

Hydropower in OR/WA May 2013

Hydropower uses the energy of flowing water to produce electricity. It is a valuable renewable energy source because it minimizes air pollution and provides a consistent power source to help meet minimum energy demands, also known as base load. However, it does have some downsides. It disrupts the fluvial ecosystem. It is vulnerable to reductions in electrical generation in low water seasons or drought years, and has high initial capital costs. Most hydropower in the United States is produced through dams or impoundments used to store and divert water into turbines to produce electricity. In 2011, hydropower, nationwide, accounted for 9% of U.S. power production, and was the largest contributor to renewable electric power generation followed by wind, wood, and wood-derived fuels. The top hydropower-producing states in 2011 were Washington, Oregon, and California.

Ownership of hydropower generation facilities is classified as “federal” or “nonfederal”. The majority of federal projects are owned and managed by the Bureau of Reclamation or the U. S. Army Corp of Engineers and are principally large multi-purpose dams capable of producing more than 30 megawatts (MW) of electricity. Nonfederal projects can be privately owned, or publically owned, and located on public, or private land. Nonfederal projects are licensed and administered by the Federal Energy Regulatory Commission (FERC) and are principally categorized as small hydropower (1-30 MW). In 2010 nonfederal hydropower accounted for 4% of total U.S. electrical power generation. It appears that all hydropower plants on BLM managed land are considered “nonfederal” projects and consequently are regulated by FERC^{1,2}.

What is the Federal Energy Regulatory Commission?

The FERC is an independent agency created by Congress in 1977. It has exclusive authority to regulate licenses on non-federal hydroelectric projects under the Federal Water Power Acts³ that affect navigable waters; occupy public lands or reservations of the U. S.; use surplus water or waterpower at a U.S. government dam; or affect the interests of interstate commerce. The FERC regulates this industry by issuing preliminary permits, project licenses, and exemptions from licensing⁴; ensuring dam safety; performing project compliance activities; investigating and assessing payments for headwater benefits; and coordinating with other agencies. In deciding

¹ For more information see: Bracmort K., Stern C., Vann A. (2012) Hydropower: Federal and Nonfederal Investment. Congressional Research Service, 7-5700. And Hall, Douglas; Reeves, Kelly(2006) A study of United States hydroelectric plant ownership. Idaho National Library, INL/EXT-06-11519.

² U. S. Department of Energy- Hydropower Program: Types of Hydropower Plants. http://www1.eere.energy.gov/water/hydro_plant_types.html; U.S.G.S. Hydroelectric Power <http://ga.water.usgs.gov/edu/hyhowworks.html>

³Federal Water Power Act of 1920; Public Utilities Act of 1935: Title I: The Public Utility Holding Company Act of 1935 and Title II- The Federal Power Act; Energy Policy Act of 1992; Energy Policy Act of 2005; and 16 U.S.C. 817

⁴ For more information regarding the licensing process, please visit <http://www.ferc.gov/industries/hydropower.asp>

whether to issue a license, the FERC gives consideration to a full range of licensing purposes related to potential value of a stream or river such as hydroelectric development, energy conservation, fish and wildlife resources, visual resources, cultural resources, recreational opportunities, irrigation, flood control, and water supply. Licenses are authorized for up to 50 years for construction, operating, and maintaining non-federal hydropower projects. Exemptions are granted in perpetuity⁵. After a license is issued, the FERC monitors the licensee's compliance with the license conditions and stipulations throughout the term of the license. In addition to the powers and responsibilities that the Federal Power Act grants to the FERC, several other laws and executive orders affect the licensing process⁶. Upon expiration, the project can be closed (decommissioned), otherwise the FERC can issue a new license (relicense) to either the existing licensee or a new licensee.

What is the Bureau of Land Management's role in the hydroelectric power licensing process?

Once the FERC receives an application, the Bureau of Land Management (BLM) updates public land records by noting a withdrawal of public lands, if any; processes and authorizes rights of way agreements; and offers the FERC pre-filing consultation including area determination; standards and guidelines identification; and an assessment as to whether the plans information is consistent with its conclusions.

Federal resource agencies, including the BLM, may also submit to the applicant and the FERC:

- a) Mandatory Conditions, FPA§4(e): The federal agency responsible for managing reservations can establish mandatory terms and conditions to protect the reservation.
- b) Terms and Conditions, FPA§30(c): these conditions prevent loss of and damage to fish and wildlife and provide for the development and improvement of fish and wildlife in the project area; this can include fish passage requirements.

Resource agencies must also negotiate with stakeholders, who submitted alternatives, to settle on modifications of the agencies preliminary conditions and prescriptions.

How many nonfederal hydroelectric projects are located on Bureau of Land Management lands in Oregon and Washington?

As of May 2013, the **State of Oregon** had 46 nonfederal hydroelectric projects active with the FERC (see location map and informational table below). Of those 46 projects, 20 include BLM lands or interest (e.g. unreserved mineral estate). Of those 20 projects 40% (8 projects) are currently in the preliminary permit stage; 35% (7 projects) are licensed and operating; 10% (2 projects) are being decommissioned; 10% (2 projects) are in the licensing process and 5% (1 project) is being relicensed. In FY 2013, as of June 14, 2013, the BLM performed some administrative action on five of these projects. The projects are described below:

⁵ Some projects are granted an exemption from licensing. Two types of exemptions could be granted: small hydropower and conduits.. For additional information about exemptions, see <http://www.ferc.gov/industries/hydropower/gen-info/licensing/small-low-impact/get-started/exemp-licens.asp>

⁶ Such as: Clean Air Act, Clean Water Act, Coastal Zone Management Act, Endangered Species Act, Fish and Wildlife Coordination Act, National Environmental Policy Act, National Historic Preservation Act, Rivers and Harbors Act, Wild and Scenic Rivers Act

Corbett Hydroelectric Project, P-14322 (OROR67180): Corbett Hydro filed an Original Major License application on May 23, 2013, to study the feasibility of the proposed hydro project to annually generate 8.4 megawatt-hours. The project is located on U.S. Forest Service and Bureau of Land Management lands located in Multnomah County, Oregon. The applicant is in the process of licensing and is scheduled to be issued the Final Environmental Analysis by February 2014.

Mason Dam, P-12686 (OROR 63741): Mason Dam Hydroelectric Project filed an Original Major License application on May 3, 2013, to study the feasibility of the proposed hydro project to annual generation of 7,510 megawatt-hours. The project is located on U.S. Forest Service and Bureau of Reclamation lands in Baker County, Oregon. The applicant is in the process of licensing this project and is scheduled to be issued the Final Environmental Analysis or Environmental Impact Statement by July 24, 2014.

Monroe Water, P-14430 (OROR 67752): Monroe Water is located on the North Unit Irrigation District's Main Canal in Jefferson County, Oregon. The preliminary permit was issued on Marcy 28, 2013 to Monroe Hydro, LLC. The proposed project would generate 1 gigawatt-hours annually.

Warm Springs Dam, P 13570 (OROR67118): On April 15, 2013, the Warm Springs Irrigation District filed with FERC an application for a new license for a Major Water Project, being 5 Megawatts or less with an Existing Dam. The project is located on the Malheur River, near the town of Juntura, Malheur County, Oregon. The project would utilize the existing Warm Springs dam and reservoir, which is owned by the Bureau of Reclamation and would occupy 13.5 acres of land administered by the Bureau of Land Management, Burns District Office. In addition to utilizing the BOR Warm Springs dam and reservoir, the project would consist of the following new facilities (1) an 8-foot diameter, 32-foot-long cylindrical intake; (2) a 190-foot-long, 8-foot-diameter steel penstock; (3) a powerhouse containing one 2.7 -megawatt Francis or Kaplan turbine; (4) a 2.2-mile-long, 25-kilovolt (kV) transmission line; and (5) appurtenant facilities. The average annual generation is estimated to be 7.442 gigawatt-hours. On April 19, 2013, the FERC issued a Notice of Application Teneder for Filing with the Commission and Soliciting Additional Study Requests. The deadline for and resource agency, Tribe or person who believes additional scientific studies should be conducted have until June, 14, 2013 to file such requests.

Whitewater Hydro, P-14383 (OROR 67386): Whitewater hydro is located on Whitewater and Russell Creeks on U.S. Forest Service land in Marion and Linn Counties, Oregon. The proposed project would generate 95.04 gigawatt-hours annually. The applicant is in the process of submitting pre-license application documents. The notice of intent to file application for a new license was approved by FERC on April 30, 2013.

As of May 2013, the **State of Washington** had 74 nonfederal hydroelectric projects active with the FERC (see location map and informational table below). Of those 74 projects, 15 include BLM lands or interest (e.g. unreserved mineral estate). Of those 15 projects, 13% (2 projects) are currently in the preliminary permit stage; 80% (12 projects) are licensed; and 6% (1 project) is in the licensing process. In FY 2013, as of June 14, 2013, the BLM performed some administrative action on eight of these projects. The projects are described below:

16.4 Wastewater, P-14349 (WAOR 67518): 16.4 Wastewater is located on the 16.4 Wasteway in Franklin County, Washington. The preliminary permit was issued on March 26, 2013 to Grand Coulee Project Hydroelectric Authority to study the feasibility of hydrologic project. If licensed, the project would generate an annual 10 gigawatt-hours.

46A Wastewater, P-14351 (67520): 46A Wastewater is located on Potholes East Canal of the Columbia River in Franklin County, Washington. The preliminary permit was issued on March 26, 2013 to Grand Coulee Project Hydroelectric Authority to study the feasibility of hydrologic project. If licensed, the project would generate an annual 6.75 gigawatt-hours.

Cascade Pumped Storage, P-14464: Cascade Pumped Storage is located on Mud Lake in Snohomish County, Washington. The preliminary permit and order granting priority to file a license application was issued on February 7, 2013 to Cascade Energy Storage, LLC. If licensed, the project would generate an annual 1,314 gigawatt-hours.

PEC 1973 Drop, P-14316 (WAOR 67498): PEC 1973 Drop is located on Potholes East Canal of the Columbia River in Franklin County, Washington and is part of the U.S. Bureau of Reclamation's Columbia Basin Project. The preliminary permit was issued on March 26, 2013 to study the feasibility of hydrologic project. If licensed, the project would generate an annual 6.7 gigawatt-hours.

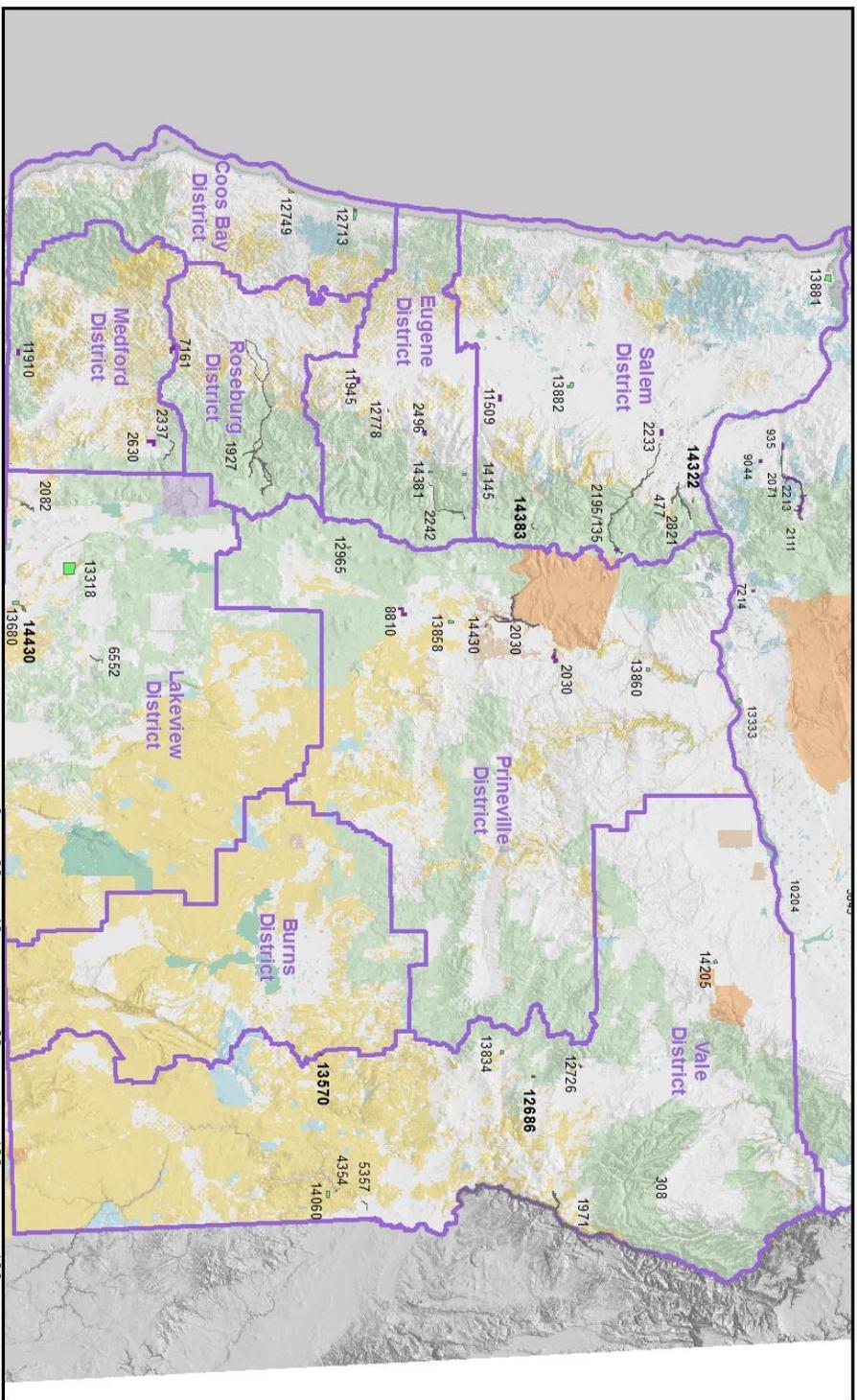
Priest Rapids, P-2114 (WAOR 20353): Priest Rapids is located on the mid-Columbia River, in portions of Grant, Yakima, Kittitas, Douglas, Benton, and Chelan Counties, Washington, and occupies about 3,052 acres of federal land managed by the Bureau of Reclamation, Bureau of Land Management, U.S. Department of the Army, US Fish and Wildlife Service, and U.S. Department of Energy. On June 3, 2013 an application was accepted to amend the Recreation Resource Management Plan and implementation schedules under article 418 of its license. The amendment includes modifications and relocation of camping and fishing amenities for the Priest Rapid Dam tailrace. The BLM is undertaking archaeological site testing and evaluations in accordance with the Historic Properties Treatment Plan and Programmatic Agreement for relicensing of the project. Archaeological reports and evaluations are in draft and are being finalized by the PUD and its contractors.

Scooteny Inlet Drop, P-14318 (WAOR 67437): Scooteny Inlet Drop is located on Potholes East Canal of the Columbia River in Franklin County, Washington. The preliminary permit was issued on March 26, 2013 to Grand Coulee Project Hydroelectric Authority to study the feasibility of hydrologic project. If licensed, the project would generate an annual 5.2 gigawatt-hours.

Scooteny Outlet Drop, P-14317 (WAOR 67500): Scooteny Outlet Drop is located on Potholes East Canal of the Columbia River in Franklin County, Washington. The preliminary permit was issued on March 26, 2013 to study the feasibility of hydrologic project. If licensed, the project would generate an annual 4.1 gigawatt-hours.

Scooteny Wasteway, P-14352 (WAOR 67521): Scooteny Wasteway is located on Potholes East Canal of the Columbia River in Franklin County, Washington. The preliminary permit was issued on March 26, 2013 to Grand Coulee Project Hydroelectric Authority to study the feasibility of hydrologic project. If licensed, the project would generate 4.8 gigawatt-hours.

FERC Hydro Energy Projects Oregon May 2013



- Legend**
- FERC Hydro Projects Status**
- Decommissioning
 - In Licensing Process
 - Licensed
 - Preliminary Permit
 - Relicensing
 - District Area Boundaries
 - Bureau of Land Management
 - U.S. Forest Service
 - National Park Service
 - U.S. Fish and Wildlife Service
 - Bureau of Indian Affairs
 - Other Federal
 - State
 - Local Government
 - Private/Unknown

No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of this data for individual or aggregate use with other data.

Note: For further information refer to accompanying spreadsheet. For detailed project information reference FERC project number at FERC E-Library: <http://www.ferc.gov/docs/filing/elibrary.asp>

Source: Federal Energy Regulatory Commission Online
Last Updated: 05/07/2013
<http://www.ferc.gov/industries/hydropower/gen-info/licensing.asp>
Map excludes exempt projects.

FERC Hydro Energy Projects in Oregon as of May 2013 (Refer to map for locations)

FERC Project Number P-	Project Name	BLM Serial Number	State	Status	Date of		Expiration	Authorized Capacity (KW)	Licensee	River or Interest	BLM Land
					Original License:	FERC License:					
308	Wallowa Falls	OROR 18832	OR	Licensed	06/27/1924	2/28/2016	1100				
477	Bull Run	OROR 18842	OR	Decommissioning	5/23/1980	11/16/2004	21150	PacificCorp	E FK Wallowa	NO	
1927	North Umpqua	OROR 18874	OR	Licensed	01/30/1947	10/31/2038	194210	PacificCorp	Sandy River Umpqua	YES	
1971	Hells Canyon	OROR 21321	OR	Relicensing	8/4/1955	7/31/2005	1166900	Idaho Power	Snake	YES	
2030	Pelton Round Butte	OROR 18883	OR	Licensed	12/18/1951	5/31/2055	370650	Confederated Tribes of Warm Springs			
2082	Klamath	OROR 18974	OR	Decommissioning	1/28/1954	2/28/2006	161338	PacificCorp	Deschutes	YES	
2195	Clackamas River	OROR 18884	OR	Licensed	04/24/1959	2/28/2046	136645	PacificCorp	Klamath Clackamas	YES	
2233	Williamette Falls	OROR 18985	OR	Licensed	07/05/1957	11/30/2035	16680	Portland General Electric	Williamette	NO	
2242	Carmen-Smith Hydroelectric	OROR 18878	OR	Relicensing	1/8/1959	11/30/2008	91995	City of Eugene, OR	Mckenzie	NO	
2337	Prospect No. 3	OROR 18986	OR	Licensed	1/1/1964	12/31/2018	7200	PacificCorp	S FK Rogue	NO	
2496	Leaburg-Walterville	OROR 46582	OR	Licensed	3/24/1997	2/28/2037	23200	Eugene Water and Electric Board	Mckenzie	NO	
2630	Prospect 1, 2, & 4	OROR 18991	OR	Licensed	3/31/1938	3/31/2038	41560	PacificCorp	Rogue	NO	
2821	Portland No. 1 & 2	OROR 19473	OR	Licensed	03/22/1979	2/28/2029	35625	City of Portland, OR	Bull Run	NO	
3571	Central Oregon Siphon	OROR 46585	OR	Licensed	9/29/1987	8/31/2037	5500	City of Portland, OR	Deschutes	NO	
4354	Owyhee Dam	OROR 36967	OR	Licensed	04/30/1984	4/30/2034	4340	Gem Irrigation District	Owyhee	NO	
4359	Owyhee Tunnel No. 1	OROR 36968	OR	Licensed	2/28/1986	1/31/2036	8120	Gem Irrigation District	Snake	NO	
5264	Stone Creek	OROR 37078	OR	Licensed	09/15/1989	8/31/2039	12000	City of Eugene, OR	Stone Creek	NO	
5357	Mitchell Butte Lateral	OROR 40623	OR	Licensed	12/14/1984	11/30/2034	1880	Owyhee Irrigation District	Stone Creek	NO	
5891	Opal Springs	OROR 44972	OR	Licensed	11/02/1982	10/31/2032	4300	Deschutes Valley Water District	Owyhee Reservoir	YES	
6552	North Fork Sprague River	OROR 41537	OR	Licensed	12/20/1985	11/30/2035	1230	Sprague Hydr, LLC	Crooked River	NO	
7161	Galesville	OROR 37299	OR	Licensed	06/29/1984	5/31/2034	1660	Douglas County, OR	N F Sprague	YES	
8810	South Bend Transmission Line	OROR 46587	OR	Licensed	09/29/1987	8/31/2037	0	PacificCorp	Cow creek	NO	
11509	Oregon Hydro	OROR 46588	OR	Licensed	10/23/1998	9/30/2048	500	City of Albany, OR	NA	NO	
11910	Applegate Dam	OROR 56558	OR	Licensed	12/17/2009	11/30/2059	10000	Ag Hydro	S. Santiam	YES	
11945	Dorena Lake Dam	OROR 56693	OR	Licensed	10/17/2008	9/30/2058	8300	DORENA HYDRO, LLC	Applegate Row	YES	
12686	Mason Dam	OROR 63741	OR	In licensing process	NA	NA	3400	Baker County, OR	Powder	NO	
12713	Reedsport Opt Wave Park	OROR 63763	OR	Licensed	08/13/2012	8/13/2047	1500	Reedsport Wavepark, LLC	Pacific Ocean	NO	
12726	Rock Creek	OROR 63898	OR	In licensing process	NA	NA		Fall Creek Hydro, LLC	Fall Creek	NO	
12749	Coos Bay Opt Wave Park	OROR 63983	OR	Preliminary Permit	NA	7/31/2013	100000	Oregon Wave Energy Partners I, LLC	Pacific Ocean	YES	

FERC Hydro Energy Projects in Oregon as of May 2013

(Refer to map for locations)

FERC Project Number P-	Project Name	BLM Serial Number	State	Status	Expiration	Authorized Capacity (KW)	Licensee	River or Interest	BLM Land
12778	Fall Creek Dam	OROR 64602	OR	In licensing process	NA	10000	Fall Creek Hydro, LLC	Fall Creek	NO
12965	Wickiup Dam	OROR 64604	OR	In licensing process	NA	NA	Wickiup Hydro Group, LLC	Deschutes	NO
13318	Swan Lake North Pumped Storage	OROR 65867	OR	Preliminary Permit	11/16/2015	1000000	Swan Lake North	Swan Lake	Yes
13570	Warm Springs Dam	OROR 67118	OR	In licensing process	NA	2500	Warm Springs Irrigation District	Malheur	YES
13666	Reedsport Opt Wave Park	OROR 67167	OR	Preliminary Permit	2/28/2014	50000	Reedsport Opt Wave Park, LLC	Pacific Ocean Reclamation D & L Canal	NO
13680	Bryant Mountain Pumped Storage	OROR 66891	OR	Preliminary Permit	8/31/2013	1250000	Bryant Mountain, LLC	Unity Reservoir	YES
13834	Unity Dam	OROR 67170	OR	Preliminary Permit	4/30/2014	4000	Amnor Hydro West Inc	Unity Reservoir	YES
13858	Cline Falls Hydro	OROR 67126	OR	Preliminary Permit	2/28/2014	750	Central Oregon Irrigation District	Deschutes	YES
13860	Oregon Winds Pumped Storage	OROR 67127	OR	Preliminary Permit	2/28/2014	400000	Jones Canyon Hydro, LLC	Closed-Loop	YES
13881	Bear Creek	OROR 67171	OR	Preliminary Permit	3/31/2014	145	CITY OF ASTORIA, OR	Bear Creek	NO
13882	Geran Island	OROR 67172	OR	Preliminary Permit	4/30/2014	1100	City of Salem, OR	N. Santiam	NO
14060	Owhee Pumped Storage	OROR 67175	OR	Preliminary Permit	8/31/2014	500000	Owhee Hydro, LLC	Lake Owhee	YES
14205	McKay Dam	OROR 67177	OR	Preliminary Permit	10/31/2014	3000	McKay Dam Hydro, LLC	McKay Dam	NO
14381	Blue River Dam	OROR 67197	OR	Preliminary Permit	6/30/2015	20000	QUALIFIED HYDRO 15, LLC	Blue River	NO
14322	Corbett Hydro	OROR 67180	OR	In licensing process	NA	NA	Corbett Water District	North and South Gordon Creek	YES
14383	Whitewater Hydro	OROR 67386	OR	In licensing process	NA	9000	Whitewater Green Energy, LLC	Whitewater Creek	NO
14416	Lorella Pumped Storage	OROR 67564	OR	Preliminary Permit	11/30/2015	250000	Free Flow Power	Langell Valley Irrigation canal	YES
14430	Monroe Water	OROR 67752	OR	Preliminary Permit	NA	300	Monroe Hydro, LLC	Irrigation Canal	NO



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Source:
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 Last Updated: 05/07/2013
<http://www.ferc.gov/industries/hydropower/gen-info/licensing.asp>
 Map excludes exempt projects.
 For detailed project information reference FERC project number at FERC E-Library: <http://www.ferc.gov/docs->

FERC Hydro Energy Projects in Washington as of May 2013

(Refer to map for locations)

FERC Project Number P-	Project Name	BLM Serial Number	State	Status	License Issued	Expiration	Authorized Capacity (KW)	Licensee	BLM Land or Interest
460	Cushman	WAOR 19741	WA	Licensed	7/30/1998	6/30/2058	131000	City of Tacoma, WA	N FK Skokomish
553	Skagit River	WAOR 22311	WA	Licensed	5/16/1995	4/30/2025	689400	City of Seattle, WA	NO
637	Lake Chelan	WAOR 19697	WA	Licensed	04/02/1926	10/31/2056	59200	Chelan County PUD No. 1	Lake Chelan
719	Trinity	WAOR 19731	WA	Licensed	5/27/2004	5/31/2044	240	Trinity Conservation, Inc	Pheips Creek
935	Mtwin	WAOR 19837	WA	Licensed	6/26/2008	5/31/2058	136000	PacificCorp	Lewis
943	Rock Island	WAOR 22613	WA	Licensed	01/21/1930	12/31/2028	422212	Chelan County PUD No. 1	Columbia River
1862	Nisqually River	WAOR 19768	WA	Licensed	08/05/1944	2/28/2037	115000	City of Tacoma, WA	NO
2016	Cowlitz River	WAOR 19791	WA	Licensed	01/01/1952	4/11/2037	462000	City of Tacoma, WA	NO
2042	Box Canyon	WAOR 19779	WA	Licensed	02/07/1952	6/30/2055	72000	Pend Oreille County PUD No. 1	Pend Oreille
2071	Yale	WAOR 19785	WA	Licensed	6/26/2008	5/31/2058	134000	PacificCorp	N FK Lewis
2103	Cedar Creek	WAOR 39062	WA	Licensed	12/7/2001	7/31/2052	0	Cominco American Incorporated	Pend Oreille
2111	Swift No. 1	WAOR 19825	WA	Licensed	6/26/2008	5/31/2058	240000	PacificCorp	Lewis
2114	Priest Rapids	WAOR 20353	WA	Licensed	11/13/1952	3/31/2052	1410000	Grant County PUD No. 2	Columbia River
2144	Boundary	WAOR 19832	WA	Licensed	3/20/2013	2/28/2055	1003253	City of Seattle, WA	Pend Oreille
2145	Rocky Reach	WAOR 19793	WA	Licensed	2/19/2009	1/31/2052	865760	Chelan County PUD No. 1	Columbia River
2149	Wells	WAOR 19795	WA	Licensed	11/9/2012	10/31/2052	774250	Douglas County PUD No. 1	Columbia River
2150	Baker	WAOR 22617	WA	Licensed	10/17/2008	9/30/2058	170030	PUGET SOUND ENERGY, INC	Baker
2157	Henry M Jackson	WAOR 19802	WA	Licensed	09/02/2011	8/31/2056	111800	Snohomish County PUD No. 1	Sultan
2213	Swift No 2	WAOR 19805	WA	Licensed	6/26/2008	5/31/2058	66800	Cowlitz County PUD No. 1	Lewis
2225	Sullivan Lake (Storage)	WAOR 19833	WA	Decommissioning	11/25/1958	9/30/2008	0	Pend Oreille County PUD No. 1	Sullivan
2244	Packwood Lake	WAOR 19834	WA	Relicensing	07/07/1960	2/28/2010	26125	ENERGY NORTHWEST	Lake Creek
2493	Snoqualmie Falls	WAOR 19810	WA	Licensed	06/29/2004	5/31/2044	54400	Puget Sound Energy, INC	Snoqualmie
2544	Meyer's Falls	WAOR 19814	WA	Licensed	12/10/1993	12/31/2023	1200	Hydro Technology Systems, INC	Colville
2545	Spokane River	WAOR 19815	WA	Licensed	06/18/2009	5/31/2059	146870	Avista Corporation	Spokane
2705	Newhalen Creek	WAOR 19823	WA	Licensed	02/07/1997	1/31/2027	2125	City of Seattle, WA	Newhalen
2833	Cowlitz Falls	WAOR 20405	WA	Licensed	06/30/1986	5/31/2036	70200	Lewis County PUD No. 1	Cowlitz
2840	Potholes East Canal Headworks	WAOR 40481	WA	Licensed	12/09/1981	9/30/2032	6500	East Columbia Basin ID	Columbia River
2849	Main Canal Headworks	WAOR 40482	WA	Licensed	11/16/1981	11/30/2031	26000	East Columbia Basin ID	Columbia River
2926	Russel D Smith, Pec 22.7	WAOR 22612	WA	Licensed	3/27/1980	2/28/2030	6100	East Columbia Basin ID	Columbia River
2937	Quincy chute	WAOR 40496	WA	Licensed	08/20/1982	7/19/2032	9367	East Columbia Basin ID	Columbia River
2959	South Fork Toit River	WAOR 40618	WA	Licensed	3/29/1984	7/19/2029	16700	City of Seattle, WA	S FK Toit
3074	Upriver	WAOR 46623	WA	Licensed	06/04/1981	3/31/2031	17700	City of Spokane, WA	Spokane
3239	Koma Kulshan	WAOR 36824	WA	Licensed	04/13/1987	3/31/2037	12000	Koma Kulshan Associates	Sulphur Creek
3295	Summer Falls	WAOR 38408	WA	Licensed	08/14/1981	7/31/2031	92000	East Columbia Basin ID	Columbia
3701	Tieton Dam	WAOR 41501	WA	Licensed	06/27/1991	5/31/2041	13600	SOUTHERN CALIFORNIA PUBLIC PWR AUTH	Tieton

FERC Hydro Energy Projects in Washington as of May 2013 (Refer to map for locations)

FERC Project Number P-	Project Name	BLM Serial Number	State	Status	Date of Original License		Expiration	Authorized Capacity (KW)	Licensee	River	BLM Land or Interest
					License	Expiration					
3842	Etlopa Branch Canal	WAOR 40484	WA	Licensed	12/09/1981	12/31/2031	2200	East Columbia Basin ID	Columbia River	NO	
3843	Potholes East Canal	WAOR 40485	WA	Licensed	12/09/1981	12/31/2031	2400	East Columbia Basin ID	Columbia River	NO	
4885	Twin Falls	WAOR 37184	WA	Licensed	05/06/1985	4/30/2035	24000	Twin Falls Hydro Associates	S Fk Snoqualmie	YES	
6221	Black Creek	WAOR 45590	WA	Licensed	07/29/1988	6/30/2038	3700	Black Creek Hydro	Black Creek	NO	
6461	Morse Creek	WAOR 45589	WA	Licensed	09/20/1985	8/31/2035	500	City of Port Angeles, WA	Morse Creek	NO	
6842	Wynoochee Dam	WAOR 37504	WA	Licensed	09/09/1987	8/31/2037	11100	City of Aberdeen, WA	Wynoochee	NO	
7076	Dalles Dam North Fishway	WAOR 42249	WA	Licensed	12/31/1987	11/30/2037	4900	Northern Wasco CO PUD	Columbia River	NO	
7214	Spring Creek Power	WAOR 45560	WA	Licensed	09/28/1984	8/31/2034	1	Lane Smith	White Salmon	NO	
7337	Cowiche	WAOR 41504	WA	Licensed	07/06/1984	6/30/2034	1470	Yakima-Tieton Irrigation District	USBR IRRIGATION SYSTEM	NO	
7338	Orchard Avenue	WAOR 41505	WA	Licensed	07/06/1984	6/30/2034	1441	Yakima-Tieton Irrigation District	USBR IRRIGATION SYSTEM	NO	
7563	Weeks Falls	WAOR 46628	WA	Licensed	04/25/1985	3/31/2035	4772	South Fork II Assoc LTD	S Fk Snoqualmie	NO	
9044	Biggs Creek	WAOR 46633	WA	Licensed	04/29/1986	3/31/2036	15	Earl Pickering	Biggs Creek	NO	
9654	MicroHydro	WAOR 45588	WA	Licensed	09/25/1987	8/31/2037	23	Brenda Wirkkala	S Fk Naselle	NO	
10204	McNary Dam Fish Attraction	WAOR 41733	WA	Licensed	09/30/1997	8/31/2041	9690	Northern Wasco County PUD No. 1	Columbia	NO	
10359	Youngs Creek	WAOR 42895	WA	Licensed	05/05/1992	4/30/2042	7500	Snohomish County PUD No. 1	Youngs Creek	NO	
10703	Yelm	WAOR 45551	WA	Licensed	03/07/1997	2/28/2037	12000	City of Centralia, WA	Nisqually	NO	
10888	Koma Kulson Transmission Line	WAOR 46063	WA	Licensed	4/25/1990	3/31/2037	0	Puget Sound Energy, Inc	Rocky Creek	NO	
12569	Enloe Hydroelectric	WAOR 61149	WA	In licensing process	NA	NA	9000	Okanagan County PUD No. 1	Similkameen	YES	
12687	Deception Pass Tidal Energy	WAOR 64168	WA	Preliminary Permit	NA	7/31/2013	6400	Snohomish County PUD No. 1	Puget Sound	YES	
12690	Admiralty Inlet Tidal Energy	WAOR 67885	WA	Preliminary Permit	NA	6/30/2013	1000	Snohomish County PUD No. 1	Puget Sound	NO	
13333	JD Pool Pumped Storage	WAOR 65868	WA	Preliminary Permit	NA	10/31/2015	1500000	Klickitat County PUD No. 1	CLOSED-LOOP	NO	
13804	White River	WAOR 67395	WA	Preliminary Permit	NA	12/31/2013	63000	White River Hydro, LLC	White River	NO	
13885	Tacoma Water Supply Transmission System	WAOR 67398	WA	Preliminary Permit	NA	4/30/2014	3000	City of Tacoma, WA	Tacoma Water Transmission System	NO	
13948	Calligan Creek	WAOR 67414	WA	Preliminary Permit	NA	3/31/2014	6000	Snohomish County PUD No. 1	Calligan Creek	NO	
13951	Bear Creek	WAOR 67417	WA	Preliminary Permit	NA	4/30/2014	850	Bear Creek Hydro Associates, LLC	Bear Creek	NO	
13994	Hancock Creek	WAOR 67429	WA	Preliminary Permit	NA	4/30/2014	6000	Snohomish County PUD No. 1	Hancock Creek	NO	
14063	Hiram Chittenden Lock and Dam	WAOR 67428	WA	Preliminary Permit	NA	12/31/2014	5000	Annor Hydro West	Salmon Bay	NO	
14065	Clear Creek Dam	WAOR 67430	WA	Preliminary Permit	NA	11/30/2014	920	Annor Hydro West	N Fk Tieton	NO	
14110	Black Canyon	WAOR 67431	WA	Preliminary Permit	NA	9/30/2014	25000	Black Canyon Hydro, LLC	Snoqualmie	NO	
14295	Sunset Falls	WAOR 67497	WA	Preliminary Permit	NA	2/28/2015	30000	Snohomish County PUD No. 1	S Fk Skykomish	NO	

FERC Hydro Energy Projects in Washington as of May 2013 (Refer to map for locations)

FERC Project Number P-	Project Name	BLM Serial Number	State	Status	Date of Original License	Expiration	Authorized Capacity (KW)	Licensee	River	BLM Land or Interest
14316	PEC 1973 Drop	WAOR 67498	WA	Preliminary Permit	NA	2/25/2013	2200	Grand Coulee Hydro Authority	Potholes East Canal	NO
14317	Scooteney Outlet Drop	WAOR 67500	WA	Preliminary Permit	NA	2/28/2016	1300	Grand Coulee Hydro Authority	Potholes East Canal	Yes
14318	Scooteney Inlet Drop	WAOR 67437	WA	Preliminary Permit	NA	2/28/2016	1700	Grand Coulee Hydro Authority	Potholes East Canal	NO
14349	16.4 Wastewater	WAOR 67518	WA	Preliminary Permit	NA	2/28/2016	1750	Grand Coulee Hydro Authority	16.4 Wastewater	NO
14351	46A Wastewater	WAOR 67520	WA	Preliminary Permit	NA	2/28/2016	1600	Grand Coulee Hydro Authority	46A Wastewater	NO
14352	Scooteney Wasteway	WAOR 67521	WA	Preliminary Permit	NA	2/28/2016	1100	Grand Coulee Hydro Authority	Wasteway	NO
14372	Rocky Coulee Wasteway	WAOR 67522	WA	Preliminary Permit	NA	6/30/2015	5200	Grand Coulee Hydro Authority	Rocky Coulee Wasteway	NO
14380	Pinto Hydro Project	WAOR 67523	WA	Preliminary Permit	NA	6/30/2015	3450	Grand Coulee Hydro Authority	Rocky Coulee Wasteway	NO
14464	Cascade Pumped Storage	NULL	WA	Preliminary Permit	NA	1/31/2016	600000	Cascade Energy Storage, LLC	Mud Lake	NO



Source: Federal Energy Regulatory Commission Online
Last Updated: 05/07/2013
<http://www.ferc.gov/industries/hydro/power/gen-info/licensing.asp>
Map excludes exempt projects.
For detailed project information reference FERC project number at FERC E-Library: <http://www.ferc.gov/docs-filing/elibrary.asp>