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Public Utility District No. 1 of Douglas County

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September 28, 2009

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. Salas:

In compliance with Article 41, as modified February 24, 1989, please find enclosed the 2008 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
Ms. Dinah Demmers - Colville Confederated Tribes, 1 copy

2008 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 State Department of Fish and Wildlife, WDFW) to address the Wells Project's effects on wildlife. This agreement addresses Article 41 of the Wells Project license. Included in the agreement was a one-time cash payment of \$1,250,000 to be used for 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 that reside within the Wells Project Boundary; WDFW owns the portions outside the Wells Project Boundary. The term of this agreement extends for the duration of the Wells Project license (May 31, 2012).

On June 19, 1995, Douglas PUD entered into a Memorandum of Agreement (MOA) with WDFW for additional funding for the WWA. This MOA was necessary because the interest income received from 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 existing operations for the WWA, the parties determined 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 (May 31, 2012). The additional funding varies by year but was \$83,549 for the 2008 fiscal year (July 2007-June 2008).

This annual report presents the fiscal year 2008 expenditures and accomplishments and enumeration of certain wildlife and recreational uses of the Wells Wildlife Area through the Wells Wildlife Mitigation Program in 2008.

A. Expenditures

The Wells Special Wildlife Account principal balance totaled \$419,572 at the end of fiscal year 2008 (July 2007-June 2008) and \$317,863 at the end of the calendar year. Fiscal year 2008 expenditures are summarized in Table 1.

Table 1: Expenditures	Wells WA Account	Supplemental Funding	Total
Salaries	46,996	41,884	88,880
Employee Benefits	16,159	13,925	30,084
Goods and Services	27,363	27,106	54,469
Property Tax (Okanogan County)	5,072	0	5,072
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	104	0	104
Capital Outlay	232	635	867
Administrative Overhead	11,614	0	11,614
TOTAL	112,182	83,549	195,732

B. Game Bird Release:

- Captured and banded 135 California quail (*Callipepla californica*) and relocated 93 to the Indian Dan Unit, 10 to the Bridgeport Bar Unit and 32 to the West Foster Creek Unit.

C. Wildlife Habitat Management and Related Activities:

- Grain Food Plot and Waterfowl Habitat Development:
 - Established 154 acres of agricultural crops for wildlife food and cover on the area. This included: 113 acres of irrigated wheat (62 acres of spring wheat and 14 acres of winter wheat on Bridgeport Bar and 37 acres of spring wheat on Washburn Island), 20 acres of corn (14 acres on Bridgeport Bar and 6 acres on Washburn Island) and 21 acres of dryland wheat on the Indian Dan Canyon and West Foster Creek Units.
 - Irrigated about 40 acres of perennial vegetation on Washburn Island to promote dense nesting and escape cover.

- Riparian Tree and Shrub Planting:

- Planted 1,300 shrubs and trees on the Bridgeport Bar Unit (Table 2). Most were planted on two new sites including one located in a swale adjacent to a pond constructed in 2006.

<u>Common Name</u>	<u>Species</u>	
Black Cottonwood	<i>Populus trichocarpa</i>	250
Austrian Pine	<i>Pinus nigra</i>	50
Wood Rose	<i>Rosa woodsii</i>	700
R.O. Dogwood	<i>Cornus sericea</i>	100
Hawthorn	<i>Craetagus douglassi</i>	100
Blue Elderberry	<i>Sambucus canadensis</i>	100
Total		1,300

- Mowed, rotovated and/or sprayed vegetation competing with these and older woody plantings.
- Removed several hundred Siberian elm trees (*Ulmus parvifolia*, an undesirable exotic species) encroaching on planted trees and shrubs, and treated stumps with herbicide.
- Cut down and disposed of 20 large Siouxland cottonwoods on Bridgeport Bar to prevent potential damage to a neighbor's residence. Trimmed another 100 cottonwoods encroaching on an adjacent orchard.

- Restoration of Perennial Herbaceous Cover:

- Seeded 28 acres of perennial herbaceous cover on Bridgeport Bar. This includes seeding in 18 acres of established vegetation to increase cover density. These 18 acres were first mowed to disperse seed.
- Seeded 11 acres of perennial herbaceous cover on Washburn Island to provide wildlife food and cover.

- Ponds:

- Managed intake flow rates and water levels in five ponds on the West Foster Creek Unit to ensure adequate water distribution between ponds and prevent flooding.

- Wildlife Feeding and Watering:

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

- Artificial Nesting Structures:
 - Serviced and repaired goose, wood duck and kestrel nest structures. Canada goose nest structure use is summarized in Appendix A.
 - Installed 6 new wood duck boxes on the Okanogan Unit and replaced several others.

- Fences:
 - Inspected, maintained and repaired livestock and deer fences as needed.

- Vegetation Control:
 - Treated about 110 acres of weeds with herbicide including: diffuse knapweed (20 acres), leafy spurge (1 ac), Puncture vine (2 ac), Grass (~47 ac; quackgrass, rye, cheatgrass), Dalmatian toadflax (4 ac) and Canadian thistle (36 ac).
 - Mowed about 7 acres of weeds growing on and along wildlife area roads.
 - Mowed and applied herbicide to about 20 acres of Russian knapweed and Canadian thistle on the Indian Dan Unit and mowed 16 acres of Canadian thistle and reed canary grass on the West foster Creek Unit.

- 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 and repaired buildings as needed. Cleaned out and mowed parking areas. Cleared snow and replaced signs as needed.

D. Wildlife Populations and Surveys

Hunting harvest data has been collected on the Wildlife Area using a hunting registration program since 1978. Hunters register prior to hunting and report the game they harvest each day. Since this is conducted in a consistent manner, it provides an indication of game bird population trends over time. The registration data collected in 2008 and since 1978 is summarized below.

- Upland Game Bird:
 - Upland bird hunting pressure and success in 2008 were relatively low (see Table 3). WDFW recorded 688 upland bird hunters registering (hunter days) on the wildlife area with a harvest of 493 birds in 2008 (see Appendices C and D). This represents a harvest rate of .72 birds per hunter day. California quail comprised 89 percent of the upland

birds harvested on the area. The reported quail harvest (440) was 34.4 percent lower than in 2007 while the pheasant harvest was 2.7 percent higher (pheasant, chukar, and gray partridge numbers harvested were low: 38, 1, and 10 respectively).

- Table 3 summarizes California quail and total upland game bird harvest information collected between 1983 and 2008 on the Wildlife Area excluding the Washburn Island and Okanogan Units where hunting registration information is lacking. The period between 1978 and 1983, when ring-necked pheasants (*Phasianus colchinus*) were stocked on the area during hunting season was not included. Hunting data collected during this period was artificially inflated and was therefore not comparable to data collected subsequently.

Table 3: Wells Wildlife Area Upland Bird Hunting Data – 1978 -2008 (Indian Dan, Bridgeport Bar, West Foster Creek and Central Ferry Canyon Units).

	Hunters	Quail	Quail/ Hunter	Upland Birds	Upland Bird/Hunter
Average	1,101	751	0.77	1,051	0.97
Minimum	496	204	0.19	397	0.55
Maximum	2,840	1,659	1.65	2,453	1.71
2008	648	430	0.66	471	0.73

- The reported upland game bird harvest on Washburn Island in 2008 totaled 18 birds (10 quail, and 8 pheasants). This was not included in Appendix C.
 - Results of wildlife surveys conducted in the fall are summarized in appendix D.
- Waterfowl:
 - Surveyed a total of 72 Canada goose (*Branta canadensis*) nests on Wells Reservoir (Appendix A). Each nest was surveyed twice. Complete clutches were documented in 53 of the 72 nests. 41 ground and 12 artificial structure nests averaged 5.9 and 6.5 eggs per nest respectively. 6 ground nests were lost to predation (primarily raccoon). No nests were found on the Bridgeport Bar Islands due to raccoon activity. Production of 277 goslings was documented in 2008.
 - The US Fish and Wildlife Service and WDFW conducted aerial waterfowl surveys on November 05 and December 12, 2008 that are summarized in Appendix E.
 - Waterfowl hunters reported hunting 327 days on the Bridgeport Bar Islands, the Bridgeport Unit and the Washburn Island Unit a 45.6% decrease over 2007 and harvesting 146 geese and 687 ducks. This represents an average of 2.55 waterfowl per hunter day. Goose harvest on Washburn Island was the highest since 1981. Waterfowl harvest is summarized in Appendices C and D. Waterfowl hunting data for Bridgeport Bar (1978 to 2008) and for Washburn Island

(1981-2008), the two primary waterfowl hunting units, is summarized in table 4 and 5.

Table 4: Bridgeport Bar Waterfowl Hunting data – 1978 to 2008

Bridgeport Bar	Hunters	Ducks	Ducks \Hunter	Geese	Geese \Hunter	Total	Waterfowl \Hunter
Mean	441	651	1.52	62	0.15	713	1.67
Minimum	51	196	0.67	15	0.05	211	0.72
Maximum	851	1391	3.02	183	0.40	1422	3.09
2008	227	539	2.37	52	0.23	591	2.60

Table 5: Washburn Island Waterfowl hunting data – 1981 to 2008

Washburn Island	Hunters	Ducks	Ducks \Hunter	Geese	Geese \Hunter	Total	Waterfowl \Hunter
Mean	77	64	0.69	33	0.59	97	1.28
Minimum	5	0	0.00	11	0.08	15	0.54
Maximum	207	242	1.99	94	3.00	258	3.00
2008	100	148	1.48	94	0.94	242	2.42

- Non-Game:
 - Assisted the Bureau of Land Management in conducting bald eagle (*Haliaeetus leucocephalus*) surveys of 3 communal night roosts located in the vicinity of Wells Pool during the 2007-2008 winter (summarized in Appendix F). The highest count for the Pearl Hill/Upper Wells and Indian Dan roosts totaled 96 eagles (75 in 2007).
 - Volunteers recorded white pelican numbers (*Pelecanus erythrorhynchos*) on Wells Pool between March 7 and October 24th. The high count was 105 birds (51 in 2007) on August 6.
 - Three saw-whet owl nests produced 16 young in wood duck boxes on the wildlife area.

Appendix A

WELLS POOL
CANADA GOOSE NESTING SURVEY
2008

	NATURAL SITES	ARTIFICIAL STRUCTURES	TOTAL
TOTAL NESTS VISITED	57	15	72
NESTS WITH KNOWN CLUTCH	41	12	53
TOTAL EGGS	243	78	321
AVERAGE CLUTCH	5.93	6.50	6.06
NEST LOSS - PREDATED	6	0	6
KNOWN CLUTCH	0	0	
UNKNOWN CLUTCH	6	0	6
NESTS WITH KNOWN FATE AND CLUTCH	38	11	49
TOTAL EGGS	221	63	284
TOTAL HATCH	216	61	277
PERCENT HATCH	97.7	96.8	97.5
HATCHED EGGS PER NEST	5.7	5.5	5.65
ABANDONED	1	0	1
DEPREDATED	0	0	0
UNKNOWN	0	0	0
TOTAL LOSS	1	1	1
KNOWN PRODUCTION	216	61	277
HATCHED NESTS: UNKNOWN CLUTCH	9	4	13
*ESTIMATED HATCHLINGS	51	22	73
NESTS: UNKNOWN FATE	4	2	6
*ESTIMATED HATCHLINGS	23	11	34
NESTS: ACTIVE/NOT VISITED	0	4	4
*ESTIMATED HATCHLINGS	0	22	22
TOTAL ESTIMATED PRODUCTION	290	116	406
PERCENT OF TOTAL PRODUCTION	71.3	28.7	100

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

Appendix B.

Wells Wildlife Area
 Hunter Bag Check Summary
 2008 Hunting Season

	Indian Dan	Bridgeport Bar	West Foster	Central Ferry	Washburn Island	Total
UPLAND GAME BIRDS						
Hunters	182	268	101	97	40	688
Pheasant	0	18	12	0	8	38
Pheasant per hunter	0.00	0.07	0.12	0.00	0.20	0.06
California Quail	103	269	29	29	10	440
Quail per hunter	0.57	1.00	0.29	0.30	0.25	0.64
Gray Partridge	4	0	5	1	0	10
Gray partridge per hunter	0.02	0.00	0.05	0.01	0.00	0.01
Chukar	1	0	0	0	0	1
Chukar per hunter	0.01	0.00	0.00	0.00	0.00	0.00
Grouse	4	0	0	0	0	4
Grouse per hunter	0.02	0.00	0.00	0.00	0.00	0.01
Total upland game	112	287	46	30	18	493
Upland Game per hunter	0.62	1.07	0.46	0.31	0.45	0.72
WATERFOWL						
Hunters		227			100	327
Ducks		539			148	687
Duck per hunter		2.37			1.48	2.10
Canada Geese		52			94	146
Goose per hunter		0.23			0.94	0.45
Total Waterfowl		591			242	833
Waterfowl per hunter		2.60			2.42	2.55
MOURNING DOVE						
Dove Hunters	18	74	21	51	10	174
Dove Taken	5	132	21	288	14	460
Dove per hunter	0.28	1.78	1.00	5.65	1.40	2.64
MULE DEER						
Deer Hunters	71	6	59	66	0	202
Deer Taken	4	0	3	7	0	14
Deer per hunter	0.06	0.00	0.05	0.11		0.07

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						
2008-2009 Hunting Season						
UPLAND GAME BIRDS*						Total
	Hunters	Pheasant	California Quail	Gray Partridge	Chukar Partridge	Upland Game
Harvest 2008	688	38	440	10	1	489
Harvest 2007	895	37	671	10	8	726
Interannual change	-207	1	(231)	0	(7)	(237)
Percent change	(23.1)	2.7	(34.4)	0.0	(87.5)	(32.6)
Daily Harvest Rate 2008		0.06	0.64	0.01	0.00	0.71
Daily Harvest Rate 2007		0.04	0.75	0.01	0.01	0.81
Percent change		33.6	(14.7)	0.0	(83.7)	(12.4)
* Upland game bird figures above do not include those for Washburn Island.						
WATERFOWL**						
	Hunters	Ducks	Geese	Total Waterfowl		
Harvest 2008	327	687	146	833		
Harvest 2007	601	1284	102	1386		
Interannual change	(274)	(597)	44	(553)		
Percent Change	(45.6)	(46.5)	43.1	(39.9)		
Daily Harvest Rate 2008		2.10	0.45	2.55		
Daily Harvest Rate 2007		2.14	0.17	2.43		
Percent Change		(1.7)	163.1	4.8		
* Upland game data for Indian Dan, Bridgeport Bar, West Foster and Central Ferry Units						
** Waterfowl data for Washburn Island and Bridgeport Bar						

Appendix D.

Fall Wildlife Surveys
2008

	West Foster Creek	Central Ferry Canyon	Total
UPLAND GAME BIRDS:			
Pheasant - Male	0	0	0
- Female	3	0	3
- Total	3	0	3
California Quail	151	45	196
Gray Partridge	0	5	5
Mourning Dove	7	0	7
MAMMALS:			
Mule Deer	12	2	14
Coyote	0	1	1
DIVERSITY SPECIES:			
Red Tailed Hawk	1	2	3
Bald Eagle	0	1	1
Golden Eagle	0	1	1
Northern Harrier	2	0	2
Great Horned Owl	1	2	3
Sharp-shinned Hawk	1	0	1
Merlin	1	0	1

Appendix E.

WATERFOWL SURVEY**Wells Pool****2008-2009**

Observer/Affiliation: Randy Hill & Ray Bentley (FWS)

SPECIES	11/05/08	12/09/08
Tundra Swan	0	0
Trumpeter Swan	0	0
Undifferentiated Swan	0	0
TOTAL	0	0
Western Canada Goose	0	0
Lesser Canada Goose	0	0
Undifferentiated Canada Goose	46	85
Other Goose	0	0
TOTAL GEESE	46	85
Mallard	695	200
Gadwall	60	5
American Wigeon	3670	205
Green-winged Teal	0	0
Blue-winged Teal	0	0
Cinnamon Teal	0	0
Unidentified Teal	0	0
Northern Shoveler	0	0
Northern Pintail	0	0
Wood Duck	0	0
SUBTOTAL PUDDLE DUCKS	4425	410
Redhead	750	159
Canvasback	2439	410
Scaup	1470	1265
Ringneck	80	122
Goldeneye	290	697
Bufflehead	1081	164
Ruddy	35	0
SUBTOTAL DIVING DUCKS	6145	2817
Common Merganser	4	71
Hooded Merganser	6	11
TOTAL DUCKS	10580	3309
TOTAL WATERFOWL	10626	3394
Coots	9225	13350
SURVEY TOTAL	19851	16744
Bald Eagle *	1i	1i
White Pelican	0	0
Sandhill Crane	0	0
Loon	8	1
Grebe	2	0
Cormorant	0	0
Egret	0	0
Heron	0	7
Golden Eagle	0	0

* I = Immature, A = Adult

Appendix F.

Bald Eagle Roost Monitoring Summary

Winter 2007-2008

Modified from Bureau of Land Management records

Date	Pearl-Upper Wells Roost				Indian Dan Canyon Roost				Azwell Roost				All Roosts			
	Ad	Imm	Unk	Total	Ad	Imm	Unk	Total	Ad	Imm	Unk	Total	Total	Total	Unk	Total
12/19/2007	5	12		17	8	11		19				0	13	23	0	36
1/9/2008	13	18	1	32	3	5	5	13				0	16	23	6	45
1/23/2008	18	47		65	18	8	5	31				0	36	55	5	96
2/6/2008	6	38	1	45	20	13	2	35	2	12		14	28	63	3	94
2/20/2008	7	25		32						2		2	7	27	0	34
3/5/2008	3	9		12	15	11	1	27				0	18	20	1	39

Ad = Adult, Imm = Immature, Unk = Unknown

Document Content(s)

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