC license was due to expire in December 1993. PacifiCorp filed its final relicensure application in December 1991. ODFW submitted recommended terms and conditions to FERC in February 1993. FERC issued its Draft EA on August 31, 1993. ODFW submitted comments January 1994. As requested by FERC, ODFW provided detailed backup on computations and analyses of fish numbers, spill and project related mortalities in May 1994. FERC issued its Final EA adopting ODFW fish numbers and USFWS prescriptions for screens and ladders in July 1995. In December 1995, FERC issued an order finding that a license is not required, concluding that the Deschutes River is not navigable in the project vicinity. FERC issued an order denying rehearing and approving withdrawal of license application on March 4, 1996. This order relinquished FERC’s jurisdiction over the project and the project was then, and is still, under the jurisdiction of the State of Oregon. Fish passage is not provided at the dam and the penstock does not have a fish screen. Since 2012, there have been ongoing discussions by the city of Bend with a number of stakeholders, as to how to proceed with the management of Mirror Pond and the PacifiCorp Dam that creates it. The dam is in need of repairs and upgrades and the pond is filled with silt.

HE 577  Cottonwood Creek – Benjamin Stott
WRD - Certificate 83639 – Expires December 31, 2027

Cottonwood Creek/Klamath - Small project on the West Fork of the East Fork Cottonwood Creek in the Klamath Basin, which diverts 0.66 cfs via a 2,800 foot, six inch diameter PVC penstock. The project proposes to generate 8.5 theoretical horsepower (thp) for residential use. Based on ODFW’s determination that steelhead and rainbow trout are present in the project area, Water Right Conditions 12 and 13 require installation and maintenance of a fish screen and upstream passage structure. ODFW needs to confirm whether the fish facilities have been constructed.

HE 540  Cottonwood Creek – Lisa Buttrey/David Cothran
WRD - Certificate 93850 – Expires December 31, 2043

Cottonwood Creek/Klamath – Small project on the East Fork of Cottonwood Creek in the Klamath Basin, which diverts 0.09 CFS to develop 1.65 thp, utilizing a gross head of 162 feet, for
In 2015, owners applied for reauthorization. At that time there was uncertainty about fish presence at the project location. In addition, the project sustained damage over the winter of 2015 and repairs needed to be made to make the project operational. A site visit was conducted by ODFW district staff and a memo, dated October 12, 2015, was sent to the project owner. This memo granted an in-water work variance, with specific conditions, so necessary repairs could be made. The memo also concluded that native migratory fish are not present in the project area, so fish passage was not necessary. The license expired on December 31, 2017, and OWRD reauthorized the project on June 29, 2018 for 25 years.

**PC 889 C-Drop – Klamath Irrigation District**

*WRD- Permit S 54765 issued June 2012*

**C Canal/Klamath** – The C-Drop hydroelectric project is located at the junction of the C canal, off the A canal using waters from Upper Klamath Lake. The A canal is the main diversion for a portion of the BOR Klamath Project. The project which began generating in May 2012, can utilize up to 700 cfs and generate up to 1.1 MW. The project is not under FERC jurisdiction because it is located at a BOR site that was congressionally authorized for power generation. BOR issued a LOPP for development of the project. Operation of the project is conditioned on the continued operational proficiency of the fish screen at the head of the A-Canal. If the fish screen is not operating proficiently based on ODFW criteria, the C-Drop hydroelectric facilities shall immediately cease operation.

**PC 546 Deschutes Valley Water District - Edson Pugh, General Manager**

*WRD - Certificate 10851*

**Crooked River/Deschutes** – Certificate 10851, Permit S 5436 issued on September 10, 1934. It permits 48.2 cfs from Crooked River for supplying a hydraulic turbine connected to pumping equipment and generator. Also operating hydraulic pumping engines.

**PC 863 Deschutes Valley Water District - Edson Pugh, General Manager**

*WRD - Certificate 46049*

**Crooked River/Deschutes** – Certificate 46049, Permit 32647 issued January of 1967 for 60 cfs from the Crooked River for power for pumping water and 1.11cfs for domestic use from the Crooked River and Opal Springs.

**PC 870 Deschutes Valley Water District**

*WRD - Certificate 65840*

**Crooked River/Deschutes** – Certificate 65840, Permit 43521, with a priority date of October 20, 1977. Permit for an additional 140 cfs in conjunction with Permit 36515 (PC 863) to power turbines for domestic water from Opal Springs which would add 1,400 gpm to pumping capability.
HE 572 Justenen Ranches - Jonnie Justenen
WRD - Certificate 81745 – Expires December 31, 2025

Davison Spring/Unnamed Spring/Hood – OWRD issued the certificate on November 28, 2005 to divert up to 0.13 cfs to develop 1.9 thp. The project, located in the White River area, diverts water through a pipeline consisting of two, four-inch diameter pipes, one at Davison Spring and the other at an unnamed spring. The pipes merge into a single six inch pipe that connects to a hydro generator. The overall length of the piping is 300 feet. The project uses a multi-nozzle Pelton wheel and 130 feet of gross head to develop 1.9 theoretical horsepower (thp) for on-site domestic use. In a letter to OWRD dated August 15, 2005, ODFW concluded that fish were not present in the project area, however, ODFW recommended that the licensee install a screen on the intake to prevent entrainment of amphibians. This recommendation was not incorporated into the license as a condition.

PC 814 Kaskela Farms, Inc. - Kaskela Farms
WRD - Certificate 13647

Deschutes River/Deschutes – 1892 irrigation right and power claim. Power claim is for 18 cfs. Property is located on lower Deschutes River, south of Maupin. Irrigation right is limited to diversion period from April 1 to November 1 of each year.

HE 314 Link Creek – Blue Lake Prop, LLC - Dan Wieden
WRD - Certificate 79916 – Expires December 31, 2021

Link Creek/Suttle Lake/Deschutes - OWRD Certificate 79916 issued on February 27, 2003; expires on December 31, 2021 (24.8 cfs). Small hydro project located on Link Creek between Suttle Lake and Blue Lake. The facility was refurbished in 2005, including rebuilding a fishway to accommodate upstream and downstream passage. It is equipped with a fish screen that meets ODFW criteria. This ladder is required to be run year-round to provide for passage. The facility has not (since at least 2005) and is currently not producing power as a result of the cost associated with rebuilding the turbine.

HE 551 Middle Fork Irrigation – Clear Branch Dam - Craig Dehart
WRD - Certificate N/A
WRD - license expires December 31, 2022

Clear Branch Creek/Hood – OWRD issued the project license on November 7, 2002 for up to 0.10 cfs to develop 1.13 thp. The project is located at the base of Clear Branch Dam, and is used to generate electricity at the site throughout the year for two ultrasonic flow meters, a penstock and Clear Branch downstream flow feed. The project is located on USFS land. The applicant has an easement from the USFS. No fish screen required as there are no fish currently in the creek. Article 3 of the license requires that the water right holder may be required to install and maintain screening should fish presence at the site become an issue.
HE 527  Rimrock Creek – Bill Sturman
WRD - Certificate 89772 - Expires 2035

Rimrock Creek/Hood – Extremely small domestic hydroelectric project, in conjunction with HE 528 and HE 529. The project can divert up to 0.12 cfs and generate 2 thp. A minimum flow of 0.1 cfs is required in the bypass reach. A fish screen was installed in September 2014 to keep cutthroat trout out of the small intake. OWRD reauthorized the project on January 28, 2015 for 20 years.

HE 528  Rimrock Creek - Doug Sharkey
WRD- Certificate 89773 - Expires 2035

Rimrock Creek/Hood – Extremely small domestic hydro project, in conjunction with HE 529 and HE 527. The project can divert up to 0.12 cfs and generate 2 thp. A minimum flow of 0.1 cfs is required in the bypass reach. A fish screen was installed in September 2014 to keep cutthroat trout out of the small intake. OWRD reauthorized the project on February 2, 2015 for 20 years.

HE 529  Rimrock Creek - Bob Danko
WRD - Certificate 89774 - Expires 2035

Rimrock Creek/Hood – Extremely small domestic hydro project, in conjunction with HE 527 and HE 528. The project can divert up to 0.12 cfs and generate 2.5 thp. A minimum flow of 0.1 cfs is required in the bypass reach. A fish screen was installed in September 2014 to keep cutthroat trout out of the small intake. OWRD reauthorized the project on January 28, 2015 for 20 years.

HE 583  Short, Steven and Mary -
WRD - Certificate 84252 – Expires December 31, 2028

Unnamed spring/East Fork Hood River/Hood – OWRD issued the certificate on June 17, 2008 to divert up to 0.09 cfs from an unnamed spring to develop 2 thp. No fisheries concerns; however, the certificate holder is required to install and maintain a watering trough at the spring cistern for wildlife use.
Northeast Watersheds
Active FERC/WRD Project/Applications

Hydropower Coordinator:
Elizabeth Osier Moats
Oregon Department of Fish and Wildlife
107 20th Street
La Grande, OR 97859

Voice: 541-962-1832 Fax: 541-963-6670 email: Elizabeth.a.osiermoats@state.or.us

1975  Bliss – Idaho Power Company (IPC)
Contact: Lewis Wardle (208) 388-2964
Located in Idaho, no OWRD jurisdiction
FERC license - expires 2033

Snake River (Idaho)/Columbia – Located at river mile 560, about six miles west of Bliss, in Gooding, Twin Falls, and Elmore counties, Idaho. Project built in 1941 and consists of a 364 foot long and 38 foot high concrete gravity dam, with a five mile, 255 acre reservoir. The project has a 75 MW capacity, which operates on a 24-hour peaking cycle. Original FERC license expired in December 1997. License application filed on December 20, 1995 (jointly with Lower Salmon Falls [FERC P-2061] and Upper Salmon Falls [FERC P-2777]). ODFW filed Motion to Intervene in August 1996. ODFW’s interest was to seek improved transport through the project of stored water from upstream federal reservoirs to aid downstream anadromous fish migration through the Snake and Columbia Rivers. In October of 1997, ODFW submitted letter to FERC to (1) support NMFS request to FERC to initiate Section 7 consultation on Hells Canyon Project (FERC P-1971); (2) request that consultation include nine IPC projects; and (3) request that FERC’s proposed cumulative analysis include the entire Snake River basin upstream from Lower Granite Reservoir. NMFS sent letter to FERC in November 1998 concerning proposed cumulative analysis of IPC’s Snake River Basin projects, particularly FERC’s decision to defer anadromous fish issues. Final EIS issued in July 2002. A new 30-year license was issued in December 2003. In May of 2010, IPC requested license amendment from run-of-river operation to load following. FERC issued draft EIS in June 2010. In November 2012, USFWS issued Biological Opinion on impact of proposed amendment on Bliss Rapids and Snake River Physa snails. FERC issued final EIS in April 2013 and issues order amending license to change operations.

2055  C.J. Strike – Idaho Power Company (IPC)
Contact: Lewis Wardle (208) 388-2964
Located in Idaho, no OWRD jurisdiction
FERC license - expires 2034

Snake River (Idaho)/Columbia – Located at river mile 494, about 20 miles southwest of Mountain Home in southwestern Idaho. Project construction began in 1950 and project began
operating in 1952. Project consists of a 3,220 foot long and 115 foot high earth-fill dam, a 340 foot long spillway, powerhouse on the south bank containing three generating units, and a 7,500 acre reservoir, which extends 32 miles upstream on the Snake River and twelve miles on the Bruneau River. The project has a capacity of 82.8 MW and is normally block loaded to follow peak demands. Original FERC license expired on November 30, 2000. IPC issued draft license application in March 1998. In June 1998, ODFW submitted comments identifying effect of project on downstream Snake River flows and water quality as issues of concern. IPC filed final license application in November of 1998. State of Idaho, NMFS, USFWS, EPA, BIA, Shoshone-Bannock Tribes, and environmental groups filed motions to intervene in June 1999. ODFW filed Recommended Terms and Conditions in March 2001. Issues of concern were flow augmentation and turbine maintenance during juvenile salmonid migration to avoid constraining flow. Final EIS issued in October of 2003. FERC issued new 30-year license in August of 2004.

1971 Hells Canyon Complex – Idaho Power Company (IPC)

Contact: Brett Dumas (208) 388-2330
WRD – HE 161, HE 188, HE 189
FERC license expired – July 31, 2005

Snake River/Snake - Project consists of Hells Canyon, Oxbow, and Brownlee dams on the Snake River below Ontario, OR. Hells Canyon Dam, 328’ tall with an installed capacity of 391 MW, forms the 25 mile long Hells Canyon Reservoir and is the upstream terminus of anadromous fish migration in the Snake River. Oxbow Dam is a 175 foot tall rock fill dam, which forms 13 mile long Oxbow Reservoir, and has an installed capacity of 190 MW. Brownlee Dam is a 420 foot earth fill dam that forms 52 mile long Brownlee Reservoir with an active storage capacity of one million acre feet. The installed capacity is 585.4 MW. The HCC Project was licensed in 1955 and construction completed in the late 1960’s. The original license expired July 31, 2005. The Project is currently operating under annual licenses issued by FERC. In November 1993, relicensing scoping initiated by the resource agencies and IPC. NMFS requested FERC to initiate consultation pursuant to Sec. 7 of ESA in May 1997. IPC issued a DLA for public review on September 18, 2002. ODFW and other Oregon agencies submitted comments on the draft application to IPC on January 10, 2003. HART provided IPC a Provisional Unified State Position on April 25, 2003. IPC submitted its Final License Application on July 21, 2003. ODFW, IPC, and other interested parties entered into settlement negotiations in October 2004. Settlement negotiations ended in 2005, without participants agreeing to any measures, in principle, during negotiations. ODFW filed recommended terms and conditions for the Project 1/2006. FERC issued its final EIS on August 31, 2007. Remaining in the licensing process is water quality certification, which will likely take at least two more years, and issuance of the Final Licensing Order. IPC has filed and withdrawn its water quality application several times, most recently in June of 2018. Major licensing considerations included fish passage, ramping rates, stranding and entrapment, flow augmentation for smolt migration, and water quality, particularly temperature, dissolved oxygen, and total dissolved gas. In April 2019, the state of Oregon, by and through the Office of the Governor; ODFW; ODEQ; the state of Idaho, through the office of the Governor; IDFG; IDEQ; and IPC entered into a Stipulation and Implementation Agreement related to water quality and placement of fish in Oregon waters upstream of Hells Canyon Dam. Preliminary predictions suggest that a FERC license could be issued in 2022.
2061  Lower Salmon Falls – Idaho Power Company  
**Contact:** Brett Dumas (208) 388-2330  
*Located in Idaho, no OWRD jurisdiction*  
**FERC license - expires 2033**

Snake River (Idaho)/Columbia - Located on the mainstem Snake River at river mile 573, about two miles north of Hagerman, in Gooding and Twin Falls Counties, Idaho. Project built in 1910 and consists of a 700-foot long, 38-foot high concrete gravity dam, a 6.6 mile-long 750-acre reservoir, and a powerhouse with a total capacity of 60 MW. Project operates on a 24-hour peaking cycle. Original FERC license expired December 1997. License application filed on December 20, 1995 (jointly with Upper Salmon Falls [FERC P-2777] and Bliss [FERC P-1975]). SEE BLISS (FERC P-1975) ENTRY FOR COMBINED PROJECT RELICENSING UPDATE.

12686  Mason Dam – Baker County  
**Contact:** Jason Yencopal (541) 523-8340  
*WRD – HE 605, Certificate not yet issued*  
**FERC license - expires 2066**

Powder River – Baker County is proposing to construct and operate at 3.4 MW hydropower facility at the existing U.S. Bureau of Reclamation’s Mason Dam in Baker County, Oregon. Mason Dam is a 173’ earth-fill dam constructed in 1968. The water stored behind Mason Dam is Philips Reservoir and is released by Baker Valley Irrigation District. Project facilities will include an intake bifurcation, a powerhouse, tailrace, and transmission line and substation. Baker County filed its PLP and draft BA in October 2009. Baker County proposes operating during the irrigation season, generally April 15-October 1, using flows determined by the BOR and the Baker Valley Irrigation District. In October 2010, FERC staff recommends Baker County conduct literature-based entrainment study in lieu of screening. During 2011 and 2012, Baker County, in consultation with ODFW and other stakeholders, drafts entrainment report. In April 2013, Baker County files Application for License. Throughout 2013, ODFW working with Baker County and other stakeholders to develop settlement agreement for fish passage and screening mitigation.
and other issues (transmission line, staging area, water quality/DO). Baker County obtained a fish passage waiver and an exemption from fish screening from the Oregon Fish and Wildlife Commission. FERC was generally dismissive of the mitigation measures in lieu of fish passage and screening in ODFW’s 10(j) recommendations, but was required to include these measures in the license via the USDA-FS 4(e) prescriptions and ODEQ 401 water quality certification conditions. FERC issued a 50 year license on September 6, 2016. Baker County requested an extension to the deadline to commence construction (its second) on August 28, 2018. FERC agreed to extend the deadline to commence construction to September 6, 2020. Baker County acknowledges that it has until September 6, 2021, to complete construction of the project.

10204 McNary Auxiliary Water Supply System – N. Wasco PUD
Contact: Roger Kline (541) 296-2226
Located in Washington, no OWRD jurisdiction
FERC license - expires 2041

Columbia River – Hydro project located on auxiliary water supply system for the Washington shore fishway on the Corps McNary Dam. N. Wasco PUD (Wasco) filed a license application in April 1990, FERC issued a 50-year license for a Major Project-Existing Dam in September 1991. ODFW was a signatory to a fisheries settlement agreement that calls for Wasco to provide $110,000 annually for measures that directly benefit anadromous fish stocks originating above McNary dam. The annual payment and escalation could be modified every 10-years if mutually agreeable. If the parties do not agree, Wasco may continue paying at the existing rate or cease operation during nighttime hours between May 1 and August 31. The mitigation committee meets four times yearly. ODFW’s Columbia River Program is engaged in committee meetings.

5390 Mill Creek – City of Cove
Contact: Donna Lewis (541) 568-4566
WRD – Certificate 82203
FERC Exemption – no expiration

Bridge & Mill Creek/Grande Ronde – Small project on Mill Creek located approximately two miles SE of the City of Cove. Project is a reconstruction of a pre-existing small hydroelectric plant, and operates as run of the river. Water supplied from Bridge and Mill Creeks by two small diversion dams. License Exemption issued by FERC in February 1984. Project operation began in December 1984. OWRD certificate requires not less than 1 cfs to be maintained between points of diversion and discharge. No other adverse impacts identified by ODFW.

13380 Pendleton Energy Recovery Transfer Project – City of Pendleton
14407 Contact: Karen King (541) 966-0249
14440 WRD – T-8640, T8721, T-8761, legislative IRS 538.450
FERC conduit exemption – no expiration

Ground Water – City of Pendleton’s proposed Energy Recovery Technology (ERT) Project will use the City’s existing infrastructure and Aquifer Storage and Recovery (ASR). The ERT project will utilize energy generated during the storage part of ASR, when water flows down the well shaft to the underground aquifer, to turn a micro-turbine. In February 2009 the City filed its conduit exemption application with FERC. In March 2009 FERC determined that the application
was patently deficient and listed specific deficiencies that needed to be corrected. In January 2012 the City submits initial consultation package. ODFW waives second and third stage consultation because project will be installed within existing infrastructure of the ASR, the City’s intake is already screened to ODFW criteria and the project is unlikely to affect fish and wildlife. In May 2012 the City files Application for Exemption for ERT Phase I & II. ODFW files motion to intervene on Phase II and terms and conditions (September 2012) for mandatory reporting of any impacts to fish and wildlife. FERC grants Exemption from Licensing for Phase I (P-14407) on November 15, 2012 and Phase II (P-14440) on November 16, 2012.

12726 Rock Creek – Eastern Oregon Light and Power/Warm Springs Hydro LLC
Contact: Nick Josten – 208-589-2469
WRD – PC 47, Certificate 4120, IL 108
FERC – Final License Application pending

Rock Creek/Powder – Original project (P-1986) constructed in 1903 and decommissioned in 2003. Eastern Oregon Light and Power (EOLP) submitted a preliminary permit application to FERC in August 2006 to rehabilitate the project under FERC project number 12726. EOLP submitted a Pre-Application Document to FERC in April 2007, which initiated formal licensing for the project. EOLP then began consultation with state and federal agencies under the FERC Integrated Licensing Process (ILP). A final study report was submitted to FERC in May 2011. After a period of inactivity FERC requested that EOLP provide a status report on the ILP. In 2015, ODFW staff were contacted by Warmspring Hydro LLC regarding the existing information and outstanding issues on the Project. In January 2016, Warmsprings Hydro LLC filed a revised project proposal. Additional studies were conducted for bull trout, amphibians, water temperature, vegetation and cultural resources in 2016 and 2017 and final study reports were filed in December 2016 and April 2018. Following the filing of the DLA, ODFW and other agency stakeholders have resumed discussions with the applicant regarding minimum flow and mitigation for project impacts. In April 2019 Warm Springs Hydro LLC filed the FLA. FERC issued a letter of deficiency and request for additional information. The FLA is on hold pending the additional information. The agencies continue to work with the applicant to identify additional mitigation measures associated with bypassed reach flow and for the modelling of water temperature data.

The proposed project would consist of:
1. A new diversion and fish screen on Rock Creek below the confluence with Killamacue Creek
2. A new 2.75 mile, 24 - 36 inch diameter penstock, to be located in an abandoned powerline right-of-way for the first 0.5 miles and then in the original flume right-of-way for the final 2.25 miles to the powerhouse location
3. A new powerhouse, approximately 20-ft x 15-ft, located adjacent to Rock Creek just above the Wilcox Ditch diversion; the powerhouse would contain a single 2.4 MW Pelton turbine with a hydraulic capacity of 28 cfs
4. A 200 ft transmission line to deliver energy from the powerhouse to an Oregon Trail Electric Consumers Cooperative distribution line.

The 1902 power claim (PC) was not converted to and instream water right when P-1986 was decommissioned in 2003. The PC was leased instream in 2000, 2010, and 2015. Currently the instream lease ends in December 2020.
2778  Shoshone Falls – Idaho Power Company (IPC)
   Contact: Lewis Wardle (208) 388-2964
   WRD – Located in Idaho, no OWRD jurisdiction
   FERC - license expires 2044

   Snake River (Idaho)/Columbia – Located at river mile 615, about 4 miles east of Twin Falls, in Jerome and Twin Falls counties, Idaho. Project built between 1901 and 1909, and consists of a 780 foot long, average 16 foot high concrete diversion dam above the crest of Shoshone Falls; a 1.8 mile long, 86-acre reservoir; a 450 foot long tunnel and 120 ft. long penstock; a powerhouse located on the north bank with 3 units with a total capacity of 12.5 MW, and a 100 foot long tailrace. Project is operated as run-of-the-river. Maximum hydraulic capacity is 950 cfs. Original FERC license expired in May 1999. IPC filed license application in May 1997. State of Idaho, Nez Perce Tribe and CRITFC, filed motions to intervene in December 1997. ODFW did not file motion to intervene, but identified concerns about effect of project on delivery of stored water from upstream Bureau of Reclamation reservoirs to the lower Snake River for improved juvenile fish migration flows in accordance with NMFS Biological Opinion and other regional plans. Final EIS issued in July 2002. FERC issued new 30 year license in August 2004. In August 2006 IPC filed an application to amend license by upgrading power plant by 50 MW and extending the license term to 50 years, but not altering operation from run-of-river. In July 2010 FERC issued an order amending license to allow upgrades and 40 year license term, expiring 2044.

13832  SPS of Oregon
   Contact: Vern Spaur
   WRD – HE 553 and 593, Certificate 87134
   FERC conduit exemption- no expiration

   Wallowa/Columbia
   The SPS of Oregon Hydroelectric Project consists of an existing powerhouse containing one turbine generating unit having an installed capacity of 11 kW and appurtenant facilities. The exeptee estimates the project has an average annual generation of 75,718 kilowatt-hours that is metered back to PacifiCorp. The SPS of Oregon Hydroelectric Project is located in the applicant’s existing irrigation distribution pipeline. The irrigation pipeline begins at West Side Ditch, which originates at the Lostine River located approximately 5 miles southeast of the proposed project. From the West Side Ditch, the irrigation water travels about 800 yards through a 15-inch-diameter pipe and then travels an additional 600 feet through a 10-inch-diameter pipe to an existing building at the ranch headquarters. The water then exhausts back into an existing irrigation ditch to satisfy other water rights holders. On November 18, 2010 ODFW filed two terms and conditions pursuant to section 30(c) of the FPA that: (1) require the exeptee to take action to minimize harm to fish and wildlife resources under emergency situations and subsequently notify ODFW and (2) reserve ODFW’s authority to modify the conditions.
503 Swan Falls – Idaho Power Company
Contact: Lewis Wardle (208) 388-2964
WRD – Located in Idaho, no OWRD jurisdiction
FERC license - expires 2042

Snake River (Idaho)/Columbia – The Swan Falls Project has a nameplate capacity of 25 MW and is located 34 miles downstream from the C. J. Strike project. This was the first power plant built on the Snake River. Located near Kuna, Idaho, at river mile 457.7, the original plant was built in 1901 to supply electricity to nearby mines. Idaho Power acquired the plant in 1916, and built a new power plant in 1994, then decommissioned the old plant. Idaho Power is currently working through the process to renew the Swan Falls Project license, which expired June 2010. In June 2008 IPC filed an Application for a New License. IPC proposes continuing run-of-river operations with a minor change to the minimum flow regime and continuation of the existing ramping rate. FERC released the final EIS in August 2010 and issued a 30-year License in September 2012. ODFW is working with IPC and stakeholders to develop Swan Falls White Sturgeon Conservation Plan, as required by License Article 406.

10376 Twin Reservoirs – City of Walla Walla
Contact: Howard Laughery (509) 527-4463
WRD – HE 523, Certificate 86008, 86106
FERC exemption- no expiration

Mill Creek/Walla Walla – FERC issued an exemption in January 1988. The project operates on the City of Walla Walla’s domestic water line. Water is diverted from upper Mill Creek and is transported by pipe to Twin Reservoir, where some of the water is diverted for power production. Discharge from the powerhouse enters Twin Reservoir. Fish screens and a fishway in place. Project minimum flows are maintained and reported by operator. In March 1999 ODFW, USFWS and US Forest Service met with the City to discuss measures to reduce mortality and impingement of ESA listed bull trout caused by the existing screen and bypass system. A new fish screen was installed in July 2001, designed to ODFW, WDFW, and NMFS specifications and sized for eventual 48 cfs withdrawal per anticipated water rights. The city of Walla Walla applied to Oregon for an additional water right of 20 cfs from Mill Creek for municipal purposes: hydroelectric generation and aquifer storage and recovery. The WRD initially denied the city’s request for a water right because water was not available for use. Following discussions with fish and wildlife agencies and a settlement order developed by various government agencies and Water Watch, in exchange for the water right, Walla Walla committed to conditions to protect fish and fish habitat and mitigation resulting in a net benefit to the resource. WRD issued Certificate No. 86106 for 10 cfs to the city in February 2010.

2777 Upper Salmon Falls – Idaho Power Company (IPC)
Contact: Lewis Wardle (208) 388-2964
WRD – Located in Idaho, no OWRD jurisdiction
FERC license - expires 2033

 Snake River (Idaho)/Columbia - Located at river mile 580, about 3 miles south of Hagerman, in Gooding and Twin Falls counties, Idaho. Project built in 1910 and consists of a 1,620-foot long, 14 foot high concrete dam, with a 1 mile 50 acre reservoir, a 3,200 foot-long concrete-lined
canal, a 1,380 foot-long diversion structure, two powerhouses with a total capacity of 34.5 MW, and a 1.8 mile bypass reach. Project is operated as run-of-the-river. FERC license expired in December 1997. A license application was filed in December 1995 (jointly with Lower Salmon Falls FERC P-2061 and Bliss FERC P-1975). SEE BLISS (FERC P-1975) ENTRY FOR COMBINED PROJECT RELICENSING UPDATE. FERC released an order issuing a new 30-year license in August 2004.

308 Wallowa Falls – PacifiCorp  
Contact: Russ Howison (503) 813-6622  
WRD – PC 544, Certificate 26509  
FERC license - expires 2057

**East Fork Wallowa River/Wallowa** – This 1.1 MW run-of-river project came on line in 1921. Project located on East Fork Wallowa River, just above Wallowa Lake, and diverts 15 cfs from the East Fork Wallowa River and 1 cfs from Royal Purple Creek. Current license was issued in August 1986. ODFW prescribed annual forebay cleaning be restricted to April 1 through August 30 to protect kokanee spawning and egg incubation. FERC license expired in February 2016. PacifiCorp filed its Pre-Application Document in March 2011. From 2011 through 2013 ODFW worked with PacifiCorp, Oregon DEQ, Oregon PRD, and USFWS to identify project impacts, develop studies and suitable mitigation measures. PacifiCorp has conducted instream flow, fish use studies, terrestrial, vegetation and recreation studies. The primary fish species are; bull trout, kokanee, and rainbow trout. PacifiCorp filed a final license application in February 2014. FERC released an order issuing a 40-year subsequent license in January 2017. License conditions require increasing minimum flows from the current 0.5 cfs year-round to 4 cfs from November through April, and 5 cfs from May through October, restricting down-ramping during project start-up following a unit outage to 0.1 foot per hour from April 1 to October 31 and 0.17 foot per hour from November 1 to March 31, rerouting the tailrace to the East Fork Wallowa River, constructing and operating a tailrace barrier, consulting on the timing to flush sediment from impoundment, and collecting biological information and genetic samples from bull trout. Agency staff are currently consulting with PacifiCorp to implement license requirements.

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1 A subsequent license is issued for a project with an expiring minor or minor part license, not subject to Sections 14 and 15 of the FPA.
The list below includes projects that have had licenses terminated or surrendered, facilities removed, or have had preliminary permits cancelled, denied or surrendered within the last 10 years. Other projects included below are for locations where repeated efforts have been made over the last 30-years which suggests that these locations are likely to be evaluated for project development in the future, e.g. pumped storage or existing dams.

HE 345  Blomquist, Raymond
WRD - Certificate 76817 cancelled in October 2010

Boulder Creek/Eagle Creek/Powder - Granted hydroelectric license in September 1981, conferring the right to 0.35 cfs from Big Boulder Creek for the development of 1.9 thp. The license was to terminate in December 2001. In May 1999 Mr. Blomquist submitted an application for reauthorization of the hydroelectric project. The Final Order was issued by WRD February 2001. A small natural rock dam raises the water level to supply a 4 inch PVC pipe. Pipe removed from stream when not in use. Water is delivered to a Pelton wheel 48 inches in diameter with 24 drive cups 3 3/8 inches wide. The wheel is used to charge a 12 volt battery for lighting a small hunting cabin. At the request of Mr. Blomquist, WRD concluded in October 2010 that certificate 76817 should be canceled due to abandonment in accordance with ORS 540.621.

7269  Boyd Hydro – Jim Boyd
WRD – HE 363
FERC license terminated by implied surrender in 2011

Umatilla River/Umatilla – A 1.2 MW project which historically diverted flow from the Umatilla River at Hermiston. Project used power canal and powerhouse site abandoned by PacifiCorp. Original license was issued in July 1984, for use of up to 500 cfs. Water runs through a canal for about 5,700 feet to the penstocks and powerhouse, and then is returned to the Umatilla River. The Project had not been operated since 2002 when PacifiCorp terminated its power sales contract. In March 2009, Umatilla County acquired the project and property from Mr. Logan due to delinquent property taxes. FERC issued notice that it was initiating a license termination by implied surrender proceeding for the Project in April 2009. A bill was developed and introduced to the Oregon legislature in January 2010. HB3602 passed and was signed by the Governor. HB 3602 changed the state provision of a hydropower license terminating after five years on non-use of the project or water right for this Project only, because it had been acquired by Umatilla County through foreclosure and if it was sold, a new owner could resume operations under certain conditions, including bringing the facility up to current state screening and passage standards. Williams’ pursued an “option agreement” from Umatilla County for purchase of
project in May 2009. Through 2010, Williams’ investigated purchase and upgrade of project. Williams’ decided against purchase of the project in October 2010. FERC grants late intervention to Boyd Hydro LLC in April 2011. Boyd Hydro LLC submits an application to FERC for transfer of the license. In May 2011, FERC issues Notice of Application for Transfer from Janet Boyd to Boyd Hydro LLC. ODFW, CTUIR, WaterWatch of Oregon and NMFS file Motions to Intervene. In August 2011, FERC issues an order Terminating License by Implied Surrender and denying license transfer application. American Rivers and NMFS request rehearing, which FERC granted for further consideration in September 2011. FERC denied the rehearing in February 2012, determining that the license termination stands. In June 2012 the property is sold by Umatilla County to Go With the Flow Hydro (Marc Sigl).

Go With the Flow Hydroelectric Project – Go With the Flow Hydro, LLC

Preliminary permit cancelled in September 2016

Umatilla River/Columbia – Former Boyd Hydro Project (P-7269) purchased by Mark Sigl in June 2012. Preliminary Permit Application filed in July 2013. FERC accepts Preliminary Permit Application in September 2013. On May 5, 2014, Mr. Sigl filed an ICD for an exemption. On July 1, 2014, FERC issued a notice stating that the project does not qualify for an exemption because the powerhouse is located farther than 500 feet from the diversion and therefore, must use the FERC process for licensing.

The proposed Go with the Flow Hydroelectric Project will be located on the Umatilla River, approximately 8.7 river miles upstream of its confluence with the Columbia River. The project will utilize the existing abandoned hydroelectric facilities, which were previously licensed by FERC in 1984, under the name of Jim Boyd Hydroelectric Project. The previous FERC license was terminated on August 8, 2011. The existing facilities have been purchased by Go with the Flow LLC and will be renovated to return the plant to operating condition and meet new license requirements. Issues identified by ODFW include installation and maintenance of diversion structure, upstream and downstream passage, tailrace barrier, stream flow, and ensuring the project can restore, enhance, or improve anadromous fish populations (ORS 543.017). The fifth progress report was not submitted, and FERC issued an order cancelling the preliminary permit effective on September 9, 2016.

DI10-2 Grouse Creek Ranch

Irrigation Conduit/Imnaha - The proposed Grouse Creek Ranch Hydroelectric Project would have been located on an irrigation conduit that uses water from the Imnaha River. The installed capacity will be 5 MW or less. A Declaration of Intention was filed in October 2009. ODFW filed a Notice of Intervention in December 2009. FERC issued a letter in May of 2010 indicating a license was required and that the project may be eligible for an exemption from licensing. The U.S. Forest Service filed a letter with FERC in May 2010 stating that the proposed project would be located within the Imnaha Wild and Scenic River corridor and that the Wild and Scenic River Act prohibits development of new hydropower projects licensed by FERC on or directly affecting a designated river.
**13333** John Day Pool Pumped Storage Project – Klickitat PUD

*Located in Washington, no OWRD jurisdiction*

*FERC- Successive preliminary permit denied*

**Columbia River** – A preliminary permit was issued to Public Utility District No. 1 of Klickitat County on May 5, 2009. Klickitat PUD proposes constructing upper and lower earthen dams and associated 10,000 acre-feet storage reservoirs, an 8,000’ penstock that would connect to 10 (110 MW) turbines in a powerhouse, and 9.6 mile 240 kV transmission line. The project would be a closed loop system and would not be on any existing body of water. Water would be obtained from the Umatilla Pool (John Day Reservoir) of the Columbia River. In April 2012, Klickitat PUD files successive Preliminary Permit Application. FERC issued Preliminary Permit on November 16, 2012. ODFW filed motion to intervene. Preliminary permit applications were submitted by the Public Utility District No. 1 of Klickitat County, Washington and Clean Power Development, LLC on November 3, 2015, for Project Nos. 13333 and 14729. The lower reservoir was moved into a contaminated portion of the former smelter site which required cleanup. FERC determined that given the speculative nature of the cleanup timeline provided by Klickitat PUD and the uncertainty regarding the site’s future suitability for development, it determined it is not prudent to issue a preliminary permit for the site at this time and both applications were dismissed.

**14546** McKay Dam – Houtama Hydropower LLC

*FERC- Preliminary Permit terminated – March 9, 2018*

**McKay Creek/Umatilla River** – Houtama Hydropower proposes to construct and operate a 2.3 MW hydropower facility at the existing U.S. Bureau of Reclamation’s McKay Dam in Umatilla County, Oregon. McKay Dam is a 165 foot high reinforced concrete dam built in 1927. The project will utilize McKay Reservoir, which is 1,430 acres with a total storage capacity of 65,534 acre-feet. In August 2013, Houtama Hydropower filed Preliminary Permit Application. Bureau of Reclamation filed a Determination for Non-Federal Development in September 2013. In October 2013, Houtama Hydropower submitted a PPA for the McKay Dam Hydroelectric Project; in November, FERC accepted the PPA for filing and soliciting comments. ODFW and other agencies filed Motions to Intervene in January 2014. In February 2014 FERC granted priority to Houtama Hydropower granting priority to file license application. On September 8, 2016, Houtama Hydropower LLC held a joint agency meeting in preparation for submitting their Preliminary Application Document (PAD) for the McKay Dam Hydroelectric Project. ODFW filed additional study proposals and comments in November 2016. In May 2016, Houtama Hydropower submitted their Notice of Intent/PAD. In June, they requested using the Traditional Licensing Process (TLP). In July 2016, FERC granted Houtama Hydropower LLC’s request to use the TLP. In September 2016, a public meeting/joint agency meeting was held regarding the McKay Dam Hydroelectric Project. Pursuant to FERC requirements, minutes of the meeting were submitted and documented. In November 2016, Houtama Hydropower requested a two-year extension for their Preliminary Permit, which was granted by FERC on November 17, 2016. In February 2018 Houtama Hydropower requested to terminate its preliminary permit. The permit would have expired on January 31, 2019.
14697  **McNary Dam Advanced Hydropower Project – Advanced Hydropower Inc.**  
*FERC – Application for preliminary permit denied*

**Columbia River** – On August 3, 2015, Advanced Hydropower, Inc. filed an application for a preliminary permit with FERC to study the feasibility of the proposed McNary Dam Advanced Hydropower Project No. 14697. The project would be located at the U.S. Army Corps of Engineers’ McNary Lock and Dam facility on the Columbia River near Plymouth in Benton County, Washington, and Umatilla in Umatilla County, Oregon. The project would include a new powerhouse with an Alden turbine, operating with up to 6000 cfs with a capacity of 34 MW. The Corps opposed Advanced Hydropower’s project, claiming that FERC’s jurisdiction over non-federal hydropower at the site has been withdrawn, that the project would conflict with the purposes of McNary Lock and Dam and would interfere with the Corps ongoing turbine replacement program and its potential installation of a surface passage system to achieve juvenile fish survival targets, and that the project may significantly reduce the stability of the dam. BPA opposed the project, claiming that the FERC’s authority to issue a permit at the site is withdrawn pursuant to section 2406 of the Energy Policy Act of 1992. FERC concluded that because the Corps, which owns the McNary Lock and Dam facility and whose permission would be needed for the development of any project at that facility, has stated that it opposed the project, there is no purpose in issuing a preliminary permit. Therefore, Advanced Hydropower’s preliminary permit application was denied.

14777  **McNary Second Powerhouse – Loxbridge Partners, LLC**  
*FERC – Application for preliminary permit denied*

On April 25, 2016, Loxbridge Partners, LLC filed an application for a preliminary permit to study the feasibility of the proposed McNary Second Powerhouse Project No. 14777. The project would be located at the U.S. Army Corps of Engineers’ (Corps) McNary Lock and Dam facility on the Columbia River near the City of Umatilla in Umatilla County, Oregon. The proposed project would utilize McNary Dam and would consist of a powerhouse built in place of the existing McNary Dam south abutment and seven 100-MW Kaplan turbine-generators. FERC concluded that because the Corps, which owns the McNary Lock and Dam facility and whose permission would be needed for the development of any project at that facility, has stated that it opposes the project, there is no purpose in issuing a preliminary permit. Therefore, Loxbridge’s preliminary permit application was denied.

11602  **Sherman Hydroelectric Project - Bitterroot Management Corp.**  
*FERC – Preliminary permit expired*

**Columbia River** – A preliminary permit was issued to Bitterroot in January 1998. The proposed project would be constructed on the John Day Dam Juvenile Sampling and Monitoring Facility utilized the screened excess water return. Last correspondence from Bitterroot to FERC occurred in April 2000.
1986  Rock Creek – Eastern Oregon Light and Power  
12726  WRD – PC 47, Certificate 4120, IL 108  
FERC license- expired 1996  

Rock Creek/Powder – Original project (P-1986) constructed in 1903 and decommissioned in 2003. The project consisted of: (a) a five-foot-tall, 70-foot-long concrete diversion dam/intake structure on Rock Creek; (b) an 8,800-foot-long wooden flume; (c) a 15-foot-tall, 500-foot-long earthfill dam; (d) a 2,720-foot-long penstock; (e) a powerhouse containing two 400 kW generators; (f) a tailrace returning flows to Rock Creek; and appurtenant facilities.

On July 1, 1991, OTEC filed a notice of intent to file an application for a new license. The original license was issued effective June 30, 1946, and expired June 29, 1996. The licensee did not file an application for new license which was due by June 29, 1994. FERC subsequently solicited applications from potential applicants other than the existing licensee. In June 1995 a prospective applicant responded, but no further action occurred as of July 2000. FERC again solicited applicants; however, it rescinded the order in October 2000.

In September 2000 OTEC filed an application for surrender of license. In August 2011 OTEC files a proposal for decommissioning the project. In August 2003 FERC issued and order accepting surrender of the license.

EOLP submitted a preliminary permit application in August 2006 to rehabilitate the project under P-12726.

Historic Rock Creek power plant, Baker City, OR.

13834  Unity Dam Hydroelectric Project – Amnor Hydro West, Inc.  
WRD – None issued  
FERC – preliminary permit cancelled in December 2013  

Burnt River/Unity Dam – Preliminary permit application filed with FERC in July 2010. Unity Dam is owned by the Bureau of Reclamation and operated by the Burnt River Irrigation District. Amnor Hydro proposed a 4 MW run-of-river project consisting of a new powerhouse, preexisting conduits from the dam intake, and new 1,000 foot 14.7 kV transmission line. Following additional information provided by the applicant, FERC accepts the PPA in March 2011, and issues the preliminary permit in May 2011. FERC notified the permittee in November
2013, that its fourth progress report due on October 30, 2013, was overdue, and therefore, that the permit would likely be cancelled in no less than 30 days. The permittee did not file a response; therefore, the preliminary permit was cancelled on December 11, 2013.

7405 Upper Indian Creek – Gari Price
WRD – HE 333 expired December 2001
FERC exemption- no expiration; however, it was surrendered in 1993

Indian Creek – Grande Ronde - FERC issued an order granting exemption from licensing for the Upper Indian Creek Project in April 1984. In July 1992, the exemptee filed an application to surrender the exemption. The project was located on Upper Indian Creek in Union County, Oregon; and consisted of an intake/diversion with a 150-foot-long channel and a 48-inch-diameter, 400-foot-long corrugated pipe; a 20-inch-diameter, 5,000-foot-long steel penstock; a powerhouse containing a single generating unit with a rated capacity of 100 kW; a 24-kV, 8,000-foot-long transmission line; and related facilities. Fish screening and flow monitoring required.

The exemptee determined that the project was not economically feasible at the time and there was no purchaser for the power.

Notice of the application for surrender was published in April 1993. FERC ordered that the surrender of the exemption for the project was accepted, effective 30 days after the date the order was issued.

Mr. Price contacted FERC staff in early 2000 to inquire about obtaining another exemption for the project. FERC informed Mr. Price that the original exemption was surrendered and a new exemption would need to be obtained, which required submittal of a new application for a new proceeding. No additional correspondence appears on the FERC record under P-7405. ODFW records indicate that HE 333 expired in December 2001.

5573 Upper Little Sheep Creek – Consolidated Hydro, Inc.
WRD – HE 300
FERC exemption- no expiration; however, it was surrendered in 1997

Little Sheep Creek – Imnaha - An exemption was issued by FERC in April 1982. The project consisted of a new 3-mile power canal off the Wallowa Valley Improvement District’s (WVID) canal carrying WVID’s Big Sheep Cr. diversion. Branched underground penstock carries separate diversion from Little Sheep Cr. and Big Sheep Cr. flow from power canal to a powerhouse discharging water to be used for irrigation back into WVID’s canal. Water surplus to WVID’s needs is returned to Little Sheep Cr. The project was subject to compliance issues, canal failure, spill events, sediment events, habitat impacts in Upper Little Sheep Creek, and stranding and mortality of bull trout. In December 1996 CHI filed an application for surrender of exemption with FERC. In August 1997 FERC issued an order accepting surrender of exemption. In December 1998 ODFW confirmed with FERC that the decommissioning requirements had been met. In October 1999 the Forest Service filed a letter indicating that CHI completed revegetation work.
PC 535  Baker, City of – Powder River, Consolidated
WRD – Certificate 80496

Mill Creek/Powder – 10 cfs with 760 feet of head and 864 theoretical horsepower.

HE 525  Bowen, Robert and June
WRD – License expires December 2040

Silver Creek/Powder River – The license was issued in October 1990. The project diverts water via a headgate into a natural depression with an overflow channel then conveyed by a 650-foot pipeline to the powerhouse. The tailrace returns flow to Silver Creek. The water right is for 0.6 cfs and utilizes 100 feet of head for 6.8 thp. A minimum bypassed reach flow of 0.4 cfs is required.

HE 570  Dexter Creek – Dexter Clark
WRD - Certificate 81744 expires December 2025

Dean Creek/John Day River – Certificate was issued in November 2005. The project is located on Dean Creek, in the John Day Basin. Project would add a diversion structure and a 400 foot long 4” diameter pipe to divert water to the turbine at a rate of 0.01 cfs for 0.034 thp. ODFW conducted a site visit in April 2005 to determine if fish were present at the site. Biologists observed west slope cutthroat trout in the vicinity of the proposed project and upstream of the footbridge. No other fish species were observed. ODFW recommendations to the WRD included uninhibited upstream and downstream fish passage, screening of the intake/penstock, and adequate bypass flow.

HE 495  Heizer, William
WRD – Project appears to have been decommissioned.

Bear Creek/Goodrich Creek – Original license issued by WRD in June 1984. William Heizer submitted Notice of Intent to reauthorize hydroelectric project June 2003. Water is diverted by a 30” square steel diversion box, and conveyed by flume and pipeline to the plant site. Generation facilities will consist of 6” Pelton wheel driving a 4 KW AC generator. After passing through the generating facility, the water utilized will be returned to Beaver Creek. WRD sent Mr. Heizer a letter in February 2003 indicating they had not yet received his completed application to reauthorize the hydroelectric project. Mr. Heizer submitted an application to
reauthorize the hydroelectric project in June 2003. No additional information available in ODFW files or WRD WRIS.

**HE 524 La Grande Reservoir – City of La Grande**  
*WRD - Certificate N/A*

Beaver Creek/Grand Ronde - Hydroelectric license transferred to the City of La Grande in 1989; has an expiration date of 2039. Water used to produce power for a caretaker’s cabin at the reservoir. The existing dam has a 6” pipe that comes off at the head of the reservoir and then dumps back into Cove Creek. The micro-hydro site presents a hazard to downstream migrating fish and should be screened. In 2006, NMFS began evaluating the feasibility of providing passage at reservoir dam. The city of La Grande installed fish passage over the dam in 2017. In 2019 the La Grande Fish District staff found steelhead spawning in Beaver Creek upstream of Beaver Reservoir.

**HE 346 Lathrop, Earl and Dixie**  
*Laycock Creek/John Day - Hydroelectric license issued to Mrs. James Hayes in October 1981, conferring the right to 0.6 cfs from Laycock Creek and a license to maintain water in a reservoir and to divert from the reservoir at a rate of 1.5 cfs for the development of 17 theoretical horsepower (thp). In February 1985, the project was assigned to Joseph Schmitz. In September 1999, Joseph Schmitz submitted an application to the WRD for reauthorization of the hydroelectric project. Water is diverted from a small rock fill dam and a PVC pipeline to a small reservoir. The water is conveyed from the small reservoir by an 8” PVC pipe, 1,200 feet long, to the turbine. After passing through the generation facilities, the water utilized is returned to Laycock Creek. The certificate for 0.6 cfs from Laycock Creek and 0.78 cfs from the reservoir was issued by the WRD in January 2002. Fish related conditions in the certificate include: ensure boards are placed in Laycock Creek to divert flow to the intake shall be placed to allow upstream and downstream fish passage with contingency for fish ladder, comply with 1981 agreement with ODFW to maintain and operate a fish screen, maintain and operate a fish ladder, not more than 0.2 to 0.3 cfs shall be diverted from Laycock Creek when stream flow is below 1.0 cfs, and when stream flow is greater than 1.0 cfs up to 0.6 cfs may be diverted. In May 2007 WRD assigned the hydroelectric license HE 346 and certificate 79173 in the name of Joseph Schmidtz to Earl and Dixie Lathrop.*

**HE 349 Letosky, Joseph C. and Deborah**  
*Overholt Creek/John Day - Hydroelectric license issued to Thompson’s in December 1981, conferring the right to 0.8 cfs from Overholt Creek to develop 16.8 theoretical horsepower (thp). The license was to terminate December 2001. In November 1991 the project was assigned to Kimberly Harms. Harms submitted an application for reauthorization of the hydroelectric project in May 1999. The final order was issued by WRD in September 2001. In January 2002 WRD issued an order approving assignment of the license to Joseph and Deborah Letosky. A small log dam raises water to the screened intake. Flow is controlled by a knife gate. Water passes through a diagonally mounted screen to a 10 inch buried PVC penstock. The final order included providing passage at the dam and return flow piped directly to the stream to prevent erosion.*
HE 599 Madison Farms
WRD - Certificate 89119, hydroelectric license expires December 31, 2034

Ground Water (Umatilla Basin) – Currently owns and operates an Aquafer Storage and Recovery (ASR) agricultural well in the Butter Creek Basin with about 650’ of head. The proposed project contains an existing system collecting ground water, approximately 20’ below ground, which is piped into a 4-foot-diameter, 25-foot-deep shallow well. The water in the shallow well is pumped into the irrigation system as needed. Excess water is pumped through an 8” diameter pipe into a second 750’ deep basalt well, containing a 100 horsepower line-shaft turbine pump. The project is rated at 696 thp and the power will be sold on the interstate grid. Madison Farms filed an Application of Declaration of Intention in December 2009. FERC issued order that license is not required in May 2012. Madison Farms filed application with Oregon Water Resources Department for a major hydroelectric project (HE 599) in November 2012. Priority date of November 26, 2012. WRD has approved an ASR Limited License Application #020 for the ASR project. The Limited License is valid for five years until April 25, 2018. The license is renewable, or the ASR project may be eligible for a permanent ASR permit at the completion of this term. The Hydroelectric license is effective from the date of issuance (March 7, 2014) through December 31, 2034

HE 362 Olson, Kenneth
WRD - Certificate 84726 expires December 2029

Canyon Creek/John Day - Hydroelectric license issued to Michael Cosgrove in June 1982, conferring the right to 0.1 cfs from an unnamed spring tributary to Canyon Creek to develop 4.9 thp. Water is diverted from the spring through a 3” buried pipeline approximately 4,000 feet to the turbine while developing 400 feet of head. After generation, water returns to Canyon Creek. There are no fish in the spring. In August 2000, Kenneth Olson submitted an application for reauthorization of the hydroelectric project. The draft Proposed Final Order was issued by the WRD in June 2008.

HE 271 Racey, Andrew
WRD – Certificate 76634 expires December 2020

Cottonwood Creek/Burnt – WRD granted a hydroelectric license in July 1980, conferring the right to 0.2 cfs from Cottonwood Creek for the development of 7.5 thp. The power system includes a 2000 foot long, 8-inch pipe delivering water to a generation facility consisting of a 24-inch Pelton wheel and a 15 kW alternator. The license was to terminate in December 2000. In December 1997 Andrew Racey submitted an application for reauthorization of the hydroelectric project. The final order was issued by WRD in October 2000. The primary diversion site consists of hand-placed rocks and boards in the creek, and a small hand-dug ditch along an old reservoir dam. A horizontal flat plate fish screen was installed in the diverted channel in 1999. Water drops through the screen and goes through a slide-gate regulated pipe to the settling basin (serves as project forebay). When reauthorized in 2000, the certificate included conditions for fish screening, maintaining a cover over the settling basin and forebay to keep out small mammals, maintaining a minimum water depth of two-inches in the channel below the fish
screen, and regulate diversion so that no more than 25 percent of the flow not utilized for power enters the bypass pipe to maximize flow over the fish screen.

HE 428 Reed, Randy  
WRD – Certificate 84981 expires in December 2028

Unnamed Tributary/Middle Fork John Day - Hydroelectric license issued to William Dixon and Pamela Benge in June 1985, conferring the right to 0.4 cfs from an unnamed tributary to the Middle Fork John Day River to develop up to 5 thp. In June 2003, Randy Reed submitted an application to the WRD for reauthorization of the hydroelectric project. Water is diverted from the stream at a four foot rock dam through a buried pipeline, approximately 1,000 feet to the turbine. After use at the generation facility, the water is returned to the Middle Fork John Day River. The draft Proposed Final Order was issued by the WRD in June 2008.

HE 594 Wheelhouse, Jay and Jan  
WRD – Certificate 87269 expires December 2031

Bell Cow Creek/North Fork McKay – An application was filed with OWRD for a Minor Hydroelectric Project in March 2011. The Wheelhouses propose to produce residential power by diverting 0.45 cfs (Nov 1 - May 31) from Bell Cow Creek through a five inch, 4600 foot long pipeline through a hydro turbine and back into North Fork McKay Creek. ODFW provided comments that North Fork McKay and Bell Cow Creeks are fish bearing streams without anadromy and screening would be required. OWRD issued a water right in October 2011, with a priority of March 2011. The certificate includes a requirement to install and maintain a fish screen on the intake pipe. ODFW staff has consulted with the property owner on screen design.

HE 331 Wiggins, Duane  
WRD – Certificate 76861 expires December 2021

Spring Creek/Wallowa - A hydroelectric license was issued to Duane Wiggins in August 1981 with a priority date of June 1981, conferring the right to 0.33 cfs from Spring Creek to develop 18.75 thp. In May 1999, Mr. Wiggins submitted an application for reauthorization of the hydroelectric project. The WRD issued a Proposed Final Order December 2000, a final order in February 2001, and a certificate in April 2001. The project was reauthorized for 0.2 cfs and 25 thp. Water is pooled and diverted into a small wooden head gate and conveyed by pipeline to the plant site. Diverted flow goes through an overflow box and excess water is returned, by pipe, to the stream. There is no device at diversion to control inflow. Water is diverted into 6” diameter PVC pipe 1,440 feet long. Within first 50 feet is overflow box, with overflow piped in 6” PVC pipe back to stream. Power is transmitted 1,000’ by a single-line transmission corridor. The final order requires installation of a device to control inflow and minimize overflow return back to the stream. In December 2010, Mr. Wiggins filed a Petition for Declaratory Order with FERC to determine whether the project was subject to FERC’s jurisdiction. FERC issued an order in January 2011 finding that a federal license or exemption was not required.
A hydroelectric license was issued in December 2015. The priority date of the hydroelectric license is April 27, 2015. The maximum amount of water to be diverted is 2.0 cfs in any combination with hydroelectric water right Certificate 87134, with a period of use from January through December. Irrigation water diverted into the West Side Ditch from the Lostine River currently passes through an 11kw turbine, authorized under an existing water right Certificate 87134. Water from the tailrace empties into an existing stock water pond. The water from the pond is discharged to the Clear Water Ditch/Spring Branch irrigation channel which drains into the Wallowa River. The project diverts water from the stock pond through a conveyance pipe to a new 11 kw turbine. Water is returned to the Clear Water Ditch/Spring Branch irrigation channel. The West Side Ditch Company maintains a “fish wheel” at its diversion point on the Lostine River. An additional fish screen is located on the 15” pipe intake for the Spaur Ranch. A 0.5” screen will be constructed within the stock water pond. Confirmation of screen construction and effectiveness is pending. In June 2015, SPS of Oregon filed a Petition for Declaratory Order with FERC to determine whether the project was subject to FERC’s jurisdiction. FERC issued an order in June 2015 finding that a federal license or exemption was not required.
Northwest Watersheds
Active FERC/WRD Project/Applications
Hydropower Coordinator:
John Zauner
Oregon Department of Fish and Wildlife
17330 SE Evelyn Street
Clackamas, OR 97015
Voice: 971-673-6041 Fax: 971-673-6074 email: john.r.zauner@state.or.us

11509 Albany Hydroelectric Project – City of Albany

Contact: Mark Yeager (541) 917-7658
WRD – PC 7, Certificate 81570 date of priority 1874
FERC - license expires 2048

South Santiam/Santiam - This project diverts water at Lebanon Dam, on the South Santiam River, via Lebanon-Albany Canal, to a powerhouse near the confluence of the Calapooia and Willamette Rivers, within the city of Albany. A single 500 kW turbine uses up to 190-cfs of flow with approximately 36-feet of hydraulic head. Originally built in the 1870's, and formerly operated by Pacific Power and Light, the City of Albany (City) bought the project works, including the diversion dam, canal, and powerhouse, in 1984. The project was unlicensed and the City stopped operation of the plant in 1991 when FERC determined a license was necessary. The City initiated FERC licensing in January 1993. ODFW identified screening, passage, minimum flows and habitat protection as issues. In December 1994, the City submitted a final license application to FERC, which included fish screens and fish passage improvements at Lebanon Dam, and a plan to maintain 1,100 cfs minimum flow in the South Santiam at Lebanon Dam. In October 1998, FERC issued a license. The City has been consulting with ODFW and the federal fisheries agencies on license implementation, including fish ladder and screen design and construction, flow gaging plan, water quality monitoring, hydraulic evaluation of fish ladder and screens, and stream flow needs for Marks and Hospital Sloughs. All of these license requirements have now been implemented. Because of the cost and effort of complying with the FERC license conditions, the City is planning to file an application for surrender of license and an application for a conduit exemption with FERC. A conduit exemption would lessen the project footprint and the associated compliance issues. The City has been consulting with ODFW, NMFS, FWS, and DEQ on the surrender and exemption applications since 2017. The agencies are concerned about maintaining fish mitigation and protection measures including the fish ladders, fish screen, and flow requirements which are required under the license, but may
not be under a conduit exemption. ODFW and the City have been drafting a MOA to require continued operation and maintenance of the mitigation and protection measures in the event a conduit exemption is granted by FERC.

City of Albany fish ladder on the South Santiam River

**2821  Bull Run – City of Portland**

*Contact: Frank Galida (503) 796-7517*

**WRD - PC 864, PC 865 Certificate 43856, Certificate 43857**

**FERC - license expires 2029**

**Bull Run River/Sandy** - Two powerhouses constructed on City of Portland municipal reservoirs on the Bull Run River, a tributary to the Sandy River, are licensed through FERC to produce electricity. The city sells the electricity from a 24 MW plant at Reservoir 2 and a 12 MW plant at Reservoir 2 to Portland General Electric, which operates and maintains the equipment. Generation of power at the dams is subordinate to water supply operations. Total installed capacity of the project is 35,625 MW. FERC license issued in March 1979, and expires in February 2029. Note: The city of Portland developed, in 2008, a final Bull Run Water Supply Habitat Conservation Plan (HCP). The HCP is a 50 year plan to protect and improve aquatic habitat while continuing to manage the Bull Run Watershed Supply for the city of Portland, Oregon. The primary focus of the HCP is protection of listed ESA anadromous fish. If the city determines to continue to generate power after 2029, it will seek a new license before license expiration. The parties to the HCP, including ODFW, agreed that the HCP will be incorporated/used as part of the relicensing process, if the city pursues a new license in 2029 (see HCP language).
6414  **Canyon Creek**  
**Contact:** Douglas Pegar  
**WRD - HE 342, Certificate 84166 expires December 2028**  
**FERC – Exemption, no expiration**

Canyon Creek/Clackamas - Project located on Canyon Creek, a tributary to the Oak Grove Fork/Clackamas River, Clackamas County, Mount Hood National Forest. Water diverted is not to exceed 2.5 cfs; theoretical horsepower rated at 99.5 and produces 60 kW of power. FERC exemption originally issued in December 1982. Water right reauthorized by HART in May 2008. No fish and wildlife issues identified. Project owner considering adding another turbine that would not require additional water.

2242  **Carmen-Smith – Eugene Water and Electric Board (EWEB)**  
**Contact:** Patty Boyle 541-685-7406  
**WRD – PC 859, PC 860, Certificates 80725, 80987, 80730, 80781, 80724, 80726, 80727, 80729, 80782 - FERC- license issued in 2019, expires in 2059**

McKenzie River/Willamette - The project is located on the upper McKenzie River in Lane and Linn counties. Two project reservoirs, Carmen on the McKenzie River below Clear Lake and Smith on the Smith River, divert flow to the Carmen powerhouse, which discharges into Trail Bridge Reservoir. Water from Trail Bridge Reservoir is discharged into the McKenzie River through the Trail Bridge powerhouse. The original FERC license became effective in December 1958, and expired in November 2008. The original mitigation measures included a salmon spawning channel, ramp rates for the McKenzie River below Trail Bridge Dam and limits on the change in elevation of Trail Bridge Reservoir. Fish ladders and screens were not constructed for the original license. EWEB initiated relicensing in July 2003, using the Traditional Licensing Process (TLP), and submitted its Final License Application to the Commission in November 2006. EWEB subsequently initiated settlement negotiations in January 2007. These negotiations resulted in a comprehensive settlement agreement among seventeen parties, which was signed and filed with the Commission in October 2008. The settlement recommends implementation of mitigation measures that include minimum flows, instream and in-reservoir habitat projects, upstream and downstream fish passage, river ramping rates, water level elevation changes in Trail Bridge Reservoir, upstream fish migration, effects on wildlife, monitoring and maintenance and adaptive management. EWEB entered into a fish passage waiver agreement with the Oregon Fish and Wildlife Commission to provide mitigation in lieu of upstream fish passage at Smith Dam. DEQ released its 401 certification for public review in November 2010. FERC has claimed it cannot issue a new license because some of the license measures would conflict with the Wild and Scenic River Act. The settlement parties have filed arguments with FERC supporting issuance of the new license that incorporates all the settlement components. EWEB began convening meetings of the Fisheries Work Group in April 2010 to begin consultation for fish passage measures and aquatics plans.

By 2015 FERC had still not issued a license for the project. In June 2015, EWEB requested that FERC delay issuance of the new license to allow EWEB to complete an updated economic analysis of the project as reflected in the final license application and the October 2008 Settlement Agreement. In January 2016, EWEB filed with FERC a revised project economic analysis and Exhibit D to the final license application, and requested that FERC continue to delay
issuing the new license so EWEB and the Settlement Parties could continue renegotiations to
amend the October 2008 Settlement Agreement. In August 2016, EWEB advised FERC that
EWEB and the Settlement Parties reached agreement on all substantive issues and requested
the Commission continue to delay issuance of the new license through November 2016 to allow
the Parties to make final the Settlement Agreement. In November 2016, EWEB filed the
Amended and Restated Offer of Settlement with FERC. The major difference between the 2008
settlement and the 2016 settlement was 1) implementing trap and haul fish passage instead of
volitional passage, and 2) implementing downstream passage at Trail Bridge Dam via the
spillway with no operation of the turbine instead of the fish screen in the reservoir. A new
license was issued in May 2019, but appeared to omit several components of the settlement
agreement including proposed license articles, a specific requirement to implement the Aquatic
Management Plan (due to W&S issues), and specifically stated that the project specific fee from
DEQ’s 401 was not enforceable by FERC in the license. In the event that the license conditions
differed from the settlement, the settlement was to conform to the license unless a party filed
for dispute resolution. Several parties filed for dispute resolution including ODFW, DEQ, EWEB,
and the USDA-FS. Status of the dispute resolution is still pending. ODFW and DEQ filed a request
for rehearing on the license with FERC in June 2019 (within the 30-day requirement) regarding
FERC’s unprecedented dismissal of a 401 condition, i.e. the project specific fee.

2195 Clackamas River Hydroelectric Project – Portland General Electric (PGE)
Clackamas PGE Contact: Lindsay Smith (503) 630-8378
WRD – HE 186, 202, 203, 220 Certificate 89174, 86764 SWR 386, 387, 388
FERC - license expires 2055

Clackamas River/Clackamas - The Project consists of four developments: 1) the Oak Grove
Development, which includes Timothy and Harriet Lakes and Dams, Frog Lake and the Oak
Grove Powerhouse; 2) the North Fork Development, which consists of the North Fork Reservoir
and Dam; 3) the Faraday Development, which includes Faraday Lake and Dam; and 4) the River
Mill Development, which includes Estacada Lake and River Mill Dam. The Project also includes a
1.9 mile long adult fish ladder, a fish ladder at River Mill Dam and a 5.0 mile long juvenile
downstream migrant pipeline. Total generating capacity is 170 MW. Negotiation for a new FERC
license was begun by PGE in April 2004. 23 parties participated and reached tentative
agreement in January 2006. In June 2009, DEQ issued a 401 for the Project. FERC issued a new
license in 2010. Implementation of the terms of the license are continuing to move forward
within the agreed to timeframes of settlement. License expires 2055.

In 2015, the license was amended to include four new small turbines to take advantage of the
license mandated minimum flows. PGE amended the license to add the following turbines to
the project; 1) a powerhouse at the base of Timothy Lake Dam, housing two 0.95-MW turbines;
2) a powerhouse at Crack-in-the-Ground, located downstream of Lake Harriet, housing a 1MW
turbine; 3) a North Fork return powerhouse housing a 135-kW turbine, utilizing return flows
from the juvenile downstream migrant collection systems and the North Fork fishway adult fish
trap; and 4) a Faraday Diversion Dam powerhouse turbine and an 850-kW turbine and induction
generator utilizing North Fork fishway attraction flows.

The construction of the 1 MW powerhouse at Crack-in-the-Ground was completed in 2016,
followed by the construction of the Timothy lake Dam powerhouse in 2019. PGE has
determined that the two remaining powerhouses to be constructed are not cost effective and will not be constructed. PGE in 2019 filed a request to FERC to amend the license to remove these two powerhouse (North Fork Return Powerhouse, Faraday Diversion Dam Powerhouse) from the Clackamas River Hydroelectric Project License.

14371 Crandall Reservoir – City of Hillsboro
Contact: Erika Handley (503) 615-6702
WRD – PC 896, Certificate 87842 subject to review 50 years after issuance (November 2062)
FERC – conduit exemption no expiration

Crandall Reservoir/Tualatin - The City of Hillsboro installed a small hydropower project at their Will Crandall Reservoir, which consists of a ten million gallon water storage tank constructed to increase the city of Hillsboro’s in-town storage capacity. Water to fill the reservoir is diverted through the existing Tualatin River - Spring Hill Intake Facility, into the existing water delivery system, which includes a water treatment plant. A pump station constructed off the existing water delivery system, with a turbine, is operated on a periodic basis. The turbine is rated at 940 kW with annual generation at 60,000 kW. No fish and wildlife concerns identified. Upstream and downstream fish passage provisions are not conditions of the project due to the source of water and the existing screening facility at the diversion intake. However, through written agreement with the city of Hillsboro and ODFW’s Fish Passage Program, any change to the Spring Hill diversion intake structure or its capacity will require the intake structure to be upgraded to meet current fish screening criteria. In September 2012, ODFW filed two terms and conditions pursuant to section 30(c) of the FPA that: (1) require the exemptee to take action to minimize harm to fish and wildlife resources under emergency situations and subsequently notify Oregon DFW and (2) reserve Oregon DFW’s authority to modify the conditions. FERC issued an order granting a conduit exemption in November 2012. WRD issued the water right certificate in November 2012. The certificate requires the water right holder to construct operate and maintain fish screens, bypass devices, fish passages as required by ODFW. The certificate will be reviewed by WRD 50-years after the date of issuance pursuant to ORS 543.765.

11945 Dorena Dam – Dorena Hydro, LLC
Dorena Contact: Alina Osorio (416) 340-1937 x262
WRD – HE 559, Certificate 89160 expires 2058
FERC license expires 2058

Row River/Coast Fork Willamette - The original license for this project was issued to Dorena Hydro, LLC in October 2008. The proposed 8.3 MW project would be located at the Corps’ Dorena Dam on the Row River, near the city of Cottage Grove, in Lane County. Preliminary Permit Application (PPA) was issued by FERC in July 2001. First Stage Consultation Document (FSCD) was released in April 2003. The Final License Application (FLA) was filed in June 2004. Three addendums to the FLA were subsequently filed in August and November 2004, and December 2005. ODFW filed an Additional Study Request in August 2004 and the applicant filed several study reports, in response, in October 2004. FERC conducted its Scoping of Environmental Issues for the Project and released its Scoping Document 1 (SD1) on April 14, 2005. Subsequent to issuance of SD1, the applicant filed additional information reports, fish species status reports, and final study reports. Dorena Hydro, LLC plans to begin construction in early 2012 and complete construction in mid-2013.
FERC issued a 50-year license in October 2008, which required addressing water quality concerns, tailrace barrier design, ramping rate specifications, wildlife resource protection, pond turtle protection and avian protection. Fish screening was not prescribed on the penstock to prevent entrainment of native migratory fish. However, ODFW entered into a non-FERC settlement agreement, whereby the licensee establishes a mitigation fund for stream habitat projects above and below the dam to benefit anadromous and native migratory fish. Mitigation funds become available one year after project operation. ODFW notified the Corps regarding its fish passage obligations, triggered under state law associated with a change in permit status; however, the Corps indicated they have no plans to address fish passage under state law. In September 2010, Symbiotics requested and received an extension of time to commence and complete construction for two years to October 17, 2012, and October 17, 2015. The Project was constructed and became operational on December 11, 2014. Mitigation funding was to become available within one year of the startup date; however, the licensee was unable to meet its obligation by the end of 2015. On January 8, 2016, pursuant to Section 13.3.1 of the Mitigation Agreement, ODFW issued a Notice of Dispute. In October 2016 ODFW and Dorena Hydro entered into a Payment and Tolling Agreement whereby Dorena Hydro would begin making payments in October 2016 followed by quarterly payments until the full escalated amount is paid in full. ODFW provides review and comments on the licensees draft annual reports prior to submittal to FERC.

6661 Falls Creek – Eagle Creek Renewable Energy
Contact: Robert Gates 973-998-8403
WRD – HE 410, Certificate 93868 expires 2059
FERC – exemption no expiration

Falls Creek/South Santiam - The project is located on Falls Creek, a tributary to the South Santiam River, near Cascadia in Linn County. A FERC exemption was issued March 1983. The project diverts about 26 cfs, uses 2,381 feet of head and generates 4.3 MW. The minimum bypass flow is 1.0 cfs or all natural flow less than 1.0 cfs. In April of 1992, the Operator proposed screening modifications, improvement of intake and screen cleaning, which were completed in May 1996. The exemptee applied to the Low Impact Hydropower Institute in 2002 and was granted certification. H.P. Limited renewed their LIHI certification in 2007, 2012, and 2017. The current LIHI certificate expires on June 2, 2025. The state hydroelectric license for the project terminates on December 31, 2019. The HART began review of the reauthorization application in June 2017. ODFW conducted several site visits to evaluate the project and confirm the distribution of fish. ODFW did not find any native migratory fish in the upper project area, only brook trout. The HART reauthorized the project, and WRD issued the certificate in June 2018 effective on January 1, 2020 for 40-years through December 2059. The exemption was transferred from Falls Creek HP to Eagle Creek Renewable Energy, LLC. FERC issued a Notice of Transfer of Exemption in October 2019, which was rescinded on October 30, 2019.
6648  Lacomb – Lacomb Irrigation District (LID)  
*Contact: Seth Spencer (541) 451-1588*  
*WRD – PC 859, Certificate 80725*  
*FERC - Exemption no expiration*  

**Crabtree Creek/South Santiam** - Small project located about 15 miles east of Lebanon on Crabtree Creek, a tributary to the South Santiam. It uses the Lacomb Irrigation District Canal to divert up to 65 cfs from Crabtree Creek to the powerhouse. FERC issued an exemption in February 1983. Long-term issues associated with this project include inadequate fish screen operation and maintenance, tailrace barrier, turbidity from project-caused erosion events, flood damage and installation of turbine bypass valve. In August 2006, ODFW filed a letter with FERC acknowledging consultation by LID for replacement of the fish screen with a Farmer’s fish screen and installation of a turbine bypass valve. During a June 2008 inspection FERC noted that the powerhouse bypass was complete and the fish screen was substantially complete. The screen became operational in the fall of 2007.

2496  Leaburg/Walterville – Eugene Water and Electric Board (EWEB)  
*Contact: Lisa McLaughlin (541) 685-7450*  
*WRD – PC 545, PC 724, Certificate 27662, Certificate 27661*  
*FERC license expires 2040*  

**McKenzie River/Willamette** - Project consists of Leaburg diversion dam, a 2,500 cfs power canal and a powerhouse with two turbines (7.5 MW and 6 MW), and the Walterville 2,577 cfs power canal and a powerhouse with one 8 MW turbine on lower McKenzie River. Projects are approximately 13 and 28 miles east of Springfield. The Walterville project began operating in 1911 and the Leaburg project was completed in 1930. The Federal Power Commission issued the original license for the Walterville project on May 23, 1967 and on June 3, 1968, for the Leaburg project. Both original licenses expired on December 31, 1993. EWEB constructed a fish screen on Leaburg Canal in 1983. ODFW conducted a long-term biological evaluation, which resulted in screen modifications and incremental improvement in fish survival until high survival was achieved for smolts and fry by 1995. Primary relicensing issues included right bank fish ladder at Leaburg dam, Leaburg Lake raise and effects on fish screen and roll gate mortality, Leaburg tailrace barrier, minimum flows in the two bypass reaches, Walterville fish screen and tailrace
barrier, diversion sill dams/vortex rock weirs, gravel augmentation, ramping rates, wildlife and trust fund. In 1997, the Federal Energy Regulation Commission (FERC) issued a new 40-year license (License) to EWEB to operate the Project. Multiple organizations filed petitions for review of the licensing order with the United States Court of Appeals for the Ninth Circuit shortly after the License was issued. In 2001, FERC issued a second license order for the Project, based upon the Ninth Circuit decision and on a settlement agreement with and biological opinions issued by the National Marine Fisheries Service (NMFS) and the US Fish & Wildlife Service (USFWS).

ODFW filed request for rehearing on the license order. In November 1997, FERC issued an order on rehearing, reaffirming most of its license conditions. In January 1998, ODFW filed notice of intent to appeal, joining American Rivers and other environmental groups. U.S. Fish and Wildlife Service, EPA and NMFS joined as interveners. FERC was the respondent and EWEB intervened on behalf of FERC. In June 1998, ODFW filed appeal brief with 9th Circuit Court of Appeals. In January 1999, ODFW (via Dept. of Justice), and other parties, provided oral argument before court. In August 1999, the 9th Circuit Court of Appeals issued a ruling that FERC improperly set aside Section 18 fishway prescriptions, remanding the license to FERC. The court rejected all other appeal arguments. FERC, EWEB, NMFS, EPA USFWS and American Rivers subsequently filed for rehearing of the decision. In January 2000, the court issued a final order reflecting a denial of all parties’ petitions and re-hearings. In April 2000, FERC issued an order on Remand and Lifting Stays, which incorporated FWS and NMFS prescriptions as conditions of the license (Appendices A and B) and amended pertinent articles related to the prescriptions. In September 2001, EWEB filed, on behalf of itself, FWS, and NMFS, an offer of settlement to resolve pending requests for rehearing and reconsideration of the Commission’s April 2000 Order on Remand and Lifting Stays. The settlement, approved by the Commission, sought approval of a construction schedule pursuant to article 403, amendment of articles 410, 416, 417, 418, 419, 420, and 421, and deletion of Appendices A and B. In December 2001, FERC issued an order amending the license consistent with the settlement. EWEB has been implementing license requirements, including construction of a new right bank fishway at Leaburg Dam, expansion of the Leaburg fish screen and biological and hydraulic evaluations, raising the elevation of Leaburg Reservoir and biological evaluation of roll gate mortality, construction of the Walterville fish screen and hydraulic and biological evaluation, construction of Leaburg and Walterville tailrace barriers, and an agreement with the agencies to convert gravel augmentation requirements to providing in-kind funding for habitat projects in the lower McKenzie River. In late 2011 and 2012, EWEB coordinated with the agencies to implement a study to radio-tag spring Chinook salmon at Willamette Falls and evaluate upstream passage through their new fish protection facilities.

In 2006, EWEB began discussions with NMFS, USFWS, and ODFW regarding the ramping rate requirements, and, after a number of face-to-face meetings and other discussions, culminated in a specific plan for rewriting the ramping plan and proposing modifications to ramping rates. After several rounds of document reviews and meetings that occurred in 2012 and 2013, EWEB and the Agencies reached agreement on the ramping plan that was based on site specific data and submitted the plan to FERC in February 2014. In March 2015, FERC issued an order amending the project ramping rates.
Lucid Energy, Inc. and the Portland Water Bureau  
**Contact:** Susan Priddy (503) 380-8487  
**FERC – license expires 2034**

**Bull Run Reservoir/Bull Run** - The Project is installed within the municipal water delivery system, owned and operated by the City of Portland’s Water Bureau. Lucid Energy, Inc. and the City of Portland Water Bureau jointly filed for, and received, a FERC order granting exemption from licensing (conduit). The project utilizes flow piped from two 55 million gallon water tanks, through a 90” diameter pipeline, that deliver water to a junction with three conduits for water delivery to the City of Portland’s customers. One of these junctions, conduit 3, a 50” diameter pipeline under Powell Boulevard, has been equipped with four separate in-line internal turbine/generation units. The output is an annual generation of 1,200 MWh, with an average head of 46’ and a hydraulic capacity of 88 cfs. The largest unit is 50 kW in capacity and the other three units are each sized smaller as the energy dissipates through the conduit. Water for the City’s system originates from the upper Bull Run River and from the water stored within city-owned and operated Bull Run reservoirs. No fish and wildlife concerns identified. Water Certificates HE 601, 602, 603, and 604 issued March 17, 2014 through December 31, 2034. On June 3, 2013 the Project qualified as a conduit hydroelectric facility under FERC and was not required to be licensed under Part 1 of the FPA. Project has been constructed and is operating.

Stone Creek – Eugene Water and Electric Board (EWEB)  
**Contact:** Robin Leighty (541) 685-7330  
**WRD – PC 885 HE 303, Certificate Permit Number S51509**  
**FERC license expires 2039**

**Oak Grove Fork/Clackamas** - FERC license originally issued to Pacific Oregon Corporation in September 1989. The license was transferred to EWEB in January 1994. Project facilities include a diversion structure that is 300 feet long and 12 feet high, a fish ladder, a screened intake structure, a penstock, a power house containing one generating unit rated at 12,000 kilowatts, a tailrace, two substations and five miles of transmission line. Fish and wildlife concerns identified. The license expires in August 2039. It has recently been found that EWEB was out of compliance with their ramping, accretion and flushing flow license requirements. ODFW, USFS and EWEB have worked out, and agreed on, a new ramping rate and are working towards accretion and flushing flow compliance.

Vernon Station - Portland Water Bureau  
**Contact:** Frank Galida (503) 796-7517  
**WRD – PC 892, Certificate Permit S54647**  
**FERC – Exemption, no expiration**

**Bull Run Reservoir/Bull Run**- City water supply is from the Mount Tabor Distribution zone (water supply originates from the Bull Run River). The owner/operator of the Vernon Hydroelectric Project is the Portland Water Bureau. A single turbine unit is located within the existing underground Vernon station municipal and supply system. The unit has an installed
capacity of 25 kW with an average annual generation of 205,860 kwh that will be used on site with excess sold to a local utility. The project qualified as a conduit hydroelectric facility by FERC and was granted a conduit exemption under Part 1 of the FPA in September 2010. In April 2010, WRD approved PC 892 for up to 10 cfs to generate 59.1 theoretical horsepower (thp), with excess power being sold to local utility. No fish and wildlife concerns identified. Project has been constructed and is operating.

6943 Water Street – Santiam Water Control District (SWCD)
Contact: Brent Stevenson (503) 769-2669
WRD – PC 877, Certificate Permit 549254
FERC – Exemption, no expiration

North Santiam River/Santiam - The 155kW Water Street Project is operated by the SWCD under a five-megawatt exemption for a hydroelectric project at an existing dam Order Granting Exemption from Licensing of a Small Hydroelectric Project of 5 MW or Less, 29 FERC ¶ 62,433 (1984). It uses 165 cfs, which is then diverted to the water distribution system for municipal and agricultural use. The project was built on the north bank of the dam on the Stayton Power Canal cross from the existing “Stayton” powerhouse (currently not operating; see inactive projects FERC 11429 and 12574). When FERC issued the exemption order, the “Stayton” powerhouse was still being operated by PacifiCorp and, at certain times of the year, over 1000 cfs could be diverted, for all uses, into the power canal from the North Santiam River. The power canal was not screened at that time and adult salmon and steelhead migrated upstream through the canal, using the existing fish ladders at the canal dam and head gate. Initially, a traveling fish screen was constructed at the powerhouse. Because the traveling screen did not provide adequate fish protection, a vertical flat plate screen array was constructed along the right bank of the canal. ODFW conducted biological evaluations of the fish screen over several years, which led to recommendations for minor modifications to improve fish survival. In 1995, the SWCD proposed to screen the entire power canal as part of the “Stayton” project (FERC 11429) licensing proposal rather than make additional modifications to the existing fish screen. In 2004, the SWCD completed construction of a fish screen for the entire canal near the canal head gate and constructed an upstream fish passage barrier at the lower end of the power canal, both of which prevent fish from entering the canal. In 2005, the SWCD requested permission from ODFW and FWS to discontinue operation of the Water Street project fish screen and the “Stayton” project fish ladder because fish no longer had access to the power canal. ODFW responded with a letter approving SWCD’s proposal as long as the new fish facilities function as designed and meet agency criteria. The FWS required SWCD to develop operation, maintenance and monitoring plans for the new facilities in order to approve the request. These plans have not been developed by the SWCD or approved by the FWS.

14383 Whitewater – Whitewater Green Energy LLC
Contact: Dave Harmon
WRD – none issued at this time
FERC – preliminary permit expired

Whitewater Creek/North Santiam - Whitewater Green Energy LLC has proposed to construct a 9 MW hydropower project on Whitewater Creek, a tributary of the North Santiam River. Four versions of the Pre-Application Document (PAD) have been submitted to FERC; all four PADs
were dismissed as being patently deficient for numerous reasons. A fifth PAD was accepted by FERC. On November 5, 2013, Whitewater Green Energy was issued a preliminary permit. A successive preliminary permit was issues by FERC in August 2016 for 24-months. The draft license application was released in March 2017. ODFW identified fish and wildlife concerns, including stream flow, fish screening, and fish passage. Whitewater is using the Integrated Licensing Process (ILP) for project licensing and has concluded the study phase of the process. ODFW anticipates that Whitewater will file a final license application with FERC in the near future. The project baseline was severely altered by a major forest fire in 2017 which burned approximately 14,500 acres.

2233 Willamette Falls Hydroelectric Project – Portland General Electric (PGE)
Contact: Lindsay Smith 503-630-8378
WRD – PC 25, PC 536, PC 537, Certificate Claim SW 385
FERC - license expires 2035

Willamette River/Willamette - Willamette Falls Hydroelectric Project is located at River Mile 26 on the Willamette River, between Oregon City and West Linn in Clackamas County in north central Oregon. The T.W. Sullivan powerhouse is located adjacent to Willamette Falls, a naturally occurring horseshoe shaped, 40-foot high basalt rock formation with a low concrete gravity dam along its entire crest. Willamette Falls marks the upstream boundary of the tidally influenced section of the lower Willamette River. The powerhouse contains thirteen turbines, including twelve vertical axis Kaplan-type turbines and one Francis-type turbine (Unit 9). Each turbine has an intake from the forebay and discharges into the tailrace, which flows into the main river channel just below Willamette Falls. The powerhouse, at peak generating capacity, uses approximately 6,000 CFS to produce 17 megawatts. Portland General Electric Company (PGE) entered into a Settlement Agreement Concerning the Relicensing of the Willamette Falls Hydroelectric Project, FERC Project No. 2233 (the “Agreement”), on January 29, 2004, with fourteen parties (the “Parties”). The Federal Energy Regulatory Commission (“the Commission”) Order Approving Settlement and Issuing New License (License Order) for the Willamette Falls Hydroelectric Project was issued to PGE on December 8, 2005. Fish and wildlife concerns identified. Since 2005, PGE, ODFW, and the parties to the Settlement, have been implementing the measures agreed to and included by FERC in the license terms. The major agreement measures, such as the forebay guide wall, north fish bypass and flow control structure, have been successfully constructed and are operating within agreed criteria. In addition to project operations, the two primary measures that remain are the continuation by PGE to improve lamprey passage and continued fish ladder maintenance activities. The license expires in 2035, 30 years from issuance. The project was approved for issuance of a low impact certificate by the Low Impact Hydropower Institute (LIHI) on November 2, 2017. The expiration of the LIHI certification is November 1, 2027.
Wolf Creek Highway Water District – now Tualatin Valley Water District (TVWD)
Contact: Mark Knudson (503) 848-3027
FERC – Exemption, no expiration

Water Conduit/ City of Portland Bull Run (Sandy Basin) water supply - Licensee is Tualatin Valley Water District, P.O. 745, Beaverton, OR 97075. TVWD buys excess water from the City of Portland for municipal supply. Exemption for small conduit (0.112 MW) issued on June 3, 1983. Facility is located on Center St., west of Highway 217, in Washington County. No fish or wildlife concerns identified.
Northwest Watersheds
Inactive FERC Projects/Applications

The list below includes projects that have had licenses terminated or surrendered, facilities removed, or have had preliminary permits cancelled, denied or surrendered within the last 10 years. Other projects included below are for locations where repeated efforts have been made over the last 30-years which suggests that these locations are likely to be evaluated for project development in the future, e.g. pumped storage or existing dams.

11512 Bigelow
FERC license never accepted, surrender proceeding terminated November 2004

McKenzie River/Willamette – Small, unlicensed operating project for residential use on a side channel of the upper McKenzie River, above McKenzie Bridge. In April 1994, Bigelow submitted licensing Initial Consultation Document. In June 1994, ODFW sent comments recommending fish screen and powerhouse tailrace barrier. The draft license application was released in June 1994. In December 1994, final license application submitted, including proposals for fish screen, tailrace barrier and diversion dam passage. In October 1995, FERC was preparing an Environmental Assessment. In November 1995, FERC held a public scoping meeting. In May 1996, Flow information was not provided to Oregon Department of Environmental Quality (DEQ) to assess impacts of increased project caused water temperature on the mainstem McKenzie. 401 Water Quality Certification was denied without prejudice to a later application. In November 1997, ODFW submitted Section 10(j) recommendations to FERC. In July 1998, Draft Environmental Assessment (EA) issued; FERC requested dispute resolution with ODFW on one recommended condition requiring a fish mitigation plan. In October 1998, ODFW participated in 10j dispute resolution conference call with FERC and in November, ODFW met, on site, with applicant to work out specifics of fish mitigation plan. In December 1998, ODFW submitted amended 10j recommendation to FERC to detail fish mitigation plan for forebay. DEQ held hearing on 401 application in January 1999. In June 1999, FERC engaged in ESA Section 7 consultation, with USFWS, for bull trout, and with NMFS for upper Willamette spring chinook. In November 1999 USFWS and NMFS issued a joint Biological Opinion, concluding that the project may be licensed with mandatory fish screening and mitigation. DEQ issues revised 401 certification conditions in February 2000. On April 11, 2000, FERC issues an original license for the project. In November 2002, John Bigelow files a letter with FERC requesting surrender of the project license because he does not intend to operate the project. FERC issues notice of the surrender application in July 2003. FERC issued draft EA in June 2004. In November 2004, FERC issued a letter explaining that because John Bigelow died 17 days after the license was issued, he never accepted the license, as required, within 30-days, therefore FERC claimed that surrender of the license was unnecessary and terminated the surrender proceeding.
Blue River – Blue River Hydro Power, LLC
FERC – preliminary permit cancelled December 2016

Blue River Hydro Power LLC filed for an application for a preliminary permit, proposing to study the feasibility of the Blue River Dam Hydroelectric Project, to be located at the U.S. Army Corps of Engineers’ Blue River Dam, on the Blue River in Lane County. The project would utilize flows at the existing Blue River Dam and includes the following new features: (1) a 12-foot-diameter, 500-foot-long steel liner pipe installed in the downstream portion of the existing dam outlet tunnel; (2) a gatehouse containing two 7-foot-wide, 8-foot-high steel slide gates to regulate pipe pressure and release excess water; (3) a 9-foot- to 12-foot-diameter, 600-foot-long steel penstock; (4) a 70-foot-wide, 55-foot-long reinforced concrete powerhouse; (5) two 10 megawatt vertical-shaft Francis turbine/generators; (6) an approximately 40-foot-wide, 40-foot-long concrete tailrace returning flows to the Blue River; (7) a switchyard and a 2.5-mile-long, 12.5-kilovolt buried transmission line interconnecting with Lane Electric Cooperative’s existing Blue River substation; and (8) appurtenant facilities. The estimated annual generation of the Blue River Project is 50 gigawatt-hours. Fish and wildlife concerns would have include fish screening, fish passage, water quality, and flow disruption. FERC issued Blue River Hydro Power, LLC a preliminary permit on November 6, 2015. In November 2016 FERC issued a letter informing the applicant that a progress report was overdue and the probable cancellation of the preliminary permit within 30-days. The preliminary permit was subsequently cancelled on December 22, 2016.

Blue River – Qualified Hydro L.L.C.
FERC – preliminary permit expired August 2015

Blue River/McKenzie - Qualified Hydro L.L.C. filed for, and received, an application for a preliminary permit proposing to study the feasibility of the Blue River Dam Hydroelectric Project, to be located on the Blue River Dam on the Blue River in Lane County. The project would occupy lands on the Willamette National Forest, while the dam is owned and operated by the U.S. Army Corp of Engineers. The applicant allowed the preliminary permit to expire August 6, 2015.

Blue River-Eugene Water & Electric Board (EWEB)
FERC - license surrendered and terminated March 2012

Blue River/McKenzie – This is a licensed, but unconstructed, project proposed at the US Army Corps of Engineers (Corps) Blue River Dam, on Blue River, a tributary to the McKenzie River, Lane County. EWEB submitted an application to retrofit a hydroelectric project on the dam in September 1982. FERC issued a license in November 1989. At the time of license consultation, ODFW was releasing spring Chinook salmon pre-smolts to rear in the reservoir and the agencies identified the need for fish screening to prevent entrainment of fish into the turbines. A settlement agreement was reached in June 1992, which provided for either a fish screen or mitigation fund (agencies’ choice), and a fund to supply cost sharing for temperature control facilities on the dam with the Corps. In June 1992, FERC ordered EWEB to submit plans for construction of an adult trapping facility by September 15, 1992. In October 1993, the fisheries agencies chose the mitigation trust fund instead of juvenile fish screen and bypass facilities. EWEB was required to initiate early stages of turbine construction to satisfy requirements of
FERC granting an extension to initiate project construction. The extension of the construction timeline was also based on the uncertain timing of construction of the temperature facilities by the Corps. FERC subsequently granted two additional requests for extensions by EWEB; (1) October 2005, and (2) and again in December 2011. In February 2010, EWEB filed another request for an extension until December 2015. Instead of granting another extension, FERC suggested that EWEB request a stay of the license and, if granted, the license would not be terminated. In the alternative, if EWEB does not complete construction by the current due date of December 11, 2011, EWEB must file a letter with FERC to show cause why the Commission should not start a proceedings for terminating the license, based on the implied surrender provisions of standard Article 16 of the license. EWEB filed request to surrender project license on 12-14-11. FERC ordered the surrender of the license March 18. 2012.

477 Bull Run-Portland General Electric (PGE)
WRD – SWR 389 assigned to WRD August 2008
FERC – license surrendered March 2014

Sandy River/Sandy – PGE’s Bull Run Hydroelectric Project, located in north central Oregon on the west side of Mount Hood in Clackamas County, about 35 miles east of Portland, generated around 111,00 MWh annually. The project works included Marmot Dam, located at River Mile (RM) 30 on the Sandy River, the Little Sandy Diversion Dam, located at RM 1.7 on the Little Sandy River, Roslyn Lake (which was formed by 8,000 foot of dikes), a 3.1 mile series of canals and tunnels leading from Marmot to the Little Sandy River just upstream of the Little Sandy Diversion Dam, a 2.8 mile box flume leading from the Little Sandy Dam to Roslyn Lake, two 1200 foot penstocks, and a powerhouse that contained four generators with a total capacity of 21 MW. The license was reissued 5/1/80 and was scheduled to expire 11/16/04. PGE initiated relicensing discussions on relicensing in December of 2001. In January 2002, a facilitated Decommissioning Working Group was formed to negotiate a settlement agreement that would enable PGE to apply and surrender the Project by November 15, 2002. A Settlement Agreement was agreed to by all parties and filed with FERC on October 24, 2002. FERC accepted agreement and application to surrender license. Decommissioning was estimated to cost approximately $1.7 million. Removal of Marmot Dam and associated structures began in October 2007 with the breaching of Marmot. Little Sandy Dam was removed the following year in late summer 2008. Since 2007 removal of all structures, associated appurtenances, and protection measures/activities have been completed, and monitoring is complete. On March 13, 2014 FERC notified PGE that they had met all requirements of the settlement and application to surrender license, and that Final Surrender of the Bull Run Project was officially complete. SWR 389 was assigned to WRD in August 2008 to change from hydroelectric use to instream uses for up to 200 cfs in the Little Sandy River from RM 1.7 to RM 1.5 on the Bull Run River, and up to 600 cfs in the Sandy river from RM 30 to the confluence with the Bull Run River at RM 18.4.

14769 Eagle Creek – Green Canyon Energy LLC
FERC – Preliminary permit cancelled in August 2017

Eagle Creek/Salt Creek/Middle Willamette – On May 5, 2016, Green Canyon Energy L.L.C. applied for a Preliminary Permit for a proposed hydroelectric project to be located on upper Eagle Creek, a tributary to Salt Creek on the Middle Fork Willamette River. The applicant is currently studying the feasibility of a hydroelectric power facility at this site. In July 2017 FERC
issued a letter requesting an overdue progress report within 30-days. In August 2017 FERC issued and order cancelling the preliminary permit. In September 2016 Green Canyon filed a request for rehearing which was denied by FERC in October 2016. This is the second time a preliminary permit has been filed for Eagle Creek; see FERC Number 1446

14466 Eagle Creek – Green Canyon Energy L.L.C.
FERC – preliminary permit application rejected as patently deficient November 2012

Eagle Creek/Green Canyon Energy L.L.C. applied for an Application for a Preliminary Permit for a proposed hydroelectric project on Eagle Creek, tributary to Salt Creek on the Middle Fork Willamette River. FERC declared the application on November 30, 2012 to be patently deficient and rejected the application.

13721 Geren Island- Energy Exchange
FERC – preliminary permit surrendered January 2011


13882 Geren Island - City of Salem
FERC - Preliminary Permit Surrendered and terminated July 2013

City of Salem municipal water supply/North Santiam River – Preliminary Permit issued November 2011. Study concluded project not economically feasible and Preliminary Permit was terminated July 2013.

13466 Gresham, City of
WRD – PC 891, Application S-87548, Permit S-54627
FERC – Exemption surrendered November 2014

Columbia - Project would be located in the sewage treatment plant discharge pipeline into Columbia River. The owner/operator is the City Of Gresham. Treated sewage water, prior to being discharged into Columbia River, would be used to generate power. The project would utilize a single turbine/generator unit with an installed capacity of 50 kW, generating approximately 413 megawatt-hours annually. FERC issued order granting exemption from license in 2011. WRD approved PC 891 for up to 29 cfs to generate 99 theoretical horsepower to be sold for use by Portland General Electric. On October 21 2014, the City of Gresham filed an application with FERC to surrender its exemption, citing insufficient economic returns and cheaper alternatives in reducing greenhouse gas emissions. FERC accepted the City of Gresham’s surrender November 19, 2014.
The Mt. Tabor Hydroelectric Project utilized 25 cfs through refill operations between two municipal water reservoirs at Mt Tabor Park in Portland to produce up to 170 kW hours annually. The City of Portland on October 3, 2014 surrendered its FERC exemption for the Mt Tabor Project when changes to its Reservoir operations at Mt Tabor rendered the project non-operational. FERC accepted the Surrender of Exemption December 22, 2014.

Unassigned Stayton-PacifiCorp

FERC – Licensing efforts abandoned

North Santiam River/Santiam - The 600 kW powerhouse was constructed on the Stayton Power Canal in 1937 by Mountain States Power Company. Pacific Power and Light (PP&L) acquired the Project when it merged with Mountain States in 1954. PP&L purchased 762 cfs from the Santiam Water Control District (SWCD) to operate the project. This was an unlicensed, operating project. FERC determined that the project was subject to its jurisdiction pursuant to the Federal Power Act (navigability and interstate commerce), PP&L commenced licensing in accordance with the FERC order dated August 8, 1989. PP&L initiated first stage consultation in April 1990. On December 27, 1990 FERC issued extension for filing license until August 1993. The agencies requested PacifiCorp to investigate screening the powerhouse intake and set adequate minimum flows to allow fish passage. PP&L initiated limited study scoping consultations in September 1992. PP&L requested FERC dispute resolution on need for instream flow studies. FERC agreed with the agencies and determined that Instream Flow Incremental Methodology studies would be required. PP&L announced it was no longer interested in operating the project and shut the project down June 30, 1993. Project ownership was subsequently transferred to SWCD which initiated licensing efforts under FERC docket P-11429, and again under FERC docket P-12574.

North Santiam River/Santiam – The proposed project would involve restoring an existing powerhouse (former PP&L) on the Stayton Power Canal. The SWCD owns and operates the Stayton Power Canal, which also provides water for irrigation and other purposes. The SWCD subsequently purchased the generating facility after PP&L abandoned its efforts to obtain a FERC license in 1993. The SWCD filed a Preliminary Permit Application with FERC in August 1993. The fisheries agencies filed comments identifying minimum flows, passage, water quality and screening of the power canal as the issues of concern. FERC issued a preliminary permit to SWCD in January 1994. The Initial Consultation Package was issued in April 1995. SWCD proposed to provide additional flows for upstream fish passage in the diversion reach of the North Santiam with “stored component” of Detroit Reservoir discharge and to reserve natural flow for irrigation and power generation up to capacity of canal. The Preliminary Permit expired in January 1997 and SWCD never filed a license application with FERC. In May 2017 the SWCD filed an application with WRD to lease all of Certificate 30336 as a split season instream use.
WRD approve the lease in April 2018. The current lease will terminate on October 31, 2022. See project 12574.

**12574 Stayton - SWCD**

*WRD – PC 12, Certificate 30336, IL 1191, SL 40*

*FERC - Exemption Application Withdrawn March 2011*

**North Santiam River/Santiam** – The proposed project is the same powerhouse on the Stayton Power Canal that the SWCD attempted to license under FERC 11429. In 2004, the SWCD completed construction of a fish screen for the entire canal near the canal head gate and constructed an upstream fish passage barrier on the lower end of the power canal in anticipation of obtaining a FERC authorization to operate the powerhouse. In February 2005, the SWCD filed an application with FERC for a “conduit exemption.” On January 8, 2007, FERC determined that the proposal did not qualify as a conduit facility under the Federal Power Act because the facility is an integral part of a dam and the additional flows diverted into the power canal would be used for the sole purpose of producing power. The SWCD proposed to FERC to convert its conduit exemption application to a 5 MW exemption on June 18, 2007, and on July 18, 2007, filed revisions to the application to conform to the requirements of an application for a 5 MW exemption. FERC provided on March 2, 2011 Notice of Withdrawal of Application for Exemption from Licensing.

In May 2017 the SWCD filed an application with WRD to lease all of Certificate 30336 as a split season instream use. WRD approve the lease in April 2018. The current lease will terminate on October 31, 2022.

**9169 Thompson’s Mills – Oregon State Parks and Recreation Department (OPRD)**

*WRD – PC 70, T11753*

*FERC - Exemption Surrendered July 2011*

**Calapooia River/Willamette** - Exemption issued 5/13/86. Project located in historic Thompson’s Mills in Brownsville, near Albany. Small project converts mechanical turbine for grist mill to electrical generation. In June, 1993, owner expressed interest in developing hydro at Sodom Dam. In December 1993, OPRD investigated purchase of the mill for a state historic site and park. In December 1994, ODFW proposed flow management model to allocate flow between hydro, fish and irrigation needs. OPRD still interested in purchase, but did not receive funding for 95-97 biennium. In February of 1999, Legislative Concept 3625, proposed by Mr. Babbits, would require OPRD to purchase property with Measure 66 (Parks and Fish) lottery funds. SB 1287 was introduced in April 1999, which strongly recommended Oregon Parks and Recreation District (OPRD) purchase and required ODFW to purchase water rights if flows are needed for fish passage. Assignment of the project license from Mr. Babbits to OPRD occurs in March 2004. OPRD files a request to surrender the exemption with FERC in February 2008. However, FERC finds it patently deficient and rejects the application. In August 2010, (noticed by FERC in October) OPRD files another application to surrender the exemption. In November 2010, the fish and wildlife agencies intervene and file comments supporting dam removal and requesting expedited analysis by FERC to allow dam removal to occur in 2011 before financial grants expire. In a letter issued in April 2011, FERC declares that it only has jurisdiction over the Thompson’s Mills building and generating unit and not over Shearer and Sodom dam. Based on its determination of limited scope of jurisdiction, FERC also terminates ESA consultation. FERC
issues order accepting surrender of exemption on July 27, 2011. OPRD files decommissioning plan with FERC on August 17, 2011. Shearer and Sodom dams removed in summer 2011. FERC issued July 3, 2013 notice that all terms and conditions of the surrender order had been satisfied.

![Historic Thompson’s Flouring Mill near Shedd, OR](image)

14145 Two Girls Creek – Pacific Green Power, LLC
**FERC - Integrated Licensing Process Terminated April 2013**

**Two Girls Creek / South Santiam** - On April 1, 2011, Pacific Green Power, LLC filed a Preliminary Permit Application, proposing to study the feasibility of the Two Girls Creek Hydroelectric Project, to be located on Two Girls Creek, near Sweet Home, Linn County, Oregon. FERC terminated the Integrated Licensing Process (ILP) on March 22, 2013 because of lack of due diligence in preparing study plans. FERC canceled the Preliminary Permit on April 17, 2013.

14626 Two Girls Creek – Green Volt Hydro, LLC
**FERC - Preliminary Permit Canceled August 2015**

**Two Girls Creek/Willamette** - On June 20, 2014, Green Volt Hydro, LLC filed a Preliminary Permit Application (PPA) proposing to study the feasibility of the Two Girls Creek Hydroelectric Project, to be located on Two Girls Creek near Sweet Home in Linn County, Oregon. The proposed project would consist of the following new facilities: (1) a weir with screened intake; (2) a 19,365-foot-long, 30 to 36-inch-diameter high density polyethylene (HDPE) penstock; (3) a 50 feet by 40 feet concrete block powerhouse with a single Pelton turbine/generator unit rated for 5 megawatt at 1,606 feet of net head; (4) a 1,000-foot-long, 60-inch-diameter HDPE tailrace conduit; (5) an underground 7.2-mile-long, 12-kilovolt (kV) transmission line connection to an
existing transmission line (the point of interconnection); (6) a 40-feet-wide right of way access road; and (7) appurtenant facilities. FERC canceled the Preliminary Permit on August 12, 2015.

**13661 Walterville Headgate – Coastal Hydropower, LLC**

*FERC - Preliminary Permit Withdrawn January 2011*

Walterville Canal/ McKenzie – Preliminary Permit Application filed with FERC in February 2010. NMFS, ODFW and OWRD file notices of intervention. EWEB files motion to intervene and a competing PPA. Coastal Hydropower withdrew its PPA in January 11. The project would have been located on the head gate of Walterville Canal, consisting of three generating units having a generating capacity of 1.5 MW.

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**Northwest Watersheds**

Active State Licensed Projects (Non-FERC)

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**HE 298 Barrowcliff - Triple-J Power Company**

*WRD - Certificate 76856 expires December 2021*

Whiskey Creek/Parsons Creek - The project diverts up to 4.0 cfs near Marcola, for the development of 27.27 theoretical horsepower (thp). Fish are present, and diversion screened. The water right certificate requires a minimum flow of 0.2 cfs in the stream channel at the point of diversion from June 1 through October 31, whenever the generation facilities are in operation.

**PC 898 Bear Creek Watershed – City of Astoria**

*WRD – Certificate 89004*

Astoria Municipal Water System – The City of Astoria’s Municipal Water System originating within the Bear Creek Watershed encompasses a total of seven diversions; three reservoirs and four stream diversions. The City has an existing water right Certificate 82236 for use of water from Bear Creek and Bear Creek Reservoir, tributary to the Columbia River, for municipal uses.

The project is constructed within the City’s existing municipal water system. Water diverted from the Bear Creek Watershed travels to a water treatment plant. After being treated, the water is discharged into a 21 inch diameter steel pipe at the top of Bear Creek Dam and descends approximately 100 feet in elevation to where a hydroelectric turbine is housed. The turbine can use up to 6 cubic feet per second (cfs) of water for hydroelectric generation, and provides approximately 68.2 thp of capacity. After the water passes through the turbine the
water continues to the City of Astoria’s existing water supply system for distribution for municipal use. The hydroelectric works are located on the downstream face of the dam include: a vault to house the turbine, an alternator, a power conversion system, and other accessory equipment.

ODFW review determined that fish screening would not be required through the hydro license since fish did not have access to the turbines. However, due to water being diverted for the project from the Bear Creek Dam reservoir, the lower-most reservoir in the system, ODFW determined that either fish passage or a fish passage waiver be provided. A fish passage waiver would require mitigation for 15 – 20+ miles of historic Chinook, Coho, steelhead habitat, Pacific Lamprey, and cutthroat trout habitat. The City of Astoria sought an Astoria-specific fish passage rule change from the legislature to allow a process to proceed with the project without providing fish passage or a fish passage waiver.

In 2013, Senate Bill 837 was adopted by the legislature amending ORS 543.765 allowing the means for the City of Astoria and others to receive a certificate from the Water Resources Department to use water for hydroelectric purposes within an artificial system through an expedited application process requiring certain certificate conditions and an annual fee. The City is required to pay an annual Fish Passage Restoration fee of one hundred dollars as identified in Senate Bill 837 in lieu of providing fish passage or pursuing a waiver to fish passage at the project. The Project has been constructed and is operating. The Project first started under FERC 13881. In November 2013, FERC determined that the project met qualifying conduit hydropower facility criteria and is not required to be licensed under Part 1 of the Federal Power Act (CD13-6).

HE 355 Belknap Creek – George Wheeler
WRD – Certificate 76928 expires December 2021

Belknap Creek tributary of Muddy Creek. The project is authorized for 0.05 cfs for 10.0 thp. No fish and wildlife issues identified.

HE 552 Blacklaw - William Blacklaw
WRD – Certificate 80676 expires April 2024

Unnamed tributary to Parrott Creek - Project diverts up to 1 cfs of water from irrigation reservoir. Dam is twelve feet in height with a total capacity to 8.5 acre feet. Wildlife issues identified. The project can generate up to 17.1 thp for domestic and agriculture use.

HE 533 Boulder Creek/McKenzie River - Gary Keable
WRD – Certificate NA, license expires December 2040

Boulder Creek tributary to McKenzie River – Project diverts up 5.3 cfs to develop 6.8 thp utilizing a gross head of 11.2 ft. Fishery issues identified and mitigation provided included a 2 cfs minimum flow, aid to upstream fish passage, and habitat enhancement structures in the bypass reach to be maintained for the duration of the license.
HE 247 Breitenbush River - Breitenbush Retreat Center  
WRD – Certificate 79172 expires December 2020

Breitenbush River tributary to North Santiam River - The project diverts up to 35 cfs for 67.6 thp. Fish and wildlife issues identified. The licensee installed and maintains fish screening. The project is currently undergoing HART review for reauthorization. Spring Chinook are now being released in the Breitenbush River, and ODFW is working with the retreat center to remove an instream concrete diversion associated with the project.

HE 241 Bronson Creek - Robert and Robin Stern  
WRD – Certificate 76688 expires December 2020

Bronson Creek/Chehalem Creek/Willamette River - The project is authorized to divert up to 4 cfs for 8.0 thp. Fish concerns identified. The water right conditions require an ODFW approved roughened channel fishway on the south side of the dam and include flow control and a staff gauge. The project water wheel must have at least one and one-half inches of clearance between the wheel and the bottom of the flume. Stream flow must be routed down the fishway when the project is not in operation.

HE 249 Chehalem Creek - Clarence Billette  
WRD – Certificate 76689 expires December 2020

Unnamed tributary of Chehalem Creek/Willamette River - utilizes 0.50 cfs for generation of up to 8.5 thp for domestic use. No fish and wildlife issues identified.

HE 293 Cherry Creek - Contact: Josh Fredricks  
WRD – Certificate 77010 expires December 2021

Cherry Creek/Muddy Creek/Willamette - The project diverts up to 3.4 cfs to develop 14 thp. No fish and wildlife issues identified.

HE 408 Clawson - Michael Clawson  
WRD – Certificate 87209 expires December 2031

Unnamed Tributary to Beaver Creek/Clatskanie - Project was originally licensed in December 1982. Generates 6.7 thp for own use. Wildlife Issues Identified. Uses 0.35 cfs, which will be restricted for use only outside low flow time period.

PC 894 Corbett Water District – City of Corbett  
WRD - Certificate 89005

North and South Gordon Creeks/Sandy - From North Gordon and South Gordon Creek the Corbett Water District supplies water to its water treatment plant for subsequent distribution to its municipal service area customers. Corbett applied for a minor (1.5 megawatt or less) hydroelectric project at its water treatment facility. The project consists of installing a 10 kilowatt turbine within the conduit at the entrance to the existing water treatment plant. Through net metering, the project will offset a portion of the electrical power requirements for
the water treatment plant. Fishery issues identified. The District was issued a water right in December of 2013. Corbett has successfully installed and is operating a Farmers Conservation Alliance screen at both their North and South Gordon Creek Diversions. In addition, the South Gordon Creek diversion structure has been removed with volitional upstream fish passage provided past the South Gordon Creek diversion site. Corbett planed on removing the diversion structure as well as providing volitional upstream fish passage past its North Gordon Creek Diversion site by 2018; however, this has not been accomplished. Corbett applied to OWRD in October 2011 for a certificate to use water for hydroelectric purposes in an artificial delivery system under its existing water right (ORS 543.765). WRD issued the certificate in December 2013.

In May 2013, Corbett filed a license application with FERC which was assigned FERC number 14322. However, on August 9, 2013, the Hydropower Regulatory Efficiency Act of 2013 was enacted, which included provisions exempting certain qualifying conduit hydropower facilities from the requirement to obtain a license. In September 2013, Corbett filed a Notice of Intent to Construct a Qualifying Conduit Hydropower Facility. The project was found to be consistent with the statutory criteria for a qualifying facility and a written determination was issued by FERC in November 2013. The Project qualified as a conduit hydroelectric facility under FERC (CD13-5) and was not required to be licensed under Part 1 of the FPA.

Project is constructed and currently operating.

HE 545 Cronin Creek - Jack Ericson
WRD – License expires December 2034

An unnamed spring on Cronin Creek a tributary to the Nehalem River - Project uses up to 0.32 cfs of water for the purpose of generating 5.2 thp. No fish and wildlife issues identified.

HE 318 Deep Creek/Tributary to Clackamas River - Angela Porter
WRD – Certificate 81901 Expires March 2021

Deep Creek/tributary to Clackamas River – Project licensed on April 18, 1981 and generates 3.2 thp for domestic use. Fish concerns identified. Fish screen and ladder required. Water right is not to exceed 2.9 cfs. The project certificate was issued in 2006, which appears to have corrected the 2001 certificate. Certificate conditions included a requirements for fish screen and ladder within one year of reauthorization. The project is currently under review by HART for reauthorization. Fish screens and passage may not have been addressed. The HART is planning a site visit.

HE 579 Digger Mountain - Digger Mountain Forestry LLC
WRD – Certificate 83638 expires December 2027

Unnamed tributary to the Alsea River – The project diverts 0.11 cfs to generate 1.52 thp. No fish and wildlife issues identified.
HE 581 Gilberts Creek - Rodney Trammel  
**WRD – Certificate 83866 expires December 2027**

*Gilberts Creek/Coast Creek/Willamina Creek* - Maximum of 5 cfs of water that can be diverted based on amount of flow in creek. The Project can generate up to 23.3 thp for residential use, with excess power sold to the local utility. Fish concerns identified. Require run of river operation with diversion screened to criteria.

HE 549 Gunderman - Lucien Gunderman  
**WRD – License expires December 2022**

Project utilizes up to 4 cfs from two existing farm irrigation reservoirs. An additional small reservoir assists with water delivery to powerhouse. The water source is from unnamed springs and rain runoff. Fish concerns identified. Operates without restrictions from November 1 through April 30; operates with restrictions due to water temperature concerns from May 1 through October 31. Ramping rates specified and fish screen installed. Project generates 56.81 thp for residential use with excess sold to McMinnville Water and Light.

HE 558 Gunderman - Lucien Gunderman  
**WRD – Certificate 81154 expires December 2022**

Unnamed tributary to Baker Creek - After issuance of HE 549, owner determined not enough water to generate power as planned. Applied and approved 1 cfs from unnamed tributary. Operation restrictions are in effect and generation remains restricted to use of up to 4 cfs. Applied for and received ODFW Fish Passage Waiver. Waiver mitigation items implemented.

HE 584 Gunderman - Lucien Gunderman  
**WRD – Certificate 84947 expires December 2022**

Unnamed tributary/Snake Creek tributary/Baker Creek - Diverts up to 1 cfs from unnamed intermittent tributary; project remains limited to 4 cfs. No fish and wildlife issues identified. Use restricted from November 1 through April 1.

HE 542 Hatchery Creek - George Reinmiller  
**WRD – License expires December 2034**

Hatchery Creek and Unnamed spring – Project uses up to 0.06 cfs from Hatchery Creek and 0.02 cfs from and unnamed spring to generate 2.5 thp. Fish are present and the diversion is screened.

HE 351 Honeyman Creek - John Vardanega  
**WRD – Certificate 80948 license expires December 2021**

Honeyman Creek/Scappoose Bay - Project originally licensed on November 18, 1981; reauthorized on September 24, 2004. Fish issues identified. Fish screen and fish ladder required. Project generates 9.0 thp to sell to a public utility.
HE 313  Kane Creek - Von Family Limited Partnership - Lorene Von  
WRD – Certificate 76825 and 79500 expire December 2021

Kane Creek and Unnamed tributaries to Panther Creek. HE 313 and HE 517 were combined into a single project HE 313. HE 517 is no longer in effect or force. Project uses up to 4.0 cfs for the generation of 95 thp. No fish and wildlife issues identified. A minimum flow of 0.25 cfs is required to be left in the stream year round per written agreement with ODFW (October 1985).

PC 97  Lake Oswego – Lake Oswego Hydroelectric Project - Lake Oswego Corporation  
WRD – Certificate 29248

Lake Oswego with water appropriated from the Tualatin River allows for the use of 57.5 cfs to generate 588 thp. No fish and wildlife issues identified.

HE 251  Mill Creek Race - Mission Mill Museum - Sean O’Harra  
WRD – Certificate 78316 expires December 2020

**Mill Creek Race/Willamette** - Project utilizes 50.0 cfs of the Mill Creek Race for the generation of 150.0 thp. The water right holder was required to install a NMFS criteria fish screen, but the requirement could be waived if the City of Salem installed a screen on the entire Mill Race within three years of license renewal date (December 1999). The requirement for a screen could be reinstated if the City of Salem did not provide a satisfactory intake screen for the Salem Mill Race as planned. The City of Salem constructed a fish screen where the Mill Race is diverted from Mill Creek. Because the museum no longer operates the turbine, maintenance of the screen is lacking, and an inspection by ODFW in March 2015 found extensive debris build up, high head across the screens, and likely exceedance of the approach velocity criteria. ODFW will follow up with WRD regarding the status of the water right in regards to the project no longer being operated and issues regarding screen maintenance. The project is currently under review by HART for reauthorization. The museum is evaluating the cost of rehabilitating the turbine for operation and educational value. ODFW conducted a site visit to the screen with staff from the City in February 2019. The screen is not being operated to meet criteria. The ODFW Screening Program is working with the City to make improvements and modifications to the screen. Reauthorization will be dependent on screen improvements.

HE 571  Mill Creek Reservoir - Oregon Department of Fish and Wildlife  
WRD – Certificate 81670 expires December 2025

**Mill Creek Reservoir a tributary to the Yaquina River** – The license allows the use of 0.06 cfs to generate 0.34 thp to be stored in batteries to operate a fish trap and to collect juvenile salmon migrating downstream. Fish are present and intake screened.

HE 266  Minikahda Hydropower Co. LLC - Steve Sanders  
WRD - Certificate 78317 and 81399 (issued June 2005) expire December 2021

**Minikahda Creek/Clear Creek** - Project originally licensed on August 12, 1980 and reauthorized in October 2001. Project generates 98.8 thp for sale to public utility; water right not to exceed
3.22 cfs. No fish and wildlife issues identified. Generation of power limited to December 1 through June 1 each year.

HE 598 Norris Creek - Beverly Johnson
WRD – Certificate 87916 – expires December 2033

Norris Creek/Powder Creek - The maximum amount of water to be diverted is 0.67 cfs during the season of November 1 through June 1 of each year. Power generated will be for residential use. Fish issues identified, diversion screened.

HE 595 Opal Creek - Opal Creek Ancient Forest Center
WRD – Certificate 87334 expires December 2031

Flume Creek/ Battle Ax Creek/ Opal Creek/ Little North Santiam River - Project utilizes 1.25 cfs of the waters of Flume Creek, a tributary to Opal Creek. The project generates around 18 kW of electricity. All power produced is use exclusively by the Opal Creek Ancient Forest Center, which is not connected to a public electrical grid. No fish and wildlife issues identified.

HE 242 Potterf Crystal Reservoir - James L. Potterf
WRD – Certificate 76782 expires December 2020

Crystal Reservoir/Crystal Creek/Champion Creek – Project can use up to 3.55 cfs for 110.0 thp at two sites. ODFW determined that fish screening and upstream passage were not necessary; no other fish and wildlife mitigation measures were required. HE 248 combined with HE 242 (248) and the license was reassigned to James Potterf from the original licensee, Guy Leabo.

HE 526 Porter Puddin Rock Creek - Juanita Porter
WRD – License expires December 2040

Puddin Rock Creek tributary to Martin Creek - Project diverts up to 1.29 cfs to generate 31.8 thp. No fish and wildlife issues identified. A minimum flow of 0.30 cfs is required to be kept in the Creek at all times. Project is currently not in operation, with all instream components removed, and property has been sold: Water Resources Department is following up on this for confirmation; however, it is still considered non-cancelled in WRIS data (2019).

HE 287 Martin Rough Creek - Lynn Martin
WRD – Certificate 77034 expires December 2021

Rough Creek/McKenzie - The project diverts up to 4.5 cfs for the development of 4.0 thp. The water right holder was conditioned to require fish screening facilities as required by ODFW. Fish issues identified. Fish screen with ¼ inch mesh approved in 1980; no record of upgrade during reauthorization in 2001.
HE 278  Roush SWCD Canal - Toni M. Roush  
**WRD – Certificate 76625 expires December 2020**

**Santiam main canal/North Santiam River** - The project is authorized to divert up to 70.0 cfs from the North Santiam River via the Santiam Water Control District’s Main Canal, in the City of Stayton, to develop 66.0 thp. The project was reauthorized in 2000. The water right conditions (7) required modification or replacement of the existing intake fish screen to conform to NMFS criteria. This condition could be waived by OWRD’s Director, at the request of ODFW, if the SWCD completes its screen at the head of the SWCD Irrigation Canal within one year of the license renewal date. In such event, the existing screen could remain operational until the new screen is operational. Water Right condition 9 required maintaining and operating the existing rotary tailrace barrier, as approved by ODFW (July 3, 1993), unless the operation or structure is modified by written agreement with ODFW. Any subsequent agreements are to be submitted to WRD to become part of the WR certificate. The SWCD canal is fully screened and includes an adult barrier, but there is no written record of de-activation of the fish screen and tailrace barrier. The project is currently under review by HART for reauthorization.

HE 260  Fery SWCD Canal - Lloyd F. Fery  
**WRD – Certificate 76783 expire December 2021**

**Santiam main Canal/North Santiam** - The project diverts up to 70.0 cfs for the development of 67.7 thp. The water right conditions of the 2001 reauthorization (7) required replacement of the existing intake fish screen to conform to NMFS criteria. This condition could be waived by OWRD’s Director at the request of ODFW, if the SWCD completes its screen at the head of the SWCD Irrigation Canal within one year of the license renewal date. In such event the existing screen could remain operational until the new screen is operational. The screening situation should be confirmed during the upcoming HART reauthorization review for 2021.

HE 576  Suter Creek - Contact: David and Mary Bugni  
**WRD – Certificate 83515 expires December 2027**

**Suter Creek tributary to North Fork Eagle Creek on the Clackamas River** - Project diverts up to a total of 3 cfs from November thru April 30 of each year. The Project was authorized in 2007. The Project can generate up to 12 thp for private use with excess being sold to the local utility. Fish issues identified with diversion screened to criteria and run of the river operation.

HE 319  Tenmile Creek Unnamed Tributary - Hans D and J Karin Radtke  
**WRD – Certificate 76816 – expires December 2021**

**Unnamed stream tributary of Tenmile Creek** – Project licensed for 1 cfs to generate 9.5 of thp. Project reauthorized in 2001. No fish and wildlife issues identified.

HE 384  Unnamed Tributary to Luckiamute – Zenczek Living Trust  
**WRD – Certificate 79462 expires December 2022**

**Unnamed Tributary to Luckiamute River** - Project licensed for 1.12 cfs to generate 15.9 thp. No fish and wildlife issues identified.
HE 547 Unnamed Tributary to Tenmile Creek - Celia Cade
WRD – Certificate 80859 expires December 2025

Unnamed stream a tributary to Tenmile Creek – the Project was authorized in 2005 and diverts up to 0.30 cfs to generate 5.45 thp. No fish and wildlife issues identified.

HE 586 Unnamed Tributary to Salt Creek - Steve Lozott
WRD – Certificate 85917 expires December 2029

Unnamed tributary to Salt Creek - Project uses 0.09 cfs for the generation of 1 thp. No fish or wildlife issues identified. Generation is allowed from November 1 through April 30 of each year. Power generated will be used for residential use.

HE 582 Wilkerson Creek - Paul and Patricia Jordan
WRD – Certificate 85001 expires December 2028

Wilkerson Creek tributary to the Willamette River – The license allows for diversion of up to 2.16 cfs to generate 2.21 thp. Fish are present requiring a fish and a minimum flow of 1.0 cfs to remain in the creek. The project will not divert more than 50% of Wilkerson Creek flow. The point of diversion is screened and a flow measuring weir was installed.

HE 376 Swanek – aka McDougal
WRD – expired December 2004

Bear Creek/Coyote Creek/Long Tom/Willamette – Original water right issued with 1981 priority date. WRD extended expiration date in 2007 for one year, and again in 2009 through 2010. WRIS indicates the water right expired in December 2004. No additional extension or authorized use is indicated.

HE 379 Woodcock Creek - Phillip Wurst
WRD – expiration extended until December 2011 (is considered non-cancelled as of 2019)

Woodcock Creek/Molalla – Project operating, state license HE 379 issued in 1982; expired December 31, 2002. FERC application for exemption filed a number of times under P-11423 and p-11414, the latest was in 1993. FERC exemption not granted. Fish and wildlife concerns identified. Project has not operated in years; needs to be re-licensed or terminated and decommissioned. WRD extended deadline to relicense in December 2010 until December 2011. No additional extensions have been authorized by WRD
Southwest Watersheds
Active FERC/WRD Project/Applications
Hydropower Coordinator:
Jason Brandt
Oregon Department of Fish and Wildlife
4192 North Umpqua Highway
Roseburg, OR 97470
Voice: 541-440-3353  Fax: 541-673-0372  email: Jason.R.Brandt@state.or.us

7161  Galesville - Douglas County Water Resources Survey (DCWRS)
Contact: Josh Heacock (541) 440-4255
WRD – PC 875, Certificate 67355
FERC - License expires 2034

Cow Creek/South Umpqua – 1.8 MW powerhouse at Galesville Reservoir upstream from Azalea, Oregon. Project storage used in part to enhance Cow Creek stream flows for fish life. The project includes a fish trap at base of dam to capture and haul Coho and steelhead. A 50-year FERC license was issued June 1984. Annual coordination meetings held each spring to negotiate target flow releases. DCWRS annually funds 60,000 Coho smolts at Rock Creek Hatchery; five-year mitigation plan completed in spring of 1998. ODFW completed a 3 year accumulation projects (2015) in which smolts were placed in net pens, held for several weeks, then volitionally released. ODFW staff monitors adult returns to the fish trap facility each year. DCWRS has completed several minor repairs to the fish ladder and capture facility (2013-2014). DCWRS has been objecting to ODFW’s releases juvenile Coho salmon for recreational trout fisheries in Galesville Reservoir. DCWRS was concerned that the salmon releases could lead to a FERC license reopener and a potential fish passage trigger, or at the time of relicensing, a requirement to construct fish passage. Both ODFW and NMFS provided letters in 2017 to the Douglas County Commissioners stating respectively 1) release of the fish is not a trigger for fish passage, and 2) the releases are entirely consistent with the original Reservoir Fishery Management Plan. Douglas County continued to object and ODFW stopped releasing Coho in the reservoir.

6579  Little Butte Ranch – Bill Smith
Contact: Bill Smith 541-826-7386
WRD – HE 500, Certificate 83611 expires December 2027
FERC – Exemption no expiration

North Fork Little Butte/Rogue – The project is located on the North Fork Little Butte Creek, a tributary to Little Butte Creek, which enters the Rogue River near Medford. The project diverts up to 12.5 cfs to generate approximately 29 KW. FERC issued an exemption in1982. ODFW’s project files suggest that ODFW did not receive a copy of the application for exemption and
therefore did not file conditions. The USFWS filed a comment letter that included requirements for screening, passage, and bypass flows. ODFW was involved in the state process for obtaining a hydroelectric water right and entered into an agreement (August 1981) with the original applicant for screening, passage, and bypass flows of 20 cfs instream from October to April and 40 cfs from May to September. The project could not operate until an approved fish screen was installed. In 1992 an updated design was approved by the ODFW district office but was not installed. Beginning in 1994 and concluding in 2003, ODFW Hydropower Program staff spent considerable time working with Mr. Smith on screen designs with review from ODFW engineers and screen shop technicians, NMFS, USFWS, CDFW, and FERC. The screen was installed and became operational in September 2003. ODFW was able to cost-share the screen because Mr. Smith consolidated his irrigation and hydropower points of diversion. The project should be visited at the next FERC inspection to ensure that the fish screen is being properly maintained and bypass flows are being monitored and documented.

6595 Mountain Energy Inc – Jack Goldwasser
WRD – HE 398, certificate 83990 expires December 2028
FERC – Exemption no expiration

Lake Creek/Sucker Creek/Rogue – The project was issued a state hydroelectric license in 1982. The project can utilize up to 5.0 cfs to develop 99 thr. The project was reauthorized in 2008. Water is diverted by a 6-foot high dam to a pipeline. After generation the water is returned to Lake Creek. FERC issued one prescription under 30(c) which requires the exemptee to compensate ODFW for any loss of fish and wildlife from project construction and operation. ODFW and FWS original review of the project indicated no effects to fish; however, during an inspection in 1989, ODFW documented the presence of cutthroat above and below the project. A condition in the water right certificate requires the owner to keep the fish screen free of debris; however, there no documentation of a criteria screen being built.

8704 Nichols Gap – Eagle Point Irrigation District
Contact: David Ford (541) 826-3411
WRD – HE 507, Certificate N/A, and PC 858
FERC – Exemption no expiration

South Fork Little Butte Creek/Rogue – FERC issued and exemption in 1985. Run of the river project operates seasonally between October and April. Diversion ranges from 17 to 85 cfs, and the project has a generation capacity of 800 kW. Fish should not be found in this reach of irrigation ditch. In 1995 ODFW consulted with operator on 2 cfs bypass flow for wildlife riparian habitat and need for raptor-proofing power lines. EPID has two hydroelectric projects on the irrigation canal. The first is PC 858 with water right certificate 31970 for 100 CFS from Big Butte Creek allocated by the Legislature under ORS 538.430, and having a priority date of July 5, 1957. The project is operated and maintained by PacifiCorp with no apparent FERC jurisdiction. The second project is HE 507, The Nichols Gap Project, which diverts up to 85 CFS from the tailrace of the PacifiCorp operated project during the non-irrigation season of the year and is set to expire in 2021. EPID has asked that the Nichols Gap Project be reauthorized as a non-expiring permit, that it receive the priority date under ORS 538 and that it could use the entire 100 CFS
from the first project. The HART will evaluate the alternatives for reauthorization or amending
the PC.

1927 North Umpqua Projects - PacifiCorp
Contact: Steve Albertelli (541) 776-6676
WRD – HE 19 HE 20, HE 21, HE 23, Certificate B4409 expires November 2038
FERC- license expires – November 2038

North Umpqua River/Umpqua – The project complex includes Soda Springs, Toketee, and
Lemolo Reservoirs, eight diversion dams, a series of power canals, and eight powerhouses
distributed across the upper North Umpqua Basin in the Umpqua National Forest. The project
generating capacity is approximately 185 MW. The original FERC license was issued in January
1947 and expired in January 1997. The first stage consultation for relicense was initiated by
ODFW sent comments on DLA in November 1994 and identified fish screening, minimum flows
and fish passage as major issues. PacifiCorp submitted its final application to FERC in January
1995. In May 1995 PacifiCorp proposed a comprehensive Watershed Analysis Study to address
the agencies’ recommendations for additional studies, and to meet requirements for USFS
Special Use Permit. In April 1996 PacifiCorp held a meeting to solicit input on goals and
objectives for the analysis and FERC initiated scoping for an EIS. Beginning in mid-1996
PacifiCorp initiated Cooperative Watershed Analysis with development of Aquatic, Terrestrial,
Geomorphology, and Water Quality subgroups. The subgroups met at least once per month to
discuss and develop recommendations for project operation and natural resource protection,
mitigation and enhancement objectives. From August 1997 through October 1999 the Resource
(policy) Team met monthly to review work of the technical subgroups and to evaluate
management options to address major issues. In April 1998 PacifiCorp issued its Synthesis
Report (summary of watershed analysis). Through July 1999, no consensus was reached on
mitigation measures by Resource Team, and settlement discussions continued. In November
1999 PacifiCorp announced that it was pulling out of the settlement negotiations because it was
unwilling to accept the US Forest Service position that Soda Springs dam removal would be
required for consistency with the Forest’s Aquatic Conservation Strategy. Settlement
negotiations were reinitiated with the state and federal agencies, but without the conservation
groups.

A final settlement agreement was signed by ODFW, WRD, DEQ, USDA-FS, USFWS, NMFS, BLM,
and PacifiCorp and filed with FERC in June 2001. The settlement include comprehensive
measures to mitigate for project impacts, including increases in bypass reach flow, ramping rate
restrictions, spawning gravel augmentation, wildlife crossings over canals, creation of wetlands,
fish passage measures at Soda Springs Dam, tailrace barriers at Soda Springs and Slide
powerhouses, mitigation funding, and a fish passage waiver with the OFWC for Lemolo 1,
Clearwater 1 and 2, Toketee, and Slide Creek dams.

The FERC order approving settlement offer and issuing new license was issued by FERC in
November 2003.

In December 2003 the conservation groups filed a request for rehearing on the license order
primarily focusing on the USDA-FS application of its section 4(e) authority and to advocate for
removal of Soda Springs Dam. PacifiCorp also filed a request for rehearing and clarification to which the USDA-FS and ODFW filed letters of support.

In January 2004 FERC issued an order granting rehearing for further consideration.

In March 2004 FERC issued and order on the rehearing which denied the conservation groups request for rehearing and modified article 403 in response to PacifiCorp’s request for rehearing and clarification.

On May 24, 2004 the conservation groups filed an appeal with the U.S. Ninth Circuit Court of Appeals. In September 2005 the court ruled to affirm previous USDA-FS decisions and procedures for relicensing the project that were challenged in the appeal. No further appeals were filed and the license became final in October 2005.

2002: Resource Coordination Committee (RCC) formed with all the license signatory parties and PacifiCorp involved. Early implementation projects began along with Protection, Mitigation and Enhancement Measures.

2003: Instream flow implementation, Slide Creek Bypass reach Habitat Enhancement, Gravel Augmentation, Aquatic Connectivity, and Big Game crossings all were initiated.

2006: Stump Lake wetland and White Mule riparian restoration projects were completed. Final design plans were approved for the Soda Springs tailrace barrier, Fish Creek downstream screen, and the Fish Creek canal shutoff and drainage systems. The Long Term Monitoring (LTM)/Predator Control plan was also approved.

2007: Soda Springs tailrace barrier completed. Fish passage at Soda Springs dam begins. Fish passage at Lemolo 2 and Fish Creek diversion dams were upgraded. The Fish Creek fish screen was completed along with the canal shutoff and drainage sites. The Stump Lake Connectivity Invertebrate ladder was completed. A final plan was agreed upon for all Aquatic Reconnection sites on the project. Six new Wildlife Crossings were completed along with the Lake Creek wetland site. The Rock Creek Fish Habitat Enhancement project was completed.

2008: Soda Springs Fish Passage and Screen designs and pre-construction continued. Lemolo 2 Full-Flow Reach project design began. A technical working group (TWG) was formed to address the water quality issue at Lemolo Reservoir. A total of 24 wildlife crossings were completed on the project. Ranawapiti wetland was planned and approved. The LTM Plan collected substantial information (pre-ladder conditions) below Soda Springs Dam.

2009: Slide Creek tailrace barrier design began with a final conceptual report finished for review in 2010. Soda Springs ladder and screen designs were agreed to by the parties. The Lemolo Full-Flow Reach bypass pipe construction design continued. The Ranawapiti wetland was completed along with 24 wildlife crossings.

2010: Slide Creek tailrace Barrier designs were completed and approved. Construction on the Soda Springs Fish Ladder and Screens began 6/10. Toketee Trash Rack Modifications was designed and completed. The Lemolo Reservoir TWG began collecting data on trout and removal of tui chub. Lemolo 1 forebay wetland was completed in late fall. Poole Creek boat ramp was improved and lengthened at Lemolo reservoir. LTM/Predator Prey study continued as brown trout were captured in Soda Springs reservoir to determine both size at piscivory and population abundance.

2011: Slide Creek tailrace barrier construction began along with work on the Soda Springs fish ladder and screens. The Lemolo 2 Full Flow pipe, inlet structure, and outlet structure were
completed. The pipe bypasses generation flows directly into Toketee Reservoir. Anadromous fish habitat enhancement was completed in the North Umpqua River just downstream from the Soda Springs Dam. Several upstream v-weirs and gravel were reconstructed. The Stinkhole wetland project was completed near Toketee Reservoir. Habitat enhancement work continues in the Rock Creek basin as part of the MOU between PacifiCorp and ODFW. The LTM/Predator Prey study was put on hold as construction of the fish ladder and screens at Soda Springs hampers safe access to the reservoir.

2012: Construction was completed on the Soda Springs fish ladder and screens with a test run in October. Adult salmon were seen moving up the ladder and into the reservoir in November and December. The fish screen at the Fish Creek diversion dam was modified to improve the sweeping velocity. Aquatic Reconnect sites were selected with of the sites completed. Construction at the Rock Creek fish ladder was completed. The project was identified in the MOU.

2013: Hydraulic testing of the Soda Springs fish ladder and screens began and is expected to continue through 2014. Work in the Rock Creek basin continues as part of the MOU.

2014: Work to adjust the Soda Springs fish ladder and screens continued. A total of seven Aquatic Connectivity Sites were constructed on the Clearwater 2 and Lemolo 2 canal systems. The Stump Lake Potholes wetland site was designed and constructed in the late fall. Habitat enhancement work continued in the Rock Creek basin as per the MOU. The project was approved for issuance of a low impact certificate by the Low Impact Hydropower Institute (LIHI) on December 7, 2014. The expiration of the LIHI certification is December 7, 2022.
Middle & North Fork Rogue/Rogue – The original FERC license was issued in July 1980 (retroactive to 1965) and expired in July 2005. The Prospect Nos. 1, 2, and 4 (Prospect) Project, constructed between 1911 and 1944, consists of: three diversion dams that divert water from three separate locations (Rogue River, Middle Fork Rogue River, and Red Blanket Creek); a 260-acre-foot impoundment (North Fork reservoir) behind the North Fork diversion dam; a fishway on the Middle Fork diversion dam; a 6-mile-long canal that carries water from the Middle Fork diversion dam to the North Fork reservoir (Middle Fork canal); the Red Blanket canal (0.8 miles long) that carries water from the Red Blanket diversion to the Middle Fork canal; a 1.4-mile-long canal (North Fork canal) that carries water from the North Fork reservoir to the Prospect No. 2 forebay; and a surge tank and system of flowlines extending about 0.8 miles from the Prospect No. 2 forebay to the project’s powerhouses and then to the Rogue River; three powerhouses located at about river mile 169 of the Rogue River and containing four turbine generating units for a combined installed capacity of 41.56 MW.

PacifiCorp diverts up to 150 cubic feet per second (cfs) of water from the Middle Fork Rogue River through the Middle Fork canal. Water in the Middle Fork canal flows west-northwest from the Middle Fork diversion dam for 0.88 mile and is then joined by up to 150 cfs of water diverted from the tailrace of the Prospect No. 3 Project No. 2337 (located on the South Fork Rogue River). From there, the combined flow travels 2.72 miles to the Red Blanket canal junction where flows up to 75 cfs delivered from Red Blanket Creek by the 0.84-mile-long Red Blanket canal add to the flow in the Middle Fork canal. The combined flows then continue west-northwest for 2.37 miles to a point just upstream of the east abutment of the North Fork diversion dam, where the canal flow empties into North Fork reservoir.

Up to 1,050 cfs of water from the North Fork reservoir, which includes water from the Middle Fork canal, is drawn through an intake located at the west abutment of the North Fork diversion dam. The intake directs the water into the North Fork canal, which conveys the water southwest about 1.4 miles to the Prospect No. 2 forebay. From the Prospect No. 2 forebay, the water travels south 0.6 miles through two flowlines to a surge tank. At the surge tank, the water is divided and directed in two ways depending upon generation needs and availability of water. One route is through two penstocks that convey water to the Prospect No. 2 powerhouse, whereupon the water is discharged to the Rogue River. The second route is through a flowline a short distance to the Prospect No. 4 powerhouse. Water leaves the powerhouse through a short flowline that carries it to the Prospect No. 1 forebay. From the forebay, the water is directed into a 1,000-foot-long penstock to the Prospect No. 1 powerhouse, whereupon the water discharges to the Rogue River about 400 feet downstream of the Prospect No. 2 powerhouse.

PacifiCorp released its First Stage Consultation Document in January 2000. ODFW was the primary stakeholder with support from DEQ and USFWS. In September 1999 PacifiCorp requested the formation of a HART even though the project was not undergoing reauthorization because PacifiCorp held a non-expiring Power Claim (PC). The state agreed and formed a HART with WRD, DEQ, ODFW, and PUC. The main fish and wildlife issues for relicensing included fish
screens (no diversions were screened), fish ladders (only Middle Fork has a ladder, which needed upgrades), bypassed reach flows, ramping, synchronous bypass valve, and wildlife connectivity over canals. ODFW and USFWS recommended that PacifiCorp conduct relicensing studies for fish composition and abundance, fish entrainment, ramping, flow for bypassed reach using IFIM/PHABSIM, fluvial geomorphology, and wildlife connectivity. In lieu of conducting a fish entrainment study PacifiCorp committed to designing and constructing screens on its three diversions and fish ladders on Red Blanket and Middle Fork dams.

PacifiCorp issued it Draft License Application for review in October 2002. PacifiCorp informed the HART that essential information could not be collected, and studies could not be completed in time for inclusion in the DLA. The HART provided substantial comments and identified a number incomplete studies and missing information, including the lack of a proposal to construct or modify fish ladders under the proposed protection, mitigation, or enhancement measures. In May 2003 and before filing its FLA, PacifiCorp entered into an agreement with the Oregon Fish and Wildlife Commission to provide alterative mitigation instead of upstream passage at its North Fork Dam. PacifiCorp filed its FLA in June 2003 and upon ODFW’s request, filed a letter with FERC in August 2003 confirming and clarifying its commitment to provide new fish screens and ladders at Red Blanket and Middle fork diversions and a new fish screen at North Fork diversion.

In December 2003, FERC initiated scoping, with meetings scheduled for January 2004 and comments due in February 2004. In October 2004, FERC issued a public notice that the project was ready for environmental analysis and solicited comment, recommendations, terms and conditions, and prescriptions. In May 2005, PacifiCorp approached ODFW about resolving seven issues of concern: ramping rates, gaging, managing large wood, gravel augmentation, flow continuation valve, screens, and upstream passage. Two settlement agreements were developed. The final versions of these settlements covered five of the seven issues; however, screens and passage were not included. During settlement negotiations FERC issued its draft Environmental Assessment (EA) which did not adopt ODFW and USFWS recommendations for screens and passage, causing PacifiCorp to withdraw screening and passage from settlement. Two settlement agreements were executed in October 2006, 1) addressed ramping, management of large wood, and gravel; and 2) addressing resident trout with respect to unplanned outages at the Prospect No. 2 Powerhouse, and a study of resident trout and enhancement of their habitat upstream of Lost Creek Reservoir (side agreement). The former agreement was submitted to FERC, the latter was not. The side agreement provided mitigation funding at $100,000 per year for the first 5 years, and 2 separate payments of $250,000 each in years 8 and 10 of the new license.

In January 2005 the HART filed comments, including ODFW’s filing of 10(j) recommendations, as triggered by FERC’s notice of “Ready for Environmental Analysis”. In its DEA released in November 2005, FERC staff rejected ODFW’s highest priority recommendations to screen the diversions and construct fish ladders. In January 2006, ODFW filed detailed comments that were critical of the DEA, including concerns regarding the effects of artificial whitewater flow releases on aquatic resources. ODFW and USFWS participated in FERC’s obligatory meeting to resolve the issues of inconsistency over the rejected 10(j)s in Portland in February 2006. ODFW subsequently filed considerable information to support its rejected 10(j)s, particularly for screening and passage, and filed modified 10(j) recommendations to conform with the
settlement agreements. In September 2006, FERC issued its final EA, which continued to omit recommendations to provide fish screening and ladders. ODFW filed comments stating its objections to FERC’s analysis in the final EA, and reiterated concerns about the proposed artificial whitewater flow releases.

In April 2008, FERC released an order issuing new license. In 2009, as PacifiCorp was preparing to begin the artificial whitewater flow releases, ODFW filed a motion to postpone the releases, a notice of intervention, and a request for rehearing on FERC’s order approving the Whitewater Flow Release Plan. In September 2009 FERC denied ODFW’s request for rehearing, but the plan was modified in certain respects. In late 2008, ODFW hired two staff with the settlement funding to conduct resident trout studies in the project area. Field studies were conducted over a 4 year period. The information gathered was used to determine habitat enhancement locations and project designs. ODFW staff are currently continuing with habitat enhancement design and implementation with the existing funds (currently expected to last through 2021-22).

2337 Prospect #3 – PacifiCorp
Contact: Steve Albertelli (541) 776-6676
WRD – PC 720, Certificate 9688
FERC license expired December 2018, under annual license

South Fork Rogue River/Rogue –
Construction of the Project began in 1931, and the Project was placed in service on April 22, 1932. An original minor-part license (Federal Power Commission (FPC) No. 1163) was issued to California Oregon Power Company (COPCO) on July 30, 1931 for a period of 50 years. This minor license covered the upper Project facilities, including the diversion dam and approximately 4,000 linear feet of the flowline, located on lands administered by the federal government. The initial major-part license (FPC No. P-2337) covering the downstream facilities, including the remaining waterway, penstock, and powerhouse, was issued in July 1931 for a period of 30 years. COPCO merged with Pacific Power and Light on June 21, 1961, and the January 25, 1963 license application requested transfer of the license to Pacific Power and surrender of the minor-part license. By order dated July 8, 1964, the Commission issued a new license for the Project, including all Project facilities under one license for a period of 25 years. An application for a new license was submitted on December 24, 1985, and the current license was issued on January 30, 1989 for a period of 30 years beginning on the first day of the month of issuance.

The Project diverts up to 150 cfs from the South Fork of the Rogue at RM 10.5 to a 15,894-foot-long waterway. The South Fork Diversion Dam, located at River Mile 10.5 of the South Fork Rogue River, is a 172-foot-long, 24.7-foot-high concrete dam with a 98-foot-long, ungated ogee spillway. The powerhouse contains one generating unit with a rated capacity of 7,200 kW operating under a static head of 713.37. Water that is used at the Prospect 3 powerhouse is piped to the Prospect 1, 2, & 4 project (FERC 2630). The 1989 licensed required a modular intake fish screen on the canal and minor improvements to the fish ladder. ODFW approved both designs using the agency interim criteria. In May 1996, FERC issued order approving fish passage and evaluation plans. In October 1999, PacifiCorp conducted screen evaluation with assistance from ODFW. The evaluation report was filed with FERC in April 2000.
In July 2013, PacifiCorp filed its Notice of Intent to File an Application for New License and PAD. ODFW filed comments and study requests identifying minimum flow, ramping, fish screening, fish passage, and wildlife connectivity as the major issues for relicensing. FERC issued Scoping Document 1 in August 2013. PacifiCorp filed eight revised study plans with FERC in April 2014. FERC issued a study plan determination on May 27, 2014 approving seven study plans as filed by PacifiCorp and approving one study plan (Fish Passage Facilities) with FERC staff-recommended modifications. Ten Initial Study Reports were filed with FERC in May 2015, along with a notice that, with the exception of the Initial Study Reports for Cultural Resources, Fish Passage, and Water Quality, the study reports filed at that time presented the complete and final results of the approved study plans.

In August 2016 PacifiCorp submitted its Draft License Application (DLA), starting the 90-day review period. ODFW filed comments on the DLA within the 90-day comment period and identified differences in proposed mitigation measures, including; minimum flow, modifications to the existing fish ladder, improvements to the fish screen, upgrades to wildlife crossings; and provided specific comments regarding aquatic habitat surveys, stream geomorphology, fish distribution, and water quality. In December 2016, PacifiCorp filed its Final License Application that did not address key ODFW’s comments.

In October 2017, FERC issued its draft EA. FERC staff did not recommend adopting ODFW’s 10(j) recommendations for: (a) upstream and downstream fish passage and post-construction monitoring plan, (b) minimum flows, (c) timing of scheduled maintenance activities, (d) ramping rates, (e) flow continuation, and (f) wildlife crossing monitoring plan. In January 2018, FERC conducted its obligatory meeting with ODFW to attempt to resolve the 10(j) inconsistencies identified by FERC. In March 2018, ODFW filed additional information to support its 10j recommendations for upstream and downstream passage. In April 2018, FERC issues its Final EA and did not change its stance on upstream and downstream fish passage or minimum flows, and instead supported PacifiCorp’s licensing proposals.

In January 2018, ODEQ released its water quality certification (certification) for a 30-day public review. The certification included measures to address ODFW’s interests for minimum flows and potential improvements to the fish ladder hydraulics. In February 2018, PacifiCorp withdrew and refilled a revised application with ODEQ for certification. In February 2019, ODEQ issued a final Certification with associated Findings and Evaluation Report. PacifiCorp objected to several of the 401 conditions and requested a contested case hearing with the OEQC. ODEQ, ODFW, and PacifiCorp are currently attempting to resolve the issues associated with minimum flow and fish ladder improvements without going to contested case. ODEQ and PacifiCorp are also attempting to resolve objections over water quality monitoring and reporting requirements.

The project was approved for issuance of a low impact certificate by the Low Impact Hydropower Institute (LIHI) on December 31, 2014. The expiration of the LIHI certification is December 31, 2019.
Reeder Gulch - City of Ashland
Contact: Steven Hall (541) 482-3211
WRD – PC 871
FERC – Exemption no expiration

Ashland Creek/Rogue - Exemption issued by FERC in May 1981. The Project was retrofitted to existing reservoir and abandoned powerhouse. Water is released from City of Ashland municipal reservoir into Ashland Creek above Lithia Park. No fish or wildlife concerns identified by the agencies.

Southwest Watersheds
Inactive FERC Projects/Applications

The list below includes projects that have had licenses terminated or surrendered, facilities removed, or have had preliminary permits cancelled, denied or surrendered within the last 10 years. Other projects included below are for locations where repeated efforts have been made over the last 30-years which suggests that these locations are likely to be evaluated for project development in the future, e.g. pumped storage or existing dams.

Applegate Dam – AG Hydro, LLC
FERC – License terminated October 2014

Applegate River/Rogue – FERC issued a 50-year original license for the Applegate Dam Project on December 17, 2009. The project was to be located at the U.S. Army Corps of Engineers (Corps) Applegate Dam on the Applegate River near Medford, and would use the Corps’ dam, reservoir, and outlet works.

FERC issued Scoping Document 1 in March 2006 and ODFW filed comments in May 2006. In July 2006 FERC issued a notice of REA. ODFW filed comments and 17 section 10(j) fish and wildlife recommendations in September 2006. FERC issued its draft EA and a preliminary determination of inconsistency in June 2007. FERC determined that of ODFW’s 17 recommendations, 15 were found to be within the scope of section 10(j), and eight of the 15 10(j)s were not adopted, including ramping rate monitoring and reporting, downstream passage and post construction evaluation and monitoring plan, long term monitoring of salmonids, review of final fish facility upgrade designs, fish facility maintenance, emergency and special conditions, and environmental damage action plan. FERC’s rationale was primarily based on the cost, and inconsistency with the public interest standard and comprehensive planning standard. FERC issued a Final EA in May 2008. None of the inconsistencies were resolved by the agencies and
FERC at the required 10(j) meeting. During the 10(j) meeting, ODFW agreed to file additional information regarding plans to reintroduce anadromous fish species above Applegate dam, which was filed in January 2007. In the FEA, FERC adopted a requirement for a gage installation and reporting plan and downstream passage.

As a result of ODFW’s reintroduction plans for various anadromous species in Applegate reservoir, including winter steelhead and coho salmon, NMFS filed revised preliminary fishway prescriptions in March 2008 that require Symbiotics LLC (the original project developer) to provide for the safe, timely, and effective downstream passage of anadromous fish. As a result, FERC changed its recommendation and concurred with the agencies recommendations for downstream fish passage, but continued to reject upstream passage measures. In March 2010, Symbiotics, LLC filed an application with FERC for transfer of the license to AG Hydro, LLC, which FERC approved in May 2010. The license required the licensee to commence construction within two years, i.e. by December 17, 2011. In December 2011, the licensee filed a request for extension of the start of construction deadline. It noted in its request that the Corps had expressed concern with the analysis of the conduit lining design and that “more time is needed to complete the design and [Corps] review in order to start construction.” Commission staff granted a two-year extension (the maximum permitted under section 13 of the FPA), and the final deadline to start project construction became December 17, 2013. In February 2012, AG Hydro filed a draft of an application proposing to amend the license to eliminate use of the Corps’ intake structure and to instead construct a new intake structure. The filing explained that the Corps had determined that AG Hydro’s steel liner design was unacceptable and that the National Marine Fisheries Service had asked for major modifications to the project. During 2012, AG Hydro held a substantial number of meetings with the agencies to discuss and review proposals for new concepts to address downstream fish passage, ODFW provided over 1,000 hours of staff time. In May 2012, the Corps commented that AG Hydro’s changes proposed in the draft application were not feasible, and that “considerable effort remains to develop a feasible design [and] means of construction ....” AG Hydro did not file a response addressing the Corps’ comments and did not file a final amendment application. In November 2013, AG Hydro filed a letter purporting to “provide documentation of the construction activities associated with [project] development.” In December 2013, FERC issued a notice finding that AG Hydro had failed to commence construction by the statutory deadline and notification of the probably termination of the project license. In January 2014, AG Hydro filed response opposing termination and claiming it had started construction. FERC issued an order terminating the license in October 2014 disagreeing with AG Hydro that it had started construction within the deadline.

14647 Applegate Dam – Oregon Hydropower Energy, LLC
FERC – Preliminary Permit Cancelled April 2017

Applegate River/Rogue – OHP Energy filed an application for a preliminary permit shortly after FERC terminated the license issued to AG Hydro. FERC issued a preliminary permit in March 2015. The preliminary permit was cancelled in April 2017 after OHP Energy failed to provide a 6-month progress report.
Emigrant Dam – Talent Irrigation District (TID)
FERC - license surrendered March 1999

ODFW attempted to negotiate with TID to establish minimum flows of 10 cfs. TID proposal called for two powerhouses, #1 would have 180 cfs, 125’ head, and 1,710 kW; #2 would have 20 cfs, 175’ head, and 270 kW. TID attempted to get legislative reinstatement. In December 1996, FERC issued an order reinstating license and granting an extension to construct the project to May 1999. In January 1999, TID filed application for surrender of license stating that market and finance conditions are not favorable for project construction. FERC issued notice of surrender of license and requested comments, protests, and interventions in March 1999. In April 1999, ODFW and NMFS filed motions to intervene in support of surrender. FERC issued and order accepting the surrender with an effective date of May 1999.

Southwest Watersheds
Active State Licensed Projects (Non-FERC)

He 546 Allaire – Donald and Elizabeth Allaire
WRD – certificate 83691 expires December 2027

Williams Creek/Rogue – The project was authorized in December 2007, with the earliest priority date of June 1994. The project diverts water from two sources, 1.4 cfs from Right Hand Fork Rock Creek and 1.4 cfs from Rock Creek, for the development of 99 thp. One generating system operates using flow from Right Hand Fork Rock Creek with 160 feet of head generating 25 thp. The other generating system operates using flow from Rock Creek with 450 feet of head generating 74 thp. The latter system requires fish passage at the diversion structure and fish screens at the diversions (certificate condition 11). ODFW has not confirmed that the fish protection measures have been implemented.

He 238 Birdseye Ranch – Victor “Ted” Birdseye (formerly Mill-Mar ranch, Morley Pingle)
WRD – certificate 76673 expires December 2020

Geppert Creek/SF Rogue/Rogue – The project was originally authorized in 1976, and was reauthorized in 2000. The project is currently undergoing HART review for reauthorization in 2020. The project operates using 3.0 cfs to develop 20.0 thp. There are two points of diversion, the lower diversion includes a small diversion dam. ODFW has documented the presence of cutthroat in the project area during surveys in 1999 and 2011. For the reauthorization in 2000,
ODFW required fish screens to be installed on the diversions and the replacement of a culvert located downstream of the powerhouse. The water right holder was to consult with ODFW on designs. Based on ODFW’s 2011 surveys, it appears the fish screens were never installed (the old trash screens were still in place). A new culvert was installed in tandem with the existing culvert; however, there still may be fish passage issues associated with the culverts (see Upper Rogue River Trout Project, 2011 Results, 2012 Objectives- Harris et al.). Considerations for reauthorization in 2020, new fish screens, passage at the diversion dam (trigger under ORS 509.585), and assessment of fish passage at the culverts.

HE 574 Browns Gulch – Vernon Caldwell
WRD – certificate 82428 expires December 2026

Browns Gulch/Pleasant Creek/Rogue – The project was authorized in July 2006. The project can divert up to 0.5 cfs from Browns Gulch to develop 2.2 thp. ODFW’s fish distribution maps indicate that StS are found in Brown Gulch below the project area, and cutthroat trout are found within the project area. Condition 11 of the certificate requires that an ODFW criteria fish screen be installed on the intake prior to the project becoming operational. There is no record to confirm whether consultation on the screen design or installation has occurred.

HE 501 Calahan Long Gultch – David Calahan
WRD – certificate 83612 expires December 2027

Long Gulch Creek/Applegate – The project was originally authorized in 1984, and was reauthorized in October 2007. The project can divert up to 0.3 cfs from Long Gulch Creek to develop 6.13 thp. Condition seven of the certificate requires the owner to maintain the existing intake screens and to keep the screen free of debris to prevent impingement of fish.

HE 550 Carbajal - Poorman Creek
WRD – certificate 80860 expires December 2028

Poorman Creek/Rogue – The project was authorized in 2008. The project can divert up to 0.078 cfs from #1 Gulch, tributary to Poorman Creek, to develop 1 thp. ODFW did not identify any fish or wildlife concerns, and no specific protection measures were required.

HE 463 Grave Creek – James Hamilton
WRD – certificate 84021 expires December 2028

Grave Creek/Rogue – The project was first authorized in 1983. The project was reauthorized in 2008. The project can utilize up to 1.75 cfs from Grave Creek to develop 3.6 thp. Water is diverted by a three-foot high dam and conveyed by pipeline to the powerhouse which discharges to Grave Creek. Condition 7 of the certificate cites an October 1983 agreement between ODFW and the developer which requires fish screening, fish passage at the dam, and a 2 cfs minimum flow in Grave Creek. The agreement is part of the water right. There does not appear to be any record in ODFW’s files of a site inspection of the facilities associated with the reauthorization in 2008.
HE 237  John Pierce – Squaw Creek
WRD – certificate 76690 expires December 2020

Squaw Creek/Applegate/Rogue – The project was originally authorized in 1975, and was reauthorized in 2001. The project is currently undergoing HART review for reauthorization in 2020. The project operates by diverting flow from two unnamed tributaries. Stream #2 is the primary source and stream #3 is a supplemental source. The WRD license grants the right to appropriate not more than 0.8 cfs from the two streams. Project head is about 350 feet with 31.8 thp. After passing through the power plant the water empties into a pond, then flows into a ditch and then into Squaw Creek. Squaw Creek discharges into Little Squaw Lake adjacent to the property. ODFW did not identify any fish or wildlife issues.

HE 257  Lizotte Francis Creek – Ronald Lizotte
WRD – certificate 76686 expires December 2020

Francis Creek/South Umpqua/Umpqua – The project was originally authorized in 1980, and reauthorized in 2000. The project is currently undergoing HART review for reauthorization in 2020. The project is located on Francis Creek, a tributary to the South Umpqua River. The project can use up to 0.10 CFS for the development of 2.3 thp. In October 2018, the HART conducted a site visit and did not identify any resource or land use issues relevant to this project that would restrict operation or require alteration of the project. ODFW has determined that this is not a fish bearing stream at this location due to the steepness of the stream channel.

HE 471  Naomi F. D’Abbracci & Randal Cranor
WRD – certificate 83614 expires December 2027

Lake Creek/Sucker Creek/Rogue – The project was authorized in 1983. The license was issued in 1983 for a period of 21 years. The license terminated on December 31, 2004, and was reauthorize in 2007. The project can utilize 0.15 cfs from Lake Creek to develop 4.7 thp. In May 2007 the HART conducted a site visit during which the owner reported that no fish spawn or rear in the creek below the project. The intake pipe is screened with a filter that is replaced as needed. Condition 6 of the certificate requires the owner to keep the fish screen free of debris to prevent impingement; however, the filter on the intake is not a fish screen. ODFW should confirm fish distribution in this system. ODFW’s fish distribution map indicates there are cutthroat found throughout and Coho in the lower reaches.

HE 606  Oak Flat Creek – Karuna Property LLC
WRD – certificate 89103 expires December 2035

Oak Flat Creek/Illinois – The project was authorized in 2014. The project can utilize 0.1 cfs from Oak Flat Creek and an unnamed tributary to develop 2.5 thp. The certificate requires that between July 1 and October 31 use from Oak Flat Creek can only occur if a minimum flow of 0.1 cfs remains in Oak Flat Creek below the diversion and minimum flow of 0.05 cfs remains in the unnamed tributary below the diversion. Condition 7 of the certificate requires the diversions to be screened to ODFW criteria. ODFW’s fish distribution map does not show fish presence in Oak Flat Creek.
HE 350 O’Connor Creek, Illinois – Doloris Lloyd
WRD – certificate 83613 expires in December 2027

O’Connor Creek/Illinois River/Rogue – The project was authorized in 1982. The project can utilize up to 0.1 cfs from O’Connor Creek to develop 2.27 thp. The license was scheduled to terminate in December 2002. The project received several extensions due to extenuating circumstances, and in September 2004 the expiration date was extended to December 2007. The HART members conducted a site visit in May 2007. ODFW determined that no fish are present in the project area (confirmed with ODFW fish distribution map). The project was reauthorized in November 2007.

HE 537 O’Connor Creek – J. Robert Egan
WRD – certificate NA, expires December 2040

O’Connor Creek/Illinois River/Rogue – The project was authorized in 1993. The project can utilize up to 0.022 cfs in excess of the existing water right permit 36786 (0.01 cfs) to develop 0.25 thp. There is substantial ODFW correspondence in the headquarter files indicating ODFW’s concern over removing additional flow for hydropower from the stream channel. Articles 1, 2, 3, 4, and 5 appear to address the concerns raised by ODFW. Not allowing diversion for hydropower purposed from July 1 – November 1 appears to have addressed ODFW’s request to leave at least 0.02 cfs instream, i.e. by not allowing diversion during low flow periods.

HE 255 Ormsby Long Gulch Creek – Frank Ormsby
WRD – certificate 76633 expires December 2020, will decommission

Long Gulch Creek/Illinois River/Rogue – The project was authorized in 1980, and was reauthorized in 2000. The certificate will expire in December 2020 and the owner is not planning to reauthorize. The project can utilize up to 1.5 cfs from Long Gulch Creek to develop 24.9 thp. The owner reported that they ceased operation about 12 years ago. PacifiCorp removed the interconnect and the diversion facilities have been disabled.

HE 296 Paradise Lodge – Schleining
WRD – certificate 76876 expires December 2021

Johnson Creek/Rogue – The project was authorized in 1981, and was reauthorized in 2001. The project can utilize up to 0.17 cfs from Jackson A.C. Johnson Creek to develop 7 thp. The HART conducted a site visit in October 1999 for the last reauthorization, and ODFW concluded that fish were not present in the stream and fish screening, passage and fish flows were not necessary (Homolka memo October 28, 1999).

HE 614 Schoolmarm Creek - Sean Rarey
WRD – certificate 93869 expires December 2067

Schoolmarm Creek/Taylor Creek/ - The project was authorized in 2018. The project utilized up to 0.24 cfs from Schoolmarm Creek to develop 3.8 thp. A minimum bypass flow of 10 gallons per minute will be maintained. ODFW staff determined that the proposed hydroelectric project
is located on Schoolmarm Creek, a non-fish bearing tributary of Taylor Creek. No fish or wildlife issues have been identified.

**HE 578 Skookum Creek - David and Patty Jacobs**

*WRD – certificate 83894 expires December 2027, certificate 83606 cancelled*

**Skookum Creek/Rogue** – The project was authorized in 2008 under certificate 83894. The project can utilize up to 2.5 cfs from Skookum Creek to develop 99.4 thp. Certificate 83894 was issued to correctly identify the POD and the place of use and supersedes certificate 83606. Skookum Creek is a tributary of the Rogue River upstream from William L. Jess Dam. Anadromous fish are not present; however, ODFW’s fish distribution maps show cutthroat trout in the project reaches. Condition 11 of the certificate requires that a fish screen be placed on the intake prior to project operation. There is no confirmation in the project record that the screen is in place.

**HE 250 Spring Creek – Taylor**

*WRD -- Certificate 76632 – Expires 2020*

**Spring Creek/Jenny Creek/Klamath** – While located in the Klamath watershed, this project is administered out of the Upper Rogue District Office and is included in the Southwest Watersheds for this report. The project is located on Spring Creek a tributary to Jenny Creek in Klamath County. The project can divert up to 1.56 cfs and develop up to 44.3 thp, and is associated with existing irrigation and operation of an aquaculture facility. A minimum bypass flow of 1.56 cfs is required to the confluence with Jenny Creek. The certificate required the holder to consult with ODFW to implement provisions to protect game fish in Spring Creek, which may include fish screening of the diversions. Consultation was to occur within one year of issuance of the certificate. There is no record that the consultation occurred. Reauthorization of the project is underway and discussion about fish screens will likely be necessary. OWRD has proposed extending the reauthorization period until PacifiCorp’s water rights from Spring Creek associated with the Klamath project are addressed through decommissioning.

**HE 489 The Meadows Family S Fk Scotch Gulch Creek**

*WRD – certificate 83610 expires December 2027*

**S Fk Scotch Gulch Creek/East Fk Illinois River/Rogue** – The project was authorized in 1983, and was reauthorized in 2007. The project can utilize up to 0.11 cfs of the South Fork Scotch Gulch Creek to develop 1.25 thp. Condition 7 of the certificate requires the owner to maintain the existing fish screen to meet ODFW standards.

**HE 488 The Meadows Family Trust Scotch Gulch Creek**

*WRD – certificate 83609 expires December 2027*

**Scotch Gulch Creek/East Fk Illinois River/Rogue** – The project was authorized in 1983, and reauthorized in 2007. The project can utilize up to 1.1 cfs from Scotch Gulch Creek and develop 24 thp. Condition 7 of the certificate requires the owner to maintain the existing fish screen to meet ODFW standards. The HART conducted a site visit May 2007 and described in their report that “Coho salmon are reported to spawn in stream up to residence below the return flow
point, and that “Coho salmon fry were observed just below the return flow point and approximately 30 feet downstream.” ODFW’s fish distribution map shows Coho, winter steelhead, and cutthroat in Scotch Gulch Creek.

HE 556 Unnamed stream to Cow Creek - Richard Jones  
WRD – certificate 80863 expires December 2024

Cow Creek/South Umpqua/Umpqua – the project was first authorized in 2004. The project can utilize up to 0.1333 cfs from the unnamed stream to develop 3.6 thp. No fish or wildlife issues have been identified.

HE 580 Unnamed tributary to Elk River - Hatcher/Johnson  
WRD – certificate 83536 expires December 2027

Unnamed perennial stream/Elk River/Rogue – The project was first authorized in 2007. The project can utilize up to 0.45 cfs to develop 10.3 thp. The diverted water would be piped under the Elk River to the powerhouse. Condition 11 of the certificate requires that a fish screen be placed on the intake prior to project operation; however, ODFW’s review of the project indicated there were no fish present. There is no confirmation in the project record that the screen in in place.

HE 613 Unnamed Tributary to E. Fk Millicoma – Lionel Youst  
WRD – certificate 91431 expires December 2065

Unnamed tributary to E. Fk. Millicoma River – The project was authorized in 2016. The project utilizes up to 0.9 cfs from an unnamed tributary to the E. Fk. Millicoma River to develop 7.2 thp. ODFW staff determined that proposed hydroelectric project is located in a non-fish bearing tributary of East Fork Millicoma River. No fish or wildlife issues have been identified.

PC 886 Upper Pony Creek Reservoir – Coos Bay North Bend Water Board  
WRD – no expiration

Upper Pony Creek/Coos – The project was authorized in 2005. WRD issued this permit to use the waters of Upper Pony Creek Reservoir, constructed under Reservoir Permit R- 1064 and expanded under Reservoir Permits R-85 18 and R- 12870, a tributary of Pony Creek, for 0.45 cfs to be used for hydroelectric production of 2.8 thp. The permit was issued under application S-86389 (Power Claim - PC 886). The pipeline is screened. No other fish and wildlife issues were identified. This project was reviewed by other Fish Division staff and the Director’s Office, not Hydropower Program staff.

HE 324 Wagner Ditch Creek – Delmar Wagner  
WRD – certificate 83297 December 2027

Ditch Creek/Pleasant Creek/Rogue – The project was authorized in 1981, and was reauthorized in 2007. The project can utilize up to 1.1 cfs from Ditch Creek and develop 20.9 thp. Under the assumption that the certificate would expire in 2001, the HART conducted thorough site visits in 1999 to evaluate fish numbers, flow, screening and passage. ODFW found that the fish screen needed to be replaced, minimum flows should increase, and an artificial fish passage barrier
should be removed. It is not clear in the project record why reauthorization did not occur until 2007. Based on the review in 1999, ODFW determined that juvenile Ct were observed during the visit and were documented from comprehensive surveys conducted for the original water right (1981). Steelhead use is confirmed to RM 1.5 (below the project), and coho and steelhead use is assumed to RM 2 (below the project). Conditions 7, 8, 9, and 10 of the 2007 reauthorized certificate addressed ODFW’s concerns to increase the minimum bypass flow, replace the fish screen, consult with ODFW for screen design, and to remove the fish passage barrier. There is no documentation in ODFW’s files to indicate whether any of these requirements have been met.

HE 259 Wittich Ramsey Creek – John Wittich

WRD – certificate 76927 expires December 2020

Slate Creek/Rogue – The project was authorized in 1980, and was reauthorized in 2001. The certificate will expire in December 2020 and the owner is not planning to reauthorize. The project can utilize up to 2.2 cfs from Ramsey Creek and develop 10.0 thp, although apparently the project is in disrepair and is not operating. Condition 7 of the certificate required the owner to consult with ODFW on screen design and install ODFW approved fish screens within one year. Consultation on the screen and installation did not occur during the term of the reauthorized certificate. The diversion was multi-use for irrigation and hydropower. The irrigation diversion will remain functional. The owner filed a proposed decommissioning plan with WRD. ODFW should require the diversion to be screened at the POD as part of the decommissioning plan.

HE 555 Zeutzius – Todd Zeutzius

WRD – certificate 80862 expires December 2024

Jackson Creek/Applegate/Rogue - The project was authorized in 2004. The project can divert up to 0.11 cfs from and unnamed tributary to Jackson Creek to develop 3.1 thp. ODFW did not identify any fish or wildlife concerns, and no specific protection measures were required; however, there is minimal correspondence concerning this project in headquarter or Roseburg files.
Marine Area: Territorial Sea

Active FERC Projects
Ocean Energy Coordinator:
Delia Kelly
Oregon Department of Fish and Wildlife
2040 SE Marine Science Drive
Newport, OR 97365
Voice: 541-867-0300 x 392 email: delia.r.kelly@state.or.us

14616 PacWave South
Dan Hellin (541) 737-5452
FERC – final license application pending

The Oregon State University (OSU) test facility is proposed for installation six nautical miles WSW of Newport, Oregon. The proposal is for a grid-connected facility encompassing a 2 nm² project area in 65-79 meter water depth. Facility components would include four test berths, each with an electrical hub and total capability to test max 20 devices and 20MW, as well as cables between devices, cables to shore, and onshore facility and grid connection.

In January 2013, ODFW engaged in planning efforts. In June 2013 OSU submitted BOEM Lease Request. In April 2014, BOEM issued Request for Competitive Interest. FERC authorized request to use Alternative Licensing Process in accordance with an agreed upon Communications Protocol in May 2014. FERC conducted scoping in June 2014. OSU solicits comments on Preliminary Draft EA in March 2015. In 2015 through 2018 ODFW continued to work with OSU to improve monitoring plans, best management practices, adaptive management framework, and other components of a draft license application which was submitted to FERC in April 2018. OSU filed a final license application and applicant prepared environmental assessment in May 2019.
APEX Demonstration Project - Astoria/Warrenton

M3 Wave LLC conducted a short-term test of their Automated Power Expeditionary (APEX) device September 4-18, 2014. The small scale submerged device (30’ X 8’ X 3’) rests on the seafloor in shallow water (1.25 mi W of shore, 7fm depth) off of Astoria/Warrenton/Camp Rilea. Oregon Department of State Lands (DSL) convened the first Joint Agency Review Team (JART) required by the recently approved Territorial Sea Plan, Part 5. DSL determined the project qualified as a “Pilot Project” and solicited input from ODFW through participation in the JART. In September 2014, DSL issued an Ocean Energy Facility Temporary Use License, contingent of fulfillment of conditions. In November 2014, M3 submitted final permit report to fulfill license obligations. Interest in future tests off of Oregon may include larger scale, longer duration, and/or deeper water deployments.

SurgeWEC Demonstration Project – Camp Rilea, near Warrenton

Resolute Marine Energy (RME) has engaged ODFW in discussions about their interest in testing their SurgeWEC system off Camp Rilea. In December 2013, RME met with Oregon state agencies, including ODFW, to introduce their interest in a test off the coast near Camp Rilea. RME met with ODFW for a more detailed discussion about their interest in a test off of the coast near Camp Rilea in July 2014. RME postponed the deployment and permit applications have not been submitted.

Project would involve deployment of two SurgeWEC devices to demonstrate the Wave2E (electricity producing) and the Wave2O (fresh water producing) technologies. The two SurgeWEC devices would be deployed approximately 1000 meters offshore of
Astoria/Warrenton/Camp Rilea, in approximately 7 meters (23ft) of water. Each SurgeWEC will be 8 meters (26ft) wide and cover up to 99% of the vertical water column, under most conditions, and may pierce the surface during certain low tides. Devices would be anchored, via suction or ballast, within the 200 square meter (1/8 nm²) project area and connected via six fluid-filled lines to two onshore standard shipping container housings. Onshore portion would be stationed 300 meters from shore, behind fore dune, 1 mile north of Sunset Beach State Park on Slusher Lake Road.

**PacWave North – near Newport**

PacWave North is Oregon State University’s (OSU’s) non-grid-connected, open ocean test site located approximately 4.6 km (2.5 nautical miles) off Yaquina Head, north of Newport, Oregon. The site is approximately one square nautical mile, ranges in depth from 45 - 55 meters, and has a gently sloping soft, sandy bottom.

The first wave energy converter (WEC) test at PacWave North took place in 2012 with the deployment of a half-scale (13.8’ x 10.7’ x 61.6’) WET-NZ device and the Ocean Sentinel instrumentation buoy. The WET-NZ and Ocean Sentinel were deployed from late August to early October 2012 and monitoring studies were performed at the test site prior to, during and after the deployment. In 2013, no WEC tests occurred, but OSU deployed the Ocean Sentinel instrumentation buoy in order to continue monitoring at the site. The Ocean Sentinel was removed in 2013, but its anchors remained in place until they were removed November 5, 2015. A reduced level of benthic monitoring occurred during that time. Operations at PacWave North were conducted in accordance with an Adaptive Management Framework, including annual operations and monitoring review by ODFW and other adaptive management committee members. OSU is currently seeking to renew state authorization of PacWave North from DSL, but applications are pending. There are no tests currently planned for PacWave North and no WEC-related research is scheduled. PacWave North, formerly known as NETS, is shown in the green box in the map below.
Reedsport project received the first Hydrokinetic License from FERC and subsequently announced intent to surrender. The project would have been located within a ½ mile by ½ mile site, 2.5 miles offshore of Reedsport, Oregon, in water depths ranging 204-225 feet, including installation of up to ten buoys and associated sub-surface floats, mooring lines, anchors, substations, and cables. The land-based portion of the project was to be located on public and private lands and consist of an underground transmission line, located entirely within the unincorporated town of Gardiner, and a substation.

In February 2010, OPT filed for FERC license of a phased development for up to ten buoys, grid-connected. In July 2010, a settlement agreement was signed with 14 parties stipulating adaptive management, PM&E measures, and a list of study and monitoring plans. In August 2012, FERC issued an original License for a term of 35-years as recommended by the settlement parties.

ODFW began extensive engagement with OPT to coordinate implementation of license measures. In September 2012, OPT began construction of the project by installing a single Floating Gravity Based Anchor (FGBA), Auxiliary Subsurface Buoy (ASB), and associated tendon and outer mooring lines within the marine-based portion of the project boundary. This first phase of the project was unsuccessful; the anchor was damaged and the auxiliary buoy sank. In March 2013, FERC issued a letter of non-compliance. In June 2013, FERC grants extension of time. In October 2013, OPT removed the ASB and associated tendon and outer mooring lines from the project area. In May 2014, OPT submits application for surrender of license. FERC approval of surrender of the license was contingent on site clearance from ODFW, NMFS, & USFWS. Following resolution of these conditions, in January 2018 FERC issues a letter stating the project was decommissioned accordingly, making effective the surrender of the license.