



Public Utility District No. 1 of Douglas County

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April 27, 2011

Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street N.E.
Washington, D.C. 20426

**Subject: Wells Hydroelectric Project - FERC Project No. 2149
Annual Report - Wildlife Mitigation Report**

Dear Ms. Bose:

In compliance with Article 41, as modified February 24, 1989, please find enclosed the 2010 Annual Report of activities associated with the implementation of the Wildlife Mitigation Program for the Wells Hydroelectric Project. This report was prepared by Mr. Marc Hallet, Manager of the Wells Wildlife Area for the Washington State Department of Fish and Wildlife and has been reviewed by the Public Utility District No. 1 of Douglas County.

If you have any questions or require further information, please feel free to contact me at (509) 881-2208 or sbickford@dcpud.org.

Sincerely,

Shane Bickford
Natural Resources Supervisor

Enclosures

Copy: Mr. Patrick Regan, FERC, Portland, 1 copy
Mr. James Hastreiter, FERC, Portland, 1 copy
Mr. Erich Gaedeke, FERC, Portland, 1 copy
Mr. Matt Monda, Washington Department of Fish and Wildlife, 1 copy
Mr. Garfield R. Jeffers, Jeffers, Danielson, Son & Aylward, 1 copy
Mr. Richard Whitney, - Colville Confederated Tribes, 1 copy

2010 ANNUAL REPORT
Wells Wildlife Mitigation Program
Federal Energy Regulatory Commission
License Number 2149

Submitted by:

Marc Hallet
Manager, Wells Wildlife Area
Washington State Department of Fish and Wildlife

Executive Summary

On July 15, 1974, Douglas PUD entered into an agreement with the Washington Department of Game (WDG, now Washington Department of Fish and Wildlife, WDFW) to address the Wells Hydroelectric Project's construction and operation effects on wildlife. Article 41 of the Wells Project license requires the PUD to take measures to mitigate these effects. The agreement included a one time cash payment of \$1,250,000 to be used to benefit wildlife resources in Douglas and Okanogan counties in close proximity to the Wells Reservoir. The agreement also transferred properties to the WDG to establish the Wells Wildlife Area (WWA), consisting of the Central Ferry Canyon, West Foster Creek, Indian Dan Canyon, Okanogan River, Washburn Island and Bridgeport Bar Units. Douglas PUD owns the Washburn Island Unit and portions of the Bridgeport Bar Unit and Okanogan Unit, which are within the Wells Project Boundary. WDFW owns portions outside the Wells Project Boundary. The term of this agreement extends for the duration of the Wells Project license ending May 31, 2012.

On June 19, 1995, Douglas PUD entered into a Memorandum of Agreement (MOA) with the WDFW for additional funding for the WWA. This MOA became necessary because the interest income received from the WDFW's investment of the original Douglas PUD \$1,250,000 cash payment (July 15, 1974 Agreement) was no longer adequate to fund the annual operations of the WWA. In order to maintain the present level of operations for the WWA, it was determined by the parties that additional funds were necessary. Under the terms of the MOA, Douglas PUD agreed to provide additional funding required to maintain the WWA through the end of the Wells Project license. The additional funding varies by year but was \$86,055 for the 2010 fiscal year (July 2009-June 2010).

This annual report presents the fiscal year 2010 expenditures and accomplishments and enumeration of certain wildlife and recreational uses of the Wells Wildlife Area through the Wells Wildlife Mitigation Program in 2010.

A. Expenditures

The Wells Special Wildlife Account principal balance totaled \$211,232 at the end of fiscal year 2010 (July 2009-June 2010). Fiscal year 2010 expenditures are summarized in Table 1.

<u>Table 1</u> - Expenditures	Wells WA Account	Supplemental Funding	Total
Salaries	39,064	45,112	84,176
Employee Benefits	16,057	15,798	31,855
Goods and Services	21,360	24,211	45,571
Property Tax (Okanogan County)	9,813	0	9,813
Land Rental (DNR)	1,651	0	1,651
Fire Protection Contracts (Okanogan and Douglas Counties)	2,485	0	2,485
Weed Assessments (Okanogan Co.)	506	0	506
Travel	0	671	671
Capital Outlay	1,892	934	2,826
Administrative Overhead	14,384	0	14,384
TOTAL	107,212	86,055	193,267

B. Game Bird Release:

Mild weather conditions and low population numbers after hunting season made it difficult to trap quail. Captured 14 California quail (*Callipepla californica*) off the wildlife area and released the quail on the West Foster Creek Unit.

C. Wildlife Habitat Management and Related Activities:

- Grain Food Plot and Waterfowl Habitat Development:
 - Produced 102 acres of grain crops on the wildlife area in 2010. This included 66 acres of irrigated wheat (22 acres were seeded in the fall of 2009) and 16 acres of corn on the Washburn Island and Bridgeport Bar Units and 20 acres of dryland wheat on the Indian Dan and West Foster Creek Units.

- Riparian Tree and Shrub Planting:
 - Mowed, rotovated and/or sprayed vegetation competing with woody plantings.
 - Removed Siberian elm (*Ulmus parvifolia*) trees, an undesirable exotic species encroaching on about 5 acres of desirable trees and shrubs, and treated stumps with herbicide.
 - Planted approximately 350 willow cuttings on the banks of West Foster Creek on the West Foster Creek Unit.

- Restoration of Perennial Herbaceous Cover:
 - Mowed 7 acres of perennial herbaceous plantings on the Bridgeport Bar Unit and 11 acres on Washburn Island to disperse seed and increase the density of cover.
 - Cultivated 40 acres on the West Foster Creek Unit and 25 acres on the Bridgeport Bar Unit to prepare these for shrub steppe habitat restoration. The Bridgeport Bar fields will be seeded in the spring of 2011 and the West Foster fields, in the fall of 2011. A Washington State Recreation and Conservation Office (RCO) grant provides about \$45,000 to revegetate 75 acres on the two units.

- Ponds:
 - Intake flow rates and water levels of five ponds on the West Foster Creek Unit were regulated to ensure adequate water distribution between ponds, to maintain aquatic habitat and adjacent riparian plantings and to prevent flooding.
 - Maintained water control structures on the West Foster and Indian Dan Units as needed.

- Wildlife Feeding and Watering:
 - Filled and maintained 24 upland game bird feeders.
 - Inspected and maintained gallinaceous guzzlers and springs as needed.

- Artificial Nesting Structures:
 - Inspected and maintained goose, wood duck, and kestrel nest structures. Canada goose (*Branta canadensis*) nesting structures produced about 31 percent of the hatch on Wells Pool (Appendix A).

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Non-native fox squirrels (*Sciurus niger*) are increasingly utilizing wood duck and kestrel nesting boxes to raise their young.

- Fences:
 - Inspected and repaired livestock and deer fences as needed.
 - Removed approximately one mile of barbed-wire fence from the Indian Dan Unit.
 - Repaired several gates and checked several miles of fence following a cattle trespass incident on the Indian Dan Unit.
- Vegetation Control (approximately 162 acres):
 - Treated a variety of weeds with herbicide including: diffuse knapweed (*Centaurea diffusa*) 3.5 acres, Puncture vine (*Tribulus terrestris*) 25 acres, quackgrass (*Elytrigia repens*) 23 acres, cheatgrass (*Bromus tectorum*) 34 acres, Dalmatian toadflax (*Linaria dalmatica*) 28 acres, hoary cress (*Cardaria draba*) 10 acres, and Canada thistle (*Cirsium arvense*) 55 acres.
 - Mowed weeds growing on and along wildlife area roads (~13 acres).
 - Mowed about 7 acres of diffuse knapweed.
- Firebreaks and Fire Control:
 - Maintained one mile of firebreak on the West Foster Creek Unit and two miles on the Bridgeport Bar Unit.
- Buildings and Public Use Facilities:
 - Maintained buildings and parking areas. Cleared snow from roads, parking areas, and headquarter area and replaced signs as needed.
 - Constructed an additional 360 square foot storage room in the open bays of the headquarter shop.
- Other:
 - Volunteers created two informational brochures for the area.

E. Wildlife Populations and Surveys

- Upland Game Bird:

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- WDFW recorded 636 upland bird hunters registering (hunter days) on the wildlife area with a harvest of 657 birds in 2010 (see Appendices B and C). This represents a harvest rate of 1.03 birds per hunter day. California quail comprised 95 percent of the upland birds harvested on the area. The reported quail harvest (624) was 42 percent higher than in 2009 (439). The low quail harvest on the upland units (West Foster Creek, Central Ferry Canyon and Indian Dan Canyon) is primarily due to the lack of releases made on those units. Quail releases are needed on those units to supplement low post hunting season quail numbers and ensure adequate brood stock in the spring. Pheasant, chukar and gray partridge harvest numbers reported were: 23, 1 and 8 respectively.

Table 2 summarizes California quail and total upland game harvest information collected on the wildlife area between 1983 and 2010 excluding Washburn Island and the Okanogan Units where hunting registration information is lacking. Quail hunting success in 2010 was above average and was about 50 percent higher than in 2009.

	Hunters	Quail	Quail/ Hunter	Upland Birds	Upland Bird/Hunter
Average	866	770	0.87	870	0.98
Minimum	496	320	0.44	397	0.55
Maximum	1,284	1,659	1.65	1,721	1.71
2010	571	562	0.98	591	1.04
2009	611	406	0.66	433	0.71

- Results of wildlife surveys conducted in the fall are summarized in Appendix D.
- Waterfowl:
 - Surveyed a total of 62 Canada goose nests on Wells Reservoir (Appendix A). Each nest was surveyed twice. Complete clutches were documented in 39 of the 62 nests. 28 ground nests and 11 nests in artificial structure averaged 6.9 and 6.4 eggs, respectively. 4 ground nests were lost to predators. Only 2 nests were found on the Bridgeport Bar Islands and both had been destroyed. The lack of nesting on these islands was due to raccoon activity. Production of 227 goslings was documented in 2010 (166 in 2009). The total 2010 gosling production of 232 was estimated by multiplying the number of hatchlings per nest with known clutch and fate by 1) hatched nests with unknown clutch, 2) nests with unknown fate and adding the results to the number of hatchlings from nests with known clutch and fate. This year, this estimate did not include active nests that were not visited.

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- The US Fish and Wildlife Service conducted an aerial waterfowl survey of Wells Pool on January 11, 2011. Results of this survey are summarized in Appendix E.
- Waterfowl hunters reported hunting 454 days on the Bridgeport Bar Islands, the Bridgeport Unit and the Washburn Island Unit and harvesting 82 geese and 1,110 ducks (Appendices B and C). This represents an average of 2.63 waterfowl per hunter day. Waterfowl hunting data for Bridgeport Bar (1978 to 2010) and for Washburn Island (1981 to 2010), the two principal waterfowl hunting units, is summarized in table 3 and 4. As shown, waterfowl hunting success improved considerably between 2009 and 2010 and was well above the average for the 1978 to 2010 period.

	Hunters	Ducks	Ducks \Hunter	Geese	Geese \Hunter	Total	Total Waterfowl \Hunter
Mean	439	668	1.57	60	0.15	729	1.72
Minimum	51	81	0.67	10	0.05	91	0.72
Maximum	851	1391	3.02	183	0.40	1422	3.09
2010	380	998	2.63	42	0.11	1040	2.74
2009	428	882	2.06	33	0.08	915	2.14

	Hunters	Ducks	Ducks \Hunter	Geese	Geese \Hunter	Total	Total Waterfowl \Hunter
Mean	78	66	0.72	34	0.58	100	1.30
Minimum	5	0	0.00	11	0.08	15	0.54
Maximum	207	242	1.99	94	3.00	258	3.00
2010	74	112	1.51	40	0.54	152	2.05
2009	94	63	0.67	50	0.53	113	1.20

- Non-Game:
 - Volunteers recorded white pelican (*Pelecanus erythrorhynchos*) and Double-crested cormorants (*Phalacrocorax auritus*) numbers on Wells Pool between March 3 and October 18, 2010. They observed a high of 128 pelicans on July 25 (214 in 2009) and a high of 144 cormorants (105 in 2009) on July 27. Cormorants continue to nest in a great blue heron (*Ardea herodias*) rookery located at the mouth of the Okanogan River.

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- Wildlife area staff assisted Army Corps Biologist Bob Fischer and loon researchers Ginger Gumm and Dan Poleschook in conducting a loon survey on Wells Pool. The party observed 79 common loons (*Gavia immer*) on January 29, 2010 (2.8 loons per river mile). Other wildlife observed during the survey included over 50 great blue herons and 22 bald eagles (*Haliaeetus leucocephalus*).
- Surveyed the Central Ferry Unit for sharp-tailed grouse (*Tympanuchus phasianellus*) leks. No birds were observed at the traditional lek sites or elsewhere on the unit. Increased sightings of sharp-tailed grouse in the vicinity of the West Foster Creek Unit suggest that the transplant efforts in this area have had some success. Wintering sharp-tailed grouse (up to 13) were regularly seen on the West Foster Creek Unit and 34 were observed in the spring on three nearby leks.
- Sightings of non-native Eurasian collared-dove (*Streptopelia decaocto*) and fox squirrels are increasing on parts of the wildlife area.

Appendix A

**WELLS POOL CANADA GOOSE NESTING SURVEY
2010**

	NATURAL SITES	ARTIFICIAL STRUCTURES	TOTAL
TOTAL NESTS VISITED	38	24	62
NESTS WITH KNOWN CLUTCH	28	11	39
TOTAL EGGS	194	70	264
AVERAGE CLUTCH	6.93	6.36	6.77
NEST LOSS - PREDATED	4	5	9
UNKNOWN CLUTCH		7	7
NESTS WITH KNOWN FATE AND CLUTCH	28	11	39
TOTAL EGGS	194	70	264
TOTAL HATCH	173	54	227
PERCENT HATCH	89.2	77.1	86.0
HATCHED EGGS PER NEST	6.2	4.9	5.82
ABANDONED		0	0
DEPREDATED	21	0	21
UNKNOWN		5	5
TOTAL LOSS	21	5	26
KNOWN PRODUCTION	173	54	227
HATCHED NESTS: UNKNOWN CLUTCH	9	9	18
*ESTIMATED HATCHLINGS	56	44	100
NESTS: UNKNOWN FATE		1	1
*ESTIMATED HATCHLINGS	0	5	5
NESTS: ACTIVE/NOT VISITED	0	0	0
*ESTIMATED HATCHLINGS	0	0	0
TOTAL ESTIMATED PRODUCTION	229	103	332
PERCENT OF TOTAL PRODUCTION	68.9	31.1	100

*Production based on average hatched eggs per nest with known production.

Appendix B.

**Wells Wildlife Area
Hunter Bag Check Summary
2010-2011 Hunting Season**

	Indian Dan	Bridgeport Bar	West Foster	Central Ferry	Washburn Island	Total
UPLAND GAME BIRDS						
Hunters	145	276	115	35	65	636
Pheasant	0	12	8	0	3	23
Pheasant per hunter	0.00	0.04	0.07	0.00	0.05	0.04
California Quail	55	420	59	20	70	624
Quail per hunter	0.38	1.52	0.51	0.57	1.08	0.98
Gray Partridge	5	3	0	0	0	8
Gray partridge per hunter	0.03	0.01	0.00	0.00	0.00	0.01
Chukar	0	0	0	1	0	1
Chukar per hunter	0.00	0.00	0.00	0.03	0.00	0.00
Grouse	1	0	0	0	0	1
Grouse per hunter	0.01	0.00	0.00	0.00	0.00	0.00
Total upland game	61	435	67	21	73	657
Upland Game per hunter	0.42	1.58	0.58	0.60	1.12	1.03
WATERFOWL						
Hunters		380			74	454
Ducks		998			112	1110
Duck per hunter		2.63			1.51	2.44
Canada Geese		42			40	82
Goose per hunter		0.11			0.54	0.18
Total Waterfowl		1040			152	1192
Waterfowl per hunter		2.74			2.05	2.63
MOURNING DOVE						
Dove Hunters	6	84	9	10	7	116
Dove Taken	3	279	10	2	6	300
Dove per hunter	0.50	3.32	1.11	0.20	0.86	2.59
MULE DEER						
Deer Hunters	74		41	30		145
Deer Taken	7		1	4		12
Deer per hunter	0.09		0.02	0.13		0.08

Note: Waterfowl hunter incidental take of upland game is included in the upland game figures and upland game hunter incidental take of waterfowl is included in the waterfowl figures.

Appendix C.

**Wells Wildlife Area
Game Bird Bag Check Summary
Comparative Hunting Success and Harvest Rate
2009 and 2010 Hunting Seasons**

UPLAND GAME BIRDS*						
	Hunters	Pheasant	California Quail	Gray Partridge	Chukar Partridge	Total Upland Game
Harvest 2010	636	23	624	8	1	656
Harvest 2009	666	15	439	16	3	473
Interannual change	(30)	8	185	(8)	(2)	183
Percent change	(4.5)	53.3	42.1	(50.0)	(66.7)	38.7
Daily Harvest Rate 2010		0.04	0.98	0.01	0.00	1.03
Daily Harvest Rate 2009		0.02	0.66	0.02	0.00	0.71
Percent change		60.6	48.8	(47.6)		45.2

WATERFOWL**				
	Hunters	Ducks	Geese	Total Waterfowl
Harvest 2010	454	998	112	1110
Harvest 2009	522	945	83	1028
Interannual change	(68)	53	29	82
Percent Change	(13.03)	5.61	34.94	7.98
Daily Harvest Rate 2009		2.20	0.25	2.44
Daily Harvest Rate 2008		1.81	0.16	1.97
Percent Change		21.4	55.2	24.1

* Upland game data for Indian Dan, Bridgeport Bar, West Foster, Central Ferry and Washburn Island Units

** Waterfowl data for Washburn Island and Bridgeport Bar

Appendix D

**Fall Wildlife Surveys
2010**

	West Foster Creek	Central Ferry Canyon	Total
UPLAND GAME BIRDS:			
Pheasant -	3	0	3
California Quail	38	36	74
Gray Partridge	0	3	3
Mourning Dove	7	3	10
MAMMALS:			
Mule Deer Male	0	1	1
Female	0	5	5
Fawn	2	3	5
Total	2	9	11
Cottontail Rabbit	1	0	1
Coyote	0	0	0
Bear	0	2	2
DIVERSITY SPECIES:			
Great Horned Owl	2	0	2
Red-tailed Hawk	1	0	1
Sharp-shinned hawk	1	0	1
Cooper's Hawk	1	6	7
Kestrel	3	2	5
Flicker	3	1	4
White-crowned sparrow	6	6	12
Snipe	1	0	1

Appendix E

Waterfowl Aerial Survey

Wells Pool (Lake Pateros)

Observer / Affiliation: Gordon Warrick
(USFWS)

January 11, 2011

SPECIES	
Undifferentiated Swan	1
TOTAL SWANS	1
Undifferentiated Canada Goose	295
TOTAL GEESE	295
Mallard	205
Gadwall	50
American Widgeon	325
Undifferentiated Puddle Ducks	750
SUBTOTAL PUDDLE DUCKS	1,330
Redhead	350
Canvasback	400
Scaup	2,235
Goldeneye	225
SUBTOTAL DIVING DUCKS	3,210
Common Merganser	24
TOTAL DUCKS	4,564
TOTAL WATERFOWL	4,860
Coots	2,330
SURVEY TOTAL	7,190
Bald Eagle	4a, 3i
Loon	9