Via Electronic Filing

Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 1st Street N.E.
Washington, D.C. 20426

May 30, 2014

Subject: Wells Hydroelectric Project – FERC Project No. 2149
2013 Annual Wildlife and Botanical Report and 2014 Work Plan

Dear Secretary Bose:

Public Utility District No. 1 of Douglas County, Washington (Douglas PUD), licensee for the Wells Hydroelectric Project No. 2149 (Wells Project) respectfully submits the enclosed annual report titled: 2013 Wildlife and Botanical Report and 2014 Work Plan. This report describes the implementation of activities conducted during calendar year 2013 in compliance with Article 409 of the license for the Wells Project, and the terms of the Wildlife and Botanical Management Plan (WBMP), Avian Protection Plan (APP), and Off-License Settlement Agreement. The enclosed report also includes a description of the measures to be implemented during calendar year 2014 in association with these same resource protection plans and agreement.

Article 409 of the Wells Project license requires Douglas PUD to implement the WBMP filed with the Federal Energy Regulatory Commission (FERC) on May 27, 2010 as Appendix E-3 of Exhibit E of the Final License Application. Article 409 also requires the development of an annual report that documents the results of the prior year’s measures and describes the upcoming year’s proposed measures pursuant to the WBMP. Article 409 further requires Douglas PUD to annually update the list of sensitive plant species found in the WBMP based upon an annual review of the Washington Natural Heritage Program rare plant list, and it requires Douglas PUD to develop the WBMP annual report and work plan in consultation with specific federal and state agencies and the Confederated Tribes of the Colville Reservation. Douglas PUD is required to submit the annual report and work plan to the FERC by May 31st of each year following license issuance.

In addition to Article 409, Ordering Paragraph (I) of the license directs Douglas PUD to implement the APP that was included within Appendix E-6 of Exhibit E of the Final License Application filed with the FERC on May 27, 2010.

The Off-License Settlement Agreement is not a requirement of the FERC license. However, many of the measures funded by Douglas PUD, through this agreement, are also required measures contained within the WBMP. Because of the interrelated nature of all of the wildlife and botanical measures associated with the new license and the Off-License Settlement Agreement, Douglas PUD has elected to report on both actions within one report.

The 2013 Wildlife and Botanical Report and 2014 Work Plan provides a summary of all of the actions implemented by Douglas PUD in compliance with Article 409 of the license and in compliance with the terms of the WBMP, APP, and Off-License Settlement Agreement.

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

Sincerely,

Shane Bickford
Natural Resources Supervisor

Enclosure: 2013 Annual Wildlife and Botanical Report and 2014 Work Plan

Cc: Terrestrial Resource Work Group
Jim McGee – Douglas PUD

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2 In December 2007, Douglas PUD entered into an Off-License Settlement Agreement with the Washington State Department of Fish and Wildlife (WDFW). The Off-License Settlement Agreement was filed with the FERC on May 27, 2010 as Appendix E-11 of Exhibit E of the Final License Application. The Off-License Settlement Agreement is not a requirement of the FERC license for the Wells Project. Instead, it is a contract between Douglas PUD and WDFW that addresses funding for various wildlife and botanical related projects located both within and adjacent to the Wells Project. The Off-License Agreement also covers the planting of resident fish for the enhancement of recreational fishing opportunities outside the Wells Project Boundary.
2013 ANNUAL WILDLIFE AND BOTANICAL REPORT
AND 2014 WORK PLAN

WELLS HYDROELECTRIC PROJECT

FERC NO. 2149

April 2014

Prepared for:
Public Utility District No. 1 of Douglas County
East Wenatchee, Washington
For copies of this Annual Wildlife and Botanical Report, contact:

Public Utility District No. 1 of Douglas County
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1151 Valley Mall Parkway
East Wenatchee, WA 98802-4497
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1.0 INTRODUCTION

On November 9, 2012, the Federal Energy Regulatory Commission (FERC or Commission) issued a license for the Wells Hydroelectric Project (Wells Project, FERC No. 2149-152). This annual 2013 Wildlife and Botanical Report and 2014 Work Plan describes the implementation of activities conducted during calendar year 2013 in compliance with Article 409 of the license for the Wells Project, and the terms of the Wildlife and Botanical Management Plan (WBMP), Wells 230 kV Transmission Line Avian Protection Plan (APP), and Off-License Settlement Agreement. The report also includes a description of the measures to be implemented during calendar year 2014 in association with these same resource protection plans and agreement. Consultation with the U.S. Fish and Wildlife Service (USFWS), Washington Department of Fish and Wildlife (WDFW), Washington Department of Ecology (Ecology), the Confederated Tribes of the Colville Reservation (CCT), and U.S. Bureau of Land Management (BLM) is also documented in the report.

2.0 BACKGROUND

There are approximately 108 miles of reservoir shoreline in the Wells Project. Also within the Project boundary are approximately 15 miles of shoreline around isolated ponds, the largest being Washburn Pond. Public Utility District No. 1 of Douglas County (Douglas PUD) owns over 99 percent of the shoreline within the Wells Project boundary. Lands within the Wells Project boundary include shrub steppe; irrigated agriculture; wildlife habitat, such as the Wells Wildlife Area (WWA); and recreation lands, including parks in Pateros, Brewster, and Bridgeport.

Douglas PUD owns approximately 2,649 acres of the 2,664 acres of land adjacent to the Wells Reservoir within the Project boundary. There is no private land ownership below the Project boundary around Wells Reservoir. There are also 1,117 acres within the 235 feet wide, 41 mile transmission line right of way (ROW), the majority of which are privately owned. There is no federal land ownership within the transmission line ROW.

The WWA, managed by WDFW, is located in Douglas and Okanogan counties in Washington State and consists of six units: three shoreline/riparian units and three upland units. Bridgeport Bar (502 acres), Okanogan (91 acres) and Washburn Island (300 acres) are located along the shoreline of the Wells Reservoir and a portion of each unit lies within the Project boundary. West Foster Creek (1,025 acres), Central Ferry (1,602 acres) and Indian Dan Canyon (4,716 acres) are upland units and are entirely outside the Wells Project boundary (Figure 2.0-1). As of June 2012, Douglas PUD funds the operation of the WWA under the requirements of the Off-License Settlement Agreement Resident Fish Stock and Wells Wildlife Area Funding (OLSA) with WDFW.

The Cassimer Bar Wildlife Management Area (CBWMA; 116 acres) is located in Okanogan County, and is a shoreline/riparian and wetlands unit at the Okanogan River confluence on the Colville Indian Reservation (Figure 2.0-1). The CBWMA is managed by Douglas PUD in cooperation with the CCT.
Figure 2.0-1  Wells Project Map
3.0 WILDLIFE AND BOTANICAL MANAGEMENT PLAN

The WBMP, in conjunction with Douglas PUD Land Use Policy directs implementation of resource protection measures for wildlife and botanical resources during the term of the FERC license for the Wells Project. Douglas PUD developed this management plan in consultation with agency and tribal natural resource managers (Terrestrial Resource Work Group or Terrestrial RWG). During the development of the WBMP, the Terrestrial RWG focused on developing management priorities for resources potentially impacted by ongoing Project operations. The plan is also intended to guide wildlife management activities and to protect rare, threatened and endangered (RTE) wildlife and plant species on Project lands during the term of the new license for the Wells Project.

3.1 Protect RTE Terrestrial Species Habitat on Wells Project Lands

The WDFW maintains a list of endangered, threatened and sensitive fish and wildlife species (Washington Administrative Codes (WAC) 232-12-014 and 232-12-011). Listing procedures were developed by a group of citizens, interest groups, and state agencies and adopted by the Washington Fish and Wildlife Commission in 1990 (WAC 232-12-297).

State-listed wildlife species known to use the Wells Project include the American white pelican (*Pelecanus erythrorhynchos*) and Columbia sharp-tailed grouse (*Tympanuchus phasianellus*).

3.1.1 American White Pelican

The American white pelican is listed as a state endangered species in Washington State; white pelicans are not federally-listed. White pelicans usually arrive on the reservoir in June and remain on the reservoir until October or mid-November. There is no evidence of sexually mature birds being present within the Project; all white pelicans observed appear to be immature. Consequently, there does not appear to be any nesting taking place within the Project. The white pelicans are feeding on the abundant resident fish found within the reservoir.

- Beginning in year 2 of the new license, Douglas PUD will provide educational material (signs) at Douglas PUD boat launches and local visitor centers. Educational materials will advise boaters to avoid pelicans while boating, fishing and hunting. Signs will be inspected during other duties and repaired as soon as practicable after damage is discovered.

_Douglas PUD has developed a sign to educate recreational boaters and fisherman to avoid pelicans when on the Wells Reservoir. The draft sign design was provided to the Terrestrial RWG for their review and comment. The pelican signs (11 inches by 17 inches) were printed in August 2013 and installed at all six formal boat launches and two informal launches on Wells Reservoir during September 2013. The launches include: Starr Boat Launch, Pateros Methow Boat Launch and Winter Boat Launch, Brewster Boat Launch, Bridgeport Boat Launch, Monse Boat Launch, Okanogan River Unimproved Boat Launch, and Crazy Rapids Unimproved Boat Launch. A copy of the pelican sign is shown in Figure 3.1-1._
Figure 3.1-1  Pelican educational signs installed at boat launches on Wells Reservoir

3.1.2  Sharp-tailed Grouse

Columbian sharp-tailed grouse are federal species of concern and a threatened species in Washington State. Sharp-tailed grouse are found in shrub steppe and riparian areas at higher elevations, except during hard winters when snow depth and crusting snow force them to lower elevations. Sharp-tailed grouse have been found on Project lands (Bridgeport Bar Unit of the WWA) in the past but they have not been observed there in the past twenty years (M. Hallet, WDFW, pers. comm.). Within the Wells Project, the irrigated riparian vegetation on the Bridgeport Bar Unit provides food items that could be used by sharp-tailed grouse during harsh winter conditions. There is no known Project effect on sharp-tailed grouse.

- Beginning in year one of the new license, as an enhancement, Douglas PUD will continue to water irrigation-dependent riparian trees, shrubs and associated vegetation located below Project boundary within the confines of the Bridgeport Bar Unit of the WWA. Continued management of this habitat will benefit a wide range of wildlife species, including sharp-tailed grouse.

*Through the OLSA, WDFW waters the irrigation-dependent riparian trees, shrubs and associated vegetation growing below Project boundary within the confines of the Bridgeport Bar Unit of the WWA. Dan Peterson, manager of the WWA, states in his Wells Wildlife Area Annual*
Report for 2013 that the riparian plantings were irrigated weekly between April and October 2013. A copy of Dan Petersen’s report can be found in Appendix G.

3.2 Protect RTE Botanical Species from Land Disturbing Activities and Herbicide Sprays

The Washington Natural Heritage Program (WNHP), which is administered by the Washington Department of Natural Resources, has developed a list of plant species considered endangered, threatened, sensitive, possibly extirpated, and under review (lists 1 and 2) for conservation purposes.

EDAW, Inc. (2006a) conducted a baseline botanical survey of Wells Project lands and Parametrix, Inc. (2009) conducted baseline botanical studies on the Wells 230 kV transmission line corridor. Studies included cover type mapping, RTE plant surveys and weed surveys. The four RTE plant species that were documented include two state-threatened species, Thompson’s clover (Trifolium thompsonii) and little bluestem (Schizachyrium scoparium); and two WNHP Review 1 Species: chaffweed (Anagallis minima) and northern sweetgrass (Hierochloe hirta). All RTE plant locations were documented using a handheld Global Positioning System (GPS) unit.

3.2.1 Resurvey Thompson’s Clover and Little Bluestem Protected Sites

- Beginning in year five (2017) of the new license, and every 10 years thereafter, Douglas PUD will survey and revise site boundaries for populations of little bluestem and Thompson’s clover found within the Wells Project boundary.

Not required until 2017.

3.2.2 Ground Disturbing Activities and Weed Control at RTE Plant Protection Sites

- Beginning in year one of the new license, for lands owned by Douglas PUD within the Wells Project boundary, no new ground disturbing activities will be allowed within a 500 foot buffer zone surrounding the RTE plant locations and no land use permits will be issued for these buffer areas. Any weed control needed within the buffer zone will utilize the following methods in descending order of preference: biological control, hand pulling, and hand wiping of individual weeds with herbicide. Details of the Weed Control Plan can be found in Section 4.6 of the WBMP.

Douglas PUD did not allow any ground disturbing activities to happen below Project boundary within five hundred feet of the RTE plant locations identified in the EDAW (2006a) RTE plant surveys. The Douglas PUD vegetation management employees have been informed of the RTE plant sites and no weed control was needed in any of the RTE plant locations during 2013. Bi-monthly reservoir surveys will continue as a deterrent to future ground disturbing activities within the Project boundary.
3.2.3 Weed Control at Thompson Clover Sites

- Beginning in year one of the new license, Douglas PUD will control weeds within a 500 foot buffer of Thompson’s clover occurrences within the transmission line right of way. Weed control work will utilize the following methods in descending order of preference: biological control, hand pulling, and hand wiping of individual weeds with herbicide.

No ground disturbing activities happened within 500 feet of the Thompson’s clover site identified by Parametrix (2009) in the Wells 230 kV transmission corridor. The Douglas PUD vegetation management employees have been informed of the Thompson’s clover sites and no weed control was needed in the Thompson’s clover site during 2013.

3.2.4 Washington Natural Heritage Program Rare Plant List

Douglas PUD is required by Article 409 of the license for the Wells Project to annually consult the WNHP to review their rare plant list and include an updated copy in the annual Terrestrial Report to the FERC.

A current copy of the WNHP rare plant list can be found in Appendix B of this report. The list was compiled from WNHP rare plant lists for Chelan, Douglas and Okanogan counties, updated by WNHP on July 2013. The lists were observed on October 2, 2013 at the three web addresses listed below.


Douglas PUD consulted with WNHP to review changes to the rare plant list between the October 2012 list found in the 2013 report and the July 2013 list found in this report (Appendix B). Four plant species were removed from the Chelan, Douglas and Okanogan counties rare plant lists including Anagallis minima, common name chaffweed. Chaffweed is a wetland plant that was found on the Wells Reservoir during the 2006 rare plant survey. Ten plants on the list also had their scientific name changed. Heirochloe hirta (northern sweetgrass) a RTE plant found on the Wells Reservoir in 2006 was renamed Anthoxanthum hirtum. A copy of the October 3, 2013 and October 7, 2013 emails from WNHP can be found in Appendix B following the rare plant list.

The TRWG meet on April 25, 2014. The meeting participants discussed the removal of chaffweed from the list of rare vascular plant species that are tracked by the Washington Natural Heritage Program. It was decided unanimously, that chaffweed, with its change of status, no longer requires the protection provided RTE species under Section 4.2 of the WBMP(Appendix C).
3.3 Conserve Habitat for Species on Wells Project Lands Protected by the Federal Endangered Species Act, Bald and Golden Eagle Protection Act, and Migratory Bird Treaty Act

3.3.1 Bald Eagle

Bald eagles (*Haliaeetus leucocephalus*) were delisted from the federal Endangered Species Act on August 8, 2007 (72 FR 37345) and were listed as sensitive on the Washington State list of wildlife classified as protected under WAC 232-12-011, in 2008. USFWS has published guidelines for protecting bald eagle habitat under the authority of the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act (USFWS 2007). In the 1980s, Douglas PUD installed 25 shoreline bald eagle perch poles to provide the eagles elevated perches for hunting, sunning and resting. The eagles also perch on ponderosa pine and black cottonwood (*Populus balsamifera ssp trichocarpa*) trees and old snags. The abundant waterfowl and American coots (*Fulica americana*), found within the Wells Reservoir, provide the majority of prey eaten by bald eagles during the winter (Fielder, 1982).

3.3.1.1 Bald Eagle Perches Pole Inspection

- Beginning in year one of the new license, Douglas PUD will inspect raptor perch poles annually and repair or replace perch poles as warranted. The perch poles near the Starr Boat Launch will be removed to reduce avian predation on downstream migrating salmonids.

Douglas PUD inspected 29 perch poles on Wells Project lands (Appendix D). One perch pole was slightly damaged by fire and all other perch poles were found to be sound. Two perch poles constructed on Cassimer Bar in 1985 were missing. The poles were under mined by wave action during recent winter storms. New locations for the poles were found on Cassimer Bar. An archaeological survey at the new pole sites was conducted and permission to replace the poles was requested from the Colville Confederated Tribes Historic Preservation Office and Washington State Historic Preservation Office. Douglas PUD received permission to install the poles on October 3, 2013. Two thirty five foot poles were installed by a Douglas PUD line crew on October 9, 2013.
Figure 3.3-1 Cassimer Bar raptor perch poles replaced in 2013

One perch pole near Dougherty Canyon was damaged by wildfire in 2012. The fire burned off the pole top, dropping the cross arms. A second pole near Buena Flats had a cross arm hanging but the second cross arm was serviceable. These poles will be repaired in 2014. A map depicting the location of perch poles within Project boundary can be found in Appendix D.

3.3.1.2 Bald Eagle Surveys

- Beginning in year one of the new license, Douglas PUD will perform monthly boat surveys during the months of November through March to inventory wintering bald eagle numbers and to identify large perch trees regularly used by bald eagles. Douglas PUD will determine if the perch trees need immediate protection from beavers or if they are likely to fall down in the near future due to bank erosion.

Wells Reservoir is an important waterfowl wintering area in eastern Washington. Bald eagles from Canada and Alaska migrate to the reservoir in December to feed on the abundant American coots and waterfowl. The eagles begin their migration to northern breeding areas in late February and early March.

Douglas PUD conducted bald eagle surveys on Wells Reservoir during the winter of 2011-2012, 2012-2013, and 2013-2014. Eagles were counted from a boat. All perched and flying eagles were identified as either immature or adult. Table 3.3-1 shows the bald eagle counts for the winter of 2011-2012, 2012-2013, and 2013-2014.
Table 3.3-1  Wells Reservoir Bald Eagle Surveys winter of 2011-2012, 2012-2013, and 2013-2014.

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*Imm. = immature non-breeding bird

3.3.1.3  Protect Trees from Beaver Damage

- Beginning in year two of the new license, Douglas PUD will begin, and then continue as necessary, protecting large living trees within the Project boundary that are used by eagles as perches and which are likely to be lost from beaver (*Castor canadensis*) damage. Protection measures will be completed by year five of the new license for those trees identified within the first four years of the new license. To prevent beaver damage to eagle perch trees, each tree will be wrapped with galvanized welded wire. Wire wrapped trees will be inspected annually and the wire repaired or replaced, as needed.

* Douglas PUD wrapped forty two total trees on the Wells Reservoir shoreline during the winters of 2011 and 2012. An additional 41 cottonwood trees were wrapped with 16 gauge wire with one inch by one inch square mesh during the fall of 2013. The trees were wrapped with wire that is three feet tall and encircled the entire circumference of each tree. A map depicting the location for the protected trees can be found in Appendix E.

3.3.1.4  Loss of Perch Trees due to Erosion

- At any time during the implementation of the new license, as site specific issues arise regarding potential losses of large eagle perches due to bank erosion, Douglas PUD will consult with the Terrestrial RWG to determine if any reasonable measures are available to address the issue.

No eagle perch trees were lost due to shoreline erosion during the 2013 reporting period.

The WBMP developed by the Terrestrial RWG calls for protecting eagle perch trees from beaver damage and encouraging recruitment of trees on the reservoir, through both natural reproduction and planting trees in suitable habitat. The group decided against using shoreline armoring to protect areas threatened with erosion. Measures to control shoreline erosion, such as placing hardened surfaces, can be detrimental to habitat utilized by ESA-listed salmon, steelhead and bull trout, and are generally not supported by fish and wildlife management agencies. Douglas PUD will consult with the Terrestrial RWG if any large perch trees are threatened by erosion and will ensure that new trees are planted to replace any trees lost due to erosion.
3.3.1.5 Protection of Small Trees

- Beginning in year one of the new license, Douglas PUD will ensure establishment and protection of sufficient smaller trees of appropriate age classes to ensure future abundance of potential perch trees is at least equal to the baseline abundance documented in year one of the new license.

Beaver residing on the Wells Reservoir feed on native cottonwoods, willows and trees in fruit orchards near the water. Douglas PUD hired a Nuisance Wildlife Control Operator (NWCO) to reduce the population of beaver that reside on the Wells Reservoir. The NWCO removed 18 from the Wells Reservoir during the winter of 2012-13. The removal of beaver is one way that Douglas PUD is helping to ensure that sufficient small trees have an opportunity to recruit into appropriate age classes to ensure future abundance of potential eagle perch trees.

Buena Flats was burned by the Crain Road wildfire during the fall of 2012. Douglas PUD planted 20 cottonwood cuttings on Buena Flats in March 2013. The cottonwood cuttings will be inspected during the spring of 2014 and additional cuttings planted if the cuttings suffered high mortality. The cottonwood trees will provide future bald eagle perches and habitat for other wildlife.

3.3.2 Waterfowl

Wells Reservoir is an important waterfowl wintering area in eastern Washington.

Waterfowl (ducks, geese and swans) are protected as migratory game birds under the Migratory Bird Treaty Act. Wells Reservoir is an important waterfowl wintering area in eastern Washington. Aerial survey data from fall 2001 to spring 2005 show a maximum of 33,912 ducks and geese during the fall migration, and a maximum of 38,909 ducks and geese wintering on the Wells Reservoir. The native pond weeds found growing in the Wells Reservoir, along with grain crops grown on the WWA, provide food for wintering and migrating waterfowl. Spring and summer resident waterfowl, mostly Canada geese (*Branta canadensis*) Brant, utilize the islands, wetlands and open areas of grass for breeding habitat and food.

Douglas PUD conducted an aquatic macrophyte study in the Wells Reservoir (Le and Kreiter, 2006). The results indicated the macrophyte community found within the Wells Project is healthy and dominated by native species. Project operations, including reservoir fluctuations, do not appear to be encouraging the growth of non-native macrophytes, including Eurasian watermilfoil (*Myriophyllum spicatum*). Daily reservoir fluctuations do have an effect on the growth of macrophytes in the upper 2-4 feet of the reservoir but the overall community types and species composition are not affected by reservoir operations (DTA, 2006).

Shoreline wetlands have developed under the daily fluctuations of the reservoir. Wells Reservoir provides the water that supports a variety of wetland cover types that were less abundant or did not occur in the former Columbia and Okanogan river basins. These wetlands are composed of species requiring high and relatively consistent soil moisture during the growing season and that can also withstand frequent water level fluctuations (EDAW, 2006a).
• Beginning in year one of the new license, Douglas PUD will plant at least 50 acres of annual grain crops within the Bridgeport Bar Unit of the WWA below Project boundary, to provide food for wintering Canada geese and dabbling ducks.

The Wells Wildlife Area annual report documents the planting grain crops within the WWA (Appendix G). WDFW produced 150.5 acres of irrigated grain crops on the Bridgeport Bar and Washburn Island units, 105 acres of grain were planted below Project Boundary. Species planted included 77 acres spring wheat, 8.5 acres winter wheat, 38 acres of barley and 27 corn. WDFW planted fields with wheat or barley; field size ranged from 2 to 22 acres. Fifteen (13) corn rows were established and averaged 2 acres each. Dabbling ducks and wintering geese were observed utilizing these fields during the reporting period. A copy of Dan Petersen’s Wells Wildlife Area annual report can be found in Appendix G.

3.4 Protect Wildlife Habitat on Wells Project Lands

The Wells Reservoir and wetlands provide habitat for a variety of waterfowl, shorebirds and aquatic furbearers. Riparian plant communities within the Wells Project support more wildlife species than any other vegetation type and include important habitat for migratory and nesting birds, mammals, reptiles and amphibians. Shrub steppe plant communities provide habitat for birds, reptiles and mammals adapted to thrive in this dry open habitat. Wildlife surveys detected 120 avian, 3 amphibian, 6 reptile, and 12 small mammal species within the Wells Project. The results of the wildlife surveys indicate that the Wells Project supports an abundance of healthy, native wildlife species (EDAW 2006b).

Douglas PUD has planted riparian shrubs and trees on the shoreline of the Wells Reservoir as mitigation for various construction projects and in areas where erosion was occurring to help stabilize the shoreline. Riparian shrubs and trees have been replanted where livestock disturbance has damaged the shoreline. Fencing has been installed to exclude livestock from shoreline riparian areas.

Land use permits are a tool Douglas PUD uses to balance private use of Wells Project lands with fish, wildlife, cultural resources and public recreation demands. Project lands have been monitored twice a month by boat to detect unauthorized encroachments from adjoining properties including vegetation removal and livestock trespass. Douglas PUD staff also monitors activities on Project land while performing normal land maintenance duties.

Douglas PUD has worked cooperatively with the CCT concerning land use issues within Project boundary on the Colville Indian Reservation. WDFW and Douglas PUD have worked closely on land use issues within Project boundary outside of the Reservation. In an effort to continue these important relationships, Douglas PUD will request an annual meeting with the CCT and WDFW to discuss land use and wildlife management issues related to implementation of this WBMP.

• Beginning in year one of the new license, Douglas PUD will continue twice a month boat monitoring of Project lands for unauthorized encroachment and damage caused by recreational activities and adjacent land owners. Wildlife habitat damage caused by unauthorized encroachment activities will be repaired or replaced with in-kind habitat within 12 months of identifying unauthorized activity.
Douglas PUD conducts twice monthly boat monitoring of Project lands for unauthorized encroachment and damage caused by recreational activities and adjacent land owners. Please see memo from John Brown in Appendix A.

### 3.5 Maintain Productive Wildlife Habitat on the Cassimer Bar Wildlife Management Area

The CBWMA protects and enhances wildlife habitat on 116 acres of land near the mouth of the Okanogan River. Since 1970 Douglas PUD, in cooperation with the CCT, has managed the land for wildlife habitat.

The three sloughs on Cassimer Bar were diked in the 1980s to provide furbearer and waterfowl habitat. After more than 25 years, the tide gates and culverts through the dikes, used to regulate the water elevation, have failed.

#### 3.5.1 Weed Control

- Beginning in year one of the new license, Douglas PUD will implement weed management annually to control new occurrences of noxious weeds and to reduce existing weed occurrences.

_Douglas PUD annually controls all State Classified A and B weeds known to occur on project lands. No Class A or B weeds are known to occur on Cassimer Bar. No weed control was necessary on Cassimer Bar or within the CBWMA._

#### 3.5.2 Access Management and Habitat Replacement

- Beginning in year one of the new license, Douglas PUD will manage access and replace damaged habitat to reduce adverse effects of recreation on wildlife habitat.

_Access to the CBWMA is controlled by a fence with locked gates. All access to the area by the public is on foot. No wildlife habitat was found damaged due to public recreation during 2013._

#### 3.5.3 Fencing

- Beginning in year one of the new license, Douglas PUD will install and maintain perimeter fencing to protect Cassimer Bar wildlife habitat from livestock.

_The CBWMA is protected by a fence that runs along the east boundary of the area. The fence prevents livestock from gaining access to the CBWMA. The fence was inspected three times in 2013 and no damage was found. The CBWMA is monitored by Douglas PUD staff as they travel past the area on other assignments. Livestock were not observed in the CBWMA during 2013._
3.5.4 Cassimer Bar Dikes

- Beginning in year one of the new license, Douglas PUD will evaluate the dikes on Cassimer Bar and determine an appropriate method to fix the dikes. In year two, Douglas PUD will apply for permits from appropriate agencies. Contingent on receiving the necessary permits, Douglas PUD will repair the dikes to enhance waterfowl and other aquatic habitats on Cassimer Bar. In year four and every year thereafter, the dikes will be inspected and repaired as soon as the design work and permitting allow.

Douglas PUD is working with the Terrestrial RWG to evaluate the Cassimer Bar dikes. The Terrestrial RWG discussed either repairing the dikes which would maintain habitat for warm water invasive fish and amphibian species or removing the dikes to reconnect the sloughs to the Okanogan River. Removal of the dikes and restoration of the natural flood plain function will improve water exchange, cooling the water in the sloughs, to provide conditions better suited for native species. Douglas PUD developed four options to breach the dikes.

The TRWG met on April 25, 2014 (Appendix C). The group discussed options to repairing the Cassimer Bar dikes. The Colville Confederated Tribes (CCT) representative expressed concerns about the work window for the dike repair or breaching would conflict with the tribal salmon fishery. By agreement the work window for construction activities will avoid the peak of the salmon fishery at the mouth of the Okanogan River.

The CCT representative also express concern that opening the sloughs to the Okanogan River would provide free ingress and egress to the sloughs by northern pike minnow and largemouth and smallmouth bass and may increase their productivity and abundance as piscivorous predator populations.

The TRWG discussed the various options for repairing or breaching the dikes and determined that additional information was needed. The TRWG also decided that whatever option is chosen should benefit native wildlife since that was the original reason for building the dikes. TRWG requested that Douglas PUD investigate if cool water can be allowed into the slough from the Columbia River. This information will be used to inform the TRWG decision to repair the dike as is or breaching the dike.

3.5.5 Control Noxious Weeds on Project Lands

Invasive weeds are introduced either deliberately (e.g., free seeding garden plants) or accidentally through human activity. Because of their aggressive growth and lack of natural enemies, these plants can be highly destructive, competitive, or difficult to control. These exotic species can harm the economy and natural resources by reducing crop yields, destroying native plant and animal habitat, reducing recreational opportunities, decreasing land value and in some cases poisoning humans and livestock.

Invasive non-native plants under Washington State law (17.10 RCW) are considered noxious weeds. The Washington State Noxious Weed Control Board annually develops a list of noxious weed species of statewide importance. The Chelan and Okanogan Noxious Weed Control...
Boards maintain a noxious weed list which includes those weed species found in their counties that must be controlled by landowners. Douglas County has not established a noxious weed control board, but still must follow Washington State noxious weed mandates. On each weed board list, noxious weeds are classified according to their current distribution and degree of concerns; control efforts are required of landowners for some weed classes.

3.5.6 Weed Map

EDAW, Inc. (2006a) and Parametrix (2009) conducted noxious weed surveys on Project lands and the transmission corridor, respectively. The noxious weed map was developed in ArcView Geographic Information Systems (GIS) to identify weed infestation on Project lands.

- Beginning in year one of the new license, Douglas PUD will annually control identified Class A and B designated weed occurrences on Wells Project lands.

* * *

**Douglas PUD had two employees that controlled Class A and Class B weeds during the spring, summer and fall of 2013. Weeds were controlled on Wells Project land and the Wells 230 kV Transmission Line Corridor. Douglas PUD worked with the Okanogan County Weed Control Board to identify any new infestation of weeds on Wells Project lands within Okanogan County.**

- Beginning in year five of the new license, Douglas PUD will survey Wells Project lands for new terrestrial weed infestations every five years throughout the term of the new license. Douglas PUD will use weed maps to identify problem areas and will update the maps as new weed populations are discovered.

*Not required until 2017.*

3.5.7 Weed Management Plan

- Within one year of receipt of a new license, Douglas PUD will implement the following steps to control weeds on Project lands:

1. Consider the species of noxious weeds, density and size of the sites and surrounding vegetation when determining control measures.
2. Consider the land use of the site.
3. Acquire all environmental permits required (e.g., wetlands).
4. Consult the Washington State Department of Agriculture, pesticide-sensitive individual lists for properties adjacent to the control site.
5. Determine the effectiveness of various control options: burning, tilling, digging, herbicide application by wicking, spot spraying or broadcast spraying, or biological control agent.
6. Determine the most effective physiological growth stages of the target weed to obtain maximum control with least impact to surrounding vegetation.
7. Control weeds using method(s) selected for the site.
8. Monitor all application sites to determine the effectiveness of the weed control.
9. Control sites denuded by herbicide treatment will be replanted with native plant species appropriate to the site.
In 2013, Douglas PUD employees used appropriate weed control methods specific to the species of weed to be controlled and the location of the weeds in the landscape. The lowest concentration of herbicide was used that was effective at eradicating the target weeds. All weed control sites were revisited to determine the effectiveness of the herbicide application and herbicides were reapplied if needed. Douglas PUD has been using biological control agent (insects) specific to the Class B noxious weeds purple loose strife (Lythrum salicaria) and Dalmatian toadflax (Linaria dalmatica) rather than applying herbicides to kill these weeds. Douglas PUD chose biological control for purple loose strife since it is a wetland plant and herbicides would harm other wetland plants. Biological control was picked for Dalmatian toadflax since it has a waxy leaf that is resistant to control with herbicides.

Douglas PUD developed a weed management plan to inform employees and contractors performing weed control work on the Wells Project lands and the Wells 230 kV Transmission Line Corridor. A copy of the plan can be found in Appendix F.

3.5.8 Preventing Weed Infestations

Within one year of receipt of a new license, Douglas PUD will implement the following practices and protocols intended to minimize new weed infestations:

- Use certified weed free straw and mulch and seed for habitat restoration projects.
- Limit public vehicle traffic to designated roads on Project lands.
- Douglas PUD employees and contractors will be instructed to check their vehicle undercarriage for weeds before driving on undeveloped Project lands.
- Minimize earth disturbing activities by vehicles, machinery, and water runoff on undeveloped land.
- Manage healthy native vegetation and replant native vegetation disturbed by Douglas PUD’s management activities.

In 2013, District employees maintained adherence to the above practices and protocols toward minimizing new weed infestations on Project lands.

3.6 Consultation

Douglas PUD will meet with resource agencies and/or tribes when requested to discuss management of wildlife and botanical species on Project lands. All changes to the plan must be in writing and made by unanimous consent by all Parties. Any agreed-upon changes to the WBMP will be submitted to the FERC for review and approval.

Douglas PUD shall annually file, by May 31 of each year, a report that documents the result of the prior year’s measures and the upcoming year’s proposed work plan to implement the license required measures. Douglas PUD shall include with the report an updated list of sensitive species, based upon an annual review of the WNHP rare plant list.

Douglas PUD shall also include with the report documentation of consultation with the USFWS, WDFW, Ecology, the CCT, and BLM; copies of comments and recommendations on the completed report after it has been prepared and provided to the consulted entities; and specific
descriptions of how the consulted entities’ comments are accommodated by the report. Douglas PUD shall allow a minimum of 30 days for the consulted entities to comment and make recommendations before filing the report with the Commission. If the licensee does not adopt a recommendation, the filing shall include Douglas PUD’s reasons based on project-specific information. The Commission reserves the right to require changes to project operations or facilities based on all available information and information included in the annual reports.

The Wells Terrestrial Resource Working Group (TRWG) met on April 25 to review the 2013 Annual Wildlife and Botanical Management Plan report. A copy of the meeting minutes can be found in Appendix C. The meeting participants representing USFWS, WDFW and BLM did not have any comments on the report.

Anagallis minima, common name chaffweed is a wetland plant that was found on the Wells Reservoir during the 2006 rare plant survey and was classified as a Review group 1 plant under the Washington Natural Heritage Program (NHP). Review group 1 plants are classified as plants of potential concern but need additional field work to determine their status. In 2013, chaffweed was moved to NHP’s watch list. Watch status is assigned to each vascular plant taxon that is abundant and or less threatened in Washington than previously assumed.

The meeting participants discussed the removal of chaffweed from the list of rare vascular plant species that are tracked by the Washington Natural Heritage Program. It was decided unanimously, that chaffweed, with its change of status, no longer requires the protection provided RTE species under Section 4.2 of the WBMP.

Douglas PUD received comments from the CCT concerning the planning to repair or breach the Cassimer Bar dikes. The Comments on the Cassimer Bar dikes was discussed and can be found in Section 3.5.4 of this report. A copy of CCT’s can be found in Appendix C.

4.0 WELLS 230 KV TRANSMISSION LINE AVIAN PROTECTION PLAN

The APP was developed to reduce the potential for bird collisions with the Wells 230 kV transmission lines and structures. Douglas PUD is committed to maintaining the reliability of the transmission lines in a cost effective manner while meeting the regulatory requirements to conserve migratory species; rare, threatened and endangered species; and raptors. The APP considers both avian migrants interacting with the transmission lines crossing the Columbia River and nesting on the transmission line structures. Douglas PUD prepared the APP in consultation with the USFWS and WDFW.

4.1 Bird Flight Diverters

- Bird flight diverters (BD) will be installed on the Wells transmission line river crossing in the event that the transmission line is reconducted, or if the static wire or aviation markers are replaced. BDs will be spaced between the aerial marker balls to increase visibility of the shield wire. If available, light emitting BDs will be installed to improve low light visibility; Puget Sound Energy is working with Tyco Electronics to develop BDs that store solar energy and emit visible light during low light conditions.
The steep sag of the conductor cables at the Douglas County shoreline tower of the Wells transmission line river crossing prevents safe use of a lineman’s hand car to install bird flight diverters. Douglas PUD does not anticipate replacing the conductors or ground wires on the Wells 230 kV transmission line river crossing any time in the near future. Bird flight diverters are not required to be placed on the Wells transmission line river crossing until the conductor or ground wires are replaced.

4.2 Record Keeping

- Douglas PUD will maintain records of all avian mortalities detected on the Wells 230 kV transmission line right of way.

Douglas PUD has instructed all employees working on or near transmission and distribution lines to report all dead birds found to Douglas PUD’s Wildlife Biologist. The entire length of the transmission lines are inspected twice per year and structures near the north and south path of the line are inspected multiple times a year. During these inspections, Douglas PUD crews are actively looking for carcasses incidental to their normal transmission and distribution reliability inspections.

- Douglas PUD will report all avian mortalities caused by the Wells 230 kV transmission lines to USFWS through the online USFWS Bird Fatality/Injury Reporting Program (https://birdreport.fws.gov ).

No avian mortality, of any cause, was found in the Wells 230 kV transmission line right of way during 2013.

4.3 Nest Management

Power line structures in open habitat provide perch, roost and nest substrate for some avian species. This is especially true of raptors and ravens in open habitat where natural substrates are limited. Nests built on transmission line structures can cause outages and possibly fire when long sticks fall and cause phase to ground faults. A raptor incubating or brooding young will defecate over the side of the nest, potentially causing a streamer outage if the nest is above an energized phase.

- All nest management will be performed in compliance with federal and state laws.

No nest management was required in 2013.

- Douglas PUD’s Wildlife Biologist will be consulted before any nest is removed and will secure permits from USFWS and WDFW, if necessary, before nest removal proceeds.

No nest management was required in 2013.

- Active nests will not be removed from the Wells 230 kV transmission line between February 1 and August 31 without prior approval from USFWS and WDFW.

No nests were removed from the Wells 230 kV transmission line during 2013.
4.4 Tree Removal

The transmission line corridor passes through 64 acres of Douglas fir (*Pseudotsuga menziesii*) and ponderosa pine (*Parametrix, 2009*). The conifer canopy closure varies from sparse open canopy to closed canopy. When vegetation grows in close proximity to transmission line conductors, the vegetation can provide a path for electricity to travel to ground. An electrical flash over to ground can disrupt the delivery of energy to both customers in Douglas County and to other utilities purchasing power. Douglas PUD must maintain North America Electric Reliability Corporation (NERC) standards of 25 feet separation between conductors and vegetation to insure the transmission lines’ reliability.

Removal of trees during the nesting season can have a negative impact on migratory bird species.

- To protect nesting birds, Douglas PUD will only perform tree clearing on the transmission line corridor between August 31 and January 31. Clearing of the conifer trees on the transmission line corridor is anticipated to happen once every ten years beginning in 2018.

*No tree removal was required on the Wells 230 kV transmission line during 2013.*

4.5 Training

All appropriate utility personnel will be trained annually to understand avian issues on the Wells 230 kV transmission line. This training will include background information, protocols and procedures, by which employees are required to report an avian mortality, implement a nest removal action, disposal of carcasses, perform vegetation management and comply with applicable regulations and the consequences of non-compliance.

- Douglas PUD will train (as described above) all appropriate utility personnel to understand avian issues on the Wells 230 kV transmission lines.

*Training of utility personnel to understand avian issues on the Wells 230 kV transmission lines was conducted on June 23, 2013. The training was conducted during a safety meeting attended by all available line crews and distribution engineering staff.*

4.6 Consultation

Douglas PUD will meet with resource agencies or tribes, when requested, to discuss management of wildlife and botanical species on the transmission line corridor. All changes to the APP must be agreed to by the WDFW, USFWS and Douglas PUD. Any agreed-upon changes to the APP will be reported to the FERC for review and approval.

*Douglas PUD discussed the Wells 230 kV Transmission Line APP when meeting with resource personnel during the Terrestrial RWG in March 2014 (Appendix A). Douglas PUD will consult with the Terrestrial RWG if any changes to the Wells 230 kV Transmission Line APP are needed. Any changes to the plan will be reported to the FERC for review and approval. See Appendix A.*
5.0 OFF-LICENSE SETTLEMENT AGREEMENT

On July 15, 1974, Douglas PUD entered into an agreement with the Washington Department of Game (WDG, now Washington Department of Fish and Wildlife) to address the Wells Project's construction and operation effects on wildlife. Douglas PUD transferred properties to the WDG to establish the WWA and provided funds for the operation of the wildlife area. The term of this agreement ended May 31, 2012 with Douglas PUD’s FERC license (P-2149).

On December 17, 2007, Douglas PUD entered into the OLSA Resident Fish Stocking and Wells Wildlife Area Funding with WDFW. The OLSA provides funds ($200,000 in 2007 dollars) for the operation and maintenance (O&M) of the WWA. WDFW received $217,000 (adjusted for inflation) from Douglas PUD during the September 1, 2012 through August 31, 2013 fiscal year.

WDFW will use the funds provided by Douglas PUD to create, protect and maintain habitat on the WWA. The WWA program includes the following tasks:

- Grow annual food crops on Bridgeport Bar and Washburn Island Units to benefit waterfowl and other wildlife;
- Grow annual food crops and maintain feeders and water catchments on all units for upland game birds and other wildlife species;
- Protect and maintain the riparian vegetation on all units to benefit riparian obligate species and maintain nesting habitat and cover for upland game birds, raptors and passerines;
- Protect and maintain the ponds and wetland habitats on all units as habitat for amphibians and other wetland obligate species;
- Protect and maintain riparian habitat on Indian Dan Canyon Unit used by bald eagles as a night roost to benefit wintering bald eagles;
- Protect and maintain shrub steppe habitat on all units for upland game species, shrub steppe obligate species including sharp-tailed grouse, greater sage grouse (Centrocercus urophasianus) and mule deer (Odocoileus hemionus);
- Provide wildlife related recreation opportunities including hunting and wildlife observation on the wildlife area;
- Control invasive weeds to protect and maintain habitat;
- Maintain all boundary fencing to prevent livestock trespass. Build and replace boundary fences as needed;
- WDFW will not lease any unit for livestock grazing or allow camping outside of parking areas on the wildlife area, in order to protect wildlife habitat; and
- Promote native vegetation where it is consistent with the goals of the program.

5.1 Capital Equipment Replacement Fund

The Off-License Settlement Agreement requires Douglas PUD to provide funds to replace capital equipment necessary for the maintenance of the WWA. The equipment to be replaced must have reached the end of its useful life. WDFW was provided $46,000 to purchase a four row corn planter and a half ton pickup to replace worn out equipment.
5.2 **Habitat Restoration Fund**

On August 1, 2012, a human ignited wildland fire swept through the Central Ferry Canyon unit of the WWA. The fires started in an organic fruit orchard where weeds were being burned. Over 12,000 acres of land owned by the State of Washington and private owners was burned including ninety percent (1,709 acres) of the Central Ferry Canyon unit. Douglas PUD released the $50,000 Habitat Restoration Fund to WDFW on August 21, 2012. WDFW used $48,515 to purchase seed that was drilled and applied aerially over approximately 200 acres.

WDFW received funds from the State of Washington to fully cover the cost of the habitat restoration work in Central Ferry Canyon. WDFW refunded the $48,515 provided by Douglas PUD on August 20, 2013. In exchange, Douglas PUD will make available the Habitat Restoration Fund in the event of a new wildfire on one of the units of the WWA.

5.3 **2013 Wells Wildlife Area Annual Report**

Dan Peterson, manager of the Wells Wildlife Area wrote the 2013 Wells Wildlife Area Annual Report that can be found in Appendix G.

6.0 **2014 WORK PLAN**

Article 409 of the new FERC License for the Wells Project requires Douglas PUD to report on proposed measures to implement the WBMP in the coming year. All of the items in Section 6 will be part of the work plan that will be completed by December 2014 and reported in the May 31, 2015 annual Terrestrial Report.

6.1 **Protect RTE Terrestrial Species Habitat on Wells Project Lands**

6.1.1 **American White Pelican**

- Beginning in year 2 of the new license, Douglas PUD will provide educational material (signs) at Douglas PUD boat launches and local visitor centers. Educational materials will advise boaters to avoid pelicans while boating, fishing and hunting. Signs will be inspected during other duties and repaired as soon as practicable after damage is discovered.

_Douglas PUD installed the pelican signs at all improved and at two unimproved boat launches on Wells Reservoir in 2013. In 2014, Douglas PUD will inspect the pelican signs each spring and replace any signs that are damaged or have been removed._

6.1.2 **Sharp-tailed Grouse**

- Beginning in year one of the new license, as an enhancement, Douglas PUD will continue to water irrigation-dependent riparian trees, shrubs and associated vegetation located below Project boundary within the confines of the Bridgeport Bar Unit of the WWA. Continued management of this habitat will benefit a wide range of wildlife species, including sharp-tailed grouse.
As in 2013, Douglas PUD will continue to rely on WDFW to water irrigation-dependent riparian trees, shrubs and associated vegetation located below Project boundary within the confines of the Bridgeport Bar Unit of the WWA. WDFW will continue to receive funding for the manpower to weekly maintain the irrigation lines and pump water through the OLSA.

6.2 Protect RTE Botanical Species from Land Disturbing Activities and Herbicide Sprays

6.2.1 Resurvey Thompson’s Clover and Little Bluestem Protected Sites

- Beginning in year five (2017) of the new license, and every 10 years thereafter, Douglas PUD will survey and revise site boundaries for populations of little bluestem and Thompson’s clover found within the Wells Project boundary.

Douglas PUD is not required to resurvey Thompson’s clover and little blue stem until spring/summer of 2017. Douglas PUD will conduct an ocular inspection of the Thompson’s clover and little blue stem in May or June 2014 to insure that the sites haven’t been disturbed.

6.2.2 Ground Disturbing Activities and Weed Control at RTE Plant Protection Sites

- Beginning in year one of the new license, for lands owned by Douglas PUD within the Wells Project boundary, no new ground disturbing activities will be allowed within a 500 foot buffer zone surrounding the RTE plant locations and no land use permits will be issued for these buffer areas. Any weed control needed within the buffer zone will utilize the following methods in descending order of preference: biological control, hand pulling, and hand wiping of individual weeds with herbicide. Details of the Weed Control Plan can be found in Section 4.6 of the WBMP.

The five hundred foot “No Ground Disturbance” buffer is established around all of the RTE plant sites in Douglas PUD’s GIS. Douglas PUD’s Land Services personnel have copies of the maps showing the location of the RTE plant sites with the buffer. Douglas PUD conducts twice monthly inspections of Wells Reservoir by boat to look for disturbances on Project land. They will conduct ocular surveys of the sites looking for any ground disturbance.

The District’s vegetation management employees have been informed of the RTE plant sites and have copies of the RTE plant maps. Any weed control needed within the buffer zone will utilize the following methods in descending order of preference: biological control, hand pulling, and hand wiping of individual weeds with herbicide during the spring through fall of 2014.

Chaffweed was originally placed on the WNHP Review 1 list because little information was available about its abundance and distribution in the state. In 2013, WNHP determined that enough information on the abundance and distribution of chaffweed in Washington State was now available to make a decision on the RTE status of chaffweed. The data showed that chaffweed does not require protection under the WNHP and it was removed from the Review 1 list. Douglas PUD will consult the TRWG to remove RTE protection from wetlands on Wells
Reservoir that contains chaffweed under the WBMP. The wetlands will continue to be protected under Douglas PUD’s Land Use Policy and Vegetation Management Plan.

6.2.3 Weed Control at Thompson Clover Sites

- Beginning in year one of the new license, Douglas PUD will control weeds within a 500 foot buffer of Thompson’s clover occurrences within the transmission line ROW. Weed control work will utilize the following methods in descending order of preference: biological control, hand pulling, and hand wiping of individual weeds with herbicide.

Douglas PUD’s vegetation management employees have been informed of the Thompson’s clover site in the Wells 230 kV transmission line corridor. Any weed control needed within the buffer zone for Thompson’s clover will utilize the following methods in descending order of preference: biological control, hand pulling, and hand wiping of individual weeds with herbicide during the spring through fall of 2014.

6.2.4 Washington Natural Heritage Program Rare Plant List

- Douglas PUD is required by Article 409 of the license for the Wells Hydroelectric Project FERC No. 2149-152 to annually consult the WNHP to review their rare plant list and include an updated copy in the annual Terrestrial Report to FERC.

Douglas PUD will consult with the WNHP while compiling the 2014 Annual Wildlife and Botanical Report to develop a current RTE plant list for the annual Wildlife and Botanical Management Plan. The list will be compiled from WNHP’s rare plant lists for Chelan, Douglas and Okanogan counties. Douglas PUD will consult the WNHP web site to compile the list and consult with WNHP botanist to determine the reason for any changes to the list. An updated copy of the lists will be included into the 2014 Wildlife and Botanical report.

6.3 Conserve Habitat for Species on Wells Project Lands Protected by the Federal Endangered Species Act, Bald and Golden Eagle Protection Act, and Migratory Bird Treaty Act

6.3.1 Bald Eagle

6.3.1.1 Bald Eagle Perches Pole Inspection

- Beginning in year one of the new license, Douglas PUD will inspect raptor perch poles annually and repair or replace perch poles as warranted. The perch poles near the Starr Boat Launch will be removed to reduce avian predation on downstream migrating salmonids.

In 2014, Douglas PUD will inventory raptor perch poles on Wells Project lands. The poles will be examined for rot. Two poles examined in 20013 were found to be damaged. One pole has a missing cross arm and the second pole needs to be replaced due to fire damage. These poles will be repaired in 2014.
6.3.1.2 Bald Eagle Surveys

- Beginning in year one of the new license, Douglas PUD will perform monthly boat surveys during the months of November through March to inventory wintering bald eagle numbers and to identify large perch trees regularly used by bald eagles. Douglas PUD will determine if the perch trees need immediate protection from beavers or if they are likely to fall down in the near future due to bank erosion.

*Douglas PUD will conduct bald eagle surveys on Wells Reservoir during the winter of 2013-2014. Surveys will be conducted once a month between November and March. Eagles will be counted from a boat. All perched and flying eagles will be identified as either immature or adult and recorded. The data will be provided in the 2014 annual Wildlife and Botanical report.*

6.3.1.3 Protect Trees from Beaver Damage

- Beginning in year two of the new license, Douglas PUD will begin, and then continue as necessary, protecting large living trees within the Project boundary that are used by eagles as perches and which are likely to be lost from beaver damage. Protection measures will be completed by year five of the new license for those trees identified within the first four years of the new license. To prevent beaver damage to eagle perch trees, each tree will be wrapped with galvanized welded wire. Wire wrapped trees will be inspected annually and the wire repaired or replaced, as needed.

*Douglas PUD will inventory the eighty four trees on the reservoir that have been wrapped with chicken wire to prevent beaver damage. An additional 40 trees will be wired in 2014. GPS locations will be recorded for each wrapped tree. Douglas PUD will evaluate how well the wire wraps protected the trees and increase the level of protection.*

6.3.1.4 Loss of Perch Trees due to Erosion

- At any time during the implementation of the new license, as site specific issues arise regarding potential losses of large eagle perches due to bank erosion, Douglas PUD will consult with the Terrestrial RWG to determine if any reasonable measures are available to address the issue.

*The WBMP, developed by the Terrestrial RWG, calls for protecting eagle perch trees from beaver damage and encouraging recruitment of trees on the reservoir, from both natural reproduction and planting trees in suitable habitat. The group decided against using shoreline armoring to protect areas threatened with erosion. Measures to control shoreline erosion, such as placing hardened surfaces, can be detrimental to habitat utilized by ESA-listed salmon, steelhead and bull trout, and are generally not supported by fish and wildlife management agencies. Fortunately there are very few trees currently susceptible to erosion along the Wells Reservoir. Douglas PUD will continue to monitor these trees and consult with the Terrestrial RWG if any large perch trees are lost due to erosion.*
6.3.1.5 Protection of Small Trees

- Beginning in year one of the new license, Douglas PUD will ensure establishment and protection of sufficient smaller trees of appropriate age classes to ensure future abundance of potential perch trees is at least equal to the baseline abundance documented in year one of the new license.

_Douglas PUD planted 20 cottonwood cuttings on Buena Flats to provide future perch trees for bald eagles. The cuttings will be inspected in 2014 to determine how many cuttings survived and any that died will be replanted. Douglas PUD will investigate additional sites where the cottonwood cuttings could be planted to provide additional bald eagle perch habitat._

6.3.2 Waterfowl

- Beginning in year one of the new license, Douglas PUD will plant at least 50 acres of annual grain crops within the Bridgeport Bar Unit of the WWA below Project boundary, to provide food for wintering Canada geese and dabbling ducks.

_Douglas PUD will rely on WDFW to plant and irrigate at least fifty acres of grain crops on both Bridgeport Bar and Washburn Island Units of the WWA below Project boundary. WDFW will receive funding for the manpower and material needed to plant and daily maintain the irrigation throughout the growing season through the OLSA._

6.4 Protect Wildlife Habitat on Wells Project Lands

- Beginning in year one of the new license, Douglas PUD will continue twice a month boat monitoring of Project lands for unauthorized encroachment and damage caused by recreational activities and adjacent land owners. Wildlife habitat damage caused by unauthorized encroachment activities will be repaired or replaced with in-kind habitat within 12 months of identifying unauthorized activity.

_Douglas PUD will conduct twice monthly boat surveys of the Wells Reservoir in 2014 to identify unauthorized encroachment and damage caused by recreational activities and adjacent land owners. During the winter when ice prevents boat travel on the Methow or Okanogan rivers, Douglas PUD will conduct surveys of the shoreline of the two rivers by car._

6.5 Maintain Productive Wildlife Habitat on the Cassimer Bar Wildlife Management Area

6.5.1 Weed Control

- Beginning in year one of the new license, Douglas PUD will implement weed management annually to control new occurrences of noxious weeds and to reduce existing weed occurrences.
Douglas PUD annually controls all State Classified A and B weeds known to occur on Project lands. The CBWMA will be inspected for Class A and B weeds and the Douglas PUD weed management staff will be informed if any weeds need controlling during the summer of 2014.

6.5.2 Access Management and Habitat Replacement

- Beginning in year one of the new license, Douglas PUD will manage access and replace damaged habitat to reduce adverse effects of recreation on wildlife habitat.

Douglas PUD will inspect the CBWMA during the fall of 2014 for habitat damage caused by recreation. Any habitat damage will be repaired during the spring 2015. Native trees, shrubs and grasses will be used to repair any damaged habitat.

6.5.3 Fencing

- Beginning in year one of the new license, Douglas PUD will install and maintain perimeter fencing to protect Cassimer Bar wildlife habitat from livestock.

The CBWMA is protected by a fence that runs along the east boundary of the area. The fence prevents livestock from gaining access to the area. The fence is inspected annually and repaired when damage is found. The CBWMA is observed by Douglas PUD staff as they travel past the area on other assignments. If livestock are observed in the CBWMA during the summer of 2014, they will be removed and the fence will be inspected and repaired.

6.5.4 Cassimer Bar Dikes

- Beginning in year one of the new license, Douglas PUD will evaluate the dikes on Cassimer Bar and determine an appropriate method to fix the dikes. In year two, Douglas PUD will apply for permits from appropriate agencies. Contingent on receiving the necessary permits, Douglas PUD will repair the dikes to enhance waterfowl and other aquatic habitats on Cassimer Bar. In year four and every year thereafter, the dikes will be inspected and repaired as soon as the design work and permitting allow.

Terrestrial RWG in February 2013 discussed either repairing the Cassimer Bar dikes, which would maintain habitat for warm water invasive fish and amphibian species, or removing the dikes to reconnect the sloughs to the Okanogan River. Removal of the dikes and restoration of the natural flood plain function will improve water exchange, cooling the water in the sloughs, and provide conditions better suited for native species. WDFW has indicated a preference for removing the dikes. Douglas PUD will move forward with developing construction drawings and the application for permits to remove the dikes on Cassimer Bar in 2014.
6.6 Control Noxious Weeds on Project Lands

6.6.1 Weed Map

- Beginning in year one of the new license, Douglas PUD will annually control identified Class A and B designated weed occurrences on Wells Project lands.

*Douglas PUD has two employees that will control Class A and Class B weeds during spring, summer and fall of 2014 on the Wells Project lands and the Wells 230 kV Transmission Line Corridor. Douglas PUD also hires a weed control firm to control weeds around the Wells Dam facilities. Douglas PUD will work with the Okanogan County Weed Control Board to identify any new infestation of weeds on Wells Project lands within Okanogan County.*

- Beginning in year five of the new license, Douglas PUD will survey Wells Project lands for new terrestrial weed infestations every five years throughout the term of the new license. Douglas PUD will use weed maps to identify problem areas and will update the maps as new weed populations are discovered.

*Not required until 2017.*

6.6.2 Weed Management Plan

- Within one year of receipt of a new license, Douglas PUD will implement the following steps to control weeds on Project lands:

1. Consider the species of noxious weeds, density and size of the sites and surrounding vegetation when determining control measures.
2. Consider the land use of the site.
3. Acquire all environmental permits required (e.g., wetlands).
4. Consult the Washington State Department of Agriculture, pesticide-sensitive individuals list for properties adjacent to the control site.
5. Determine the effectiveness of various control options: burning, tilling, digging, herbicide application by wicking, spot spraying or broadcast spraying, or biological control agent.
6. Determine the most effective physiological growth stages of the target weed to obtain maximum control with least impact to surrounding vegetation.
7. Control weeds using method(s) selected for the site.
8. Monitor all application sites to determine the effectiveness of the weed control.
9. Control sites denuded by herbicide treatment will be replanted with native plant species appropriate to the site.

*In 2014, Douglas PUD employees will use appropriate weed control methods specific to the species of weed to be controlled and the location of the weeds in the landscape. The concentration of herbicide used will comply with the label instructions for effective eradicating of the target weeds. All weed control sites from 2014 will be revisited to determine the effectiveness of the herbicide application and herbicides will be reapplied, if needed. Douglas PUD has been using biological control agents (insects) specific to the Class B noxious weeds*
purple loose strife and Dalmatian toadflax rather than applying herbicides to kill these weeds and will do so in 2014. Douglas PUD chose biological control for purple loose strife since it is a wetland plant and herbicides would harm sensitive wetland plants. Biological control was picked for Dalmatian toadflax since it has a waxy leaf that is resistant to control with herbicides. Douglas PUD will use other biological control organisms as they become available from the U.S. Department of Agriculture.

6.6.3 Preventing Weed Infestations

- Within one year of receipt of a new license, Douglas PUD will implement the following practices and protocols intended to minimize new weed infestations:
  - Use certified weed free straw and mulch and seed for habitat restoration projects.
  - Limit public vehicle traffic to designated roads on Project lands.
  - Douglas PUD employees and contractors will be instructed to check their vehicle undercarriage for weeds before driving on undeveloped Project lands.
  - Minimize earth disturbing activities by vehicles, machinery, and water runoff on undeveloped land.
  - Manage healthy native vegetation and replant native vegetation disturbed by Douglas PUD’s management activities.

In 2014, Douglas PUD will require all employees and contractors to follow the weed prevention guidelines when working on Project lands. Contractor activities on Project land will require vehicles and equipment be cleaned before coming on the job site. Any vehicle used at more than one construction site should be checked regularly for weeds on the undercarriage.

Douglas PUD will also utilize certified weed free straw, mulch and seed when restoring habitat disturbed by Douglas PUD’s activities, by public over use and runoff caused by adjacent properties.

6.7 Consultation

Douglas PUD will meet with resource agencies and/or tribes when requested to discuss management of wildlife and botanical species on Project lands. All changes to the plan must be in writing and made by unanimous consent by all Parties. Any agreed-upon changes to the WBMP will be submitted to the FERC for review and approval.

Douglas PUD shall annually file, by May 31 of each year, a report that documents the result of the prior year’s measures and the upcoming year’s proposed measures to implement the plan. Douglas PUD shall include with the report an updated list of sensitive species, based upon an annual review of the WNHP rare plant list.

Douglas PUD shall also include with the report documentation of consultation with the USFWS, WDFW, Ecology, the CCT, and BLM; copies of comments and recommendations on the completed report after it has been prepared and provided to the consulted entities; and specific descriptions of how the consulted entities’ comments are accommodated by the report. Douglas PUD shall allow a minimum of 30 days for the consulted entities to comment and make
recommendations before filing the report with the Commission. If the licensee does not adopt a recommendation, the filing shall include Douglas PUD’s reasons based on project-specific information. The Commission reserves the right to require changes to project operations or facilities based on all available information and information included in the annual reports.

Douglas PUD met with the Terrestrial RWG to discuss the annual Wildlife and Botanical Report. Douglas PUD consulted with the resource agencies and CCT during the writing of the annual WBMP report and 2014 Work Plan and included comments from the resource agencies and CCT in the report. A copy of the consultation record can be found in Appendix C. Douglas PUD will continue to consult with the resource agencies and CCT to address how to repair the Cassimer Bar dikes and any of other wildlife or botanical issues that may arise on Project lands.
7.0 REFERENCES


Appendix A

Memos
MEMORANDUM

TO: Jim McGee

C: Ken Pflueger
   Shane Bickford

FROM: John Brown

DATE: October 18, 2013

SUBJECT: Wells Project; Land Services Department; License Compliance; Sections 4.2, 4.4,

Upon your request, the Land Services Department has reviewed the Wells Wildlife and Botanical Management Plan (Plan) and more specifically Sections 4.2, 4.4, 4.5 and 4.6 of the Plan to confirm what responsibilities the Land Services Department has within those sections and continued adherence to these sections of the Plan.

Upon review of the Plan and in discussing the Plan with Department personnel, I find that adherence to applicable activities in these sections of the plan have occurred in 2013 and will continue to occur. To that end, the Land Services Department has undertaken the following activities:

1. No class A weeds are present on the project and all class B weeds on project lands were either sprayed or had biological controls in place and/or released for their management.

2. Bi-monthly reservoir inspections by watercraft.

3. Existing fencing around the Cassimere Bar Wildlife Area has been maintained and repaired to inhibit livestock incursions.

4. All RTE buffer areas were inspected for classified weeds and none were found.
Appendix B

List of Known Occurrences of Rare Plants in Chelan, Douglas and Okanogan Counties
## Washington Natural Heritage Program

### List of Known Occurrences of Rare Plants in Chelan, Douglas and Okanogan Counties

**Viewed 10/2/13**


<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>State Status</th>
<th>Federal Status</th>
<th>Historic Record</th>
</tr>
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<tbody>
<tr>
<td>Agoseris aurantiaca var. carnea</td>
<td>pink agoseris</td>
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<td></td>
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<tr>
<td>Agoseris elata</td>
<td>tall agoseris</td>
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<tr>
<td>Agrostis mertensii</td>
<td>northern bentgrass</td>
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<tr>
<td>Allium constrictum</td>
<td>constricted Douglas' onion</td>
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<tr>
<td>Anemone patens var. multifida</td>
<td>pasqueflower</td>
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<td></td>
<td></td>
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<tr>
<td>Anthoxanthum hirtum</td>
<td>common northern sweetgrass</td>
<td>R1</td>
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<td></td>
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<tr>
<td>Astragalus arrectus</td>
<td>Palouse milk-vetch</td>
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<tr>
<td>Astragalus misellus var. pauper</td>
<td>pauper milk-vetch</td>
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<td>Astragalus multiflorus</td>
<td>loose-flower milk-vetch</td>
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<tr>
<td>Astragalus robbinsii var. minor</td>
<td>Robbins' milk-vetch</td>
<td>R1</td>
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<td>Whitied's milk-vetch</td>
<td>E</td>
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<td>Botrychium ascendens</td>
<td>triangular-lobed moonwort</td>
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<td>Botrychium hesperium</td>
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<td>Botrychium paradoxum</td>
<td>two-spiked moonwort</td>
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<td>Carex atrosquama</td>
<td>blackened sedge</td>
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<td>Carex capillaris</td>
<td>hair-like sedge</td>
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<td>Carex capitata</td>
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<td>Carex chordorrhiza</td>
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<td>Carex comosa</td>
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<td>Carex gynocrates</td>
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<td>Carex heteroneura var. epapillosa</td>
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<td>Carex magellanica ssp. irrigua</td>
<td>poor sedge</td>
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<td>Carex media</td>
<td>intermediate sedge</td>
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<td>Carex praeceptorum</td>
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<td>Carex propposita</td>
<td>Smoky Mountain sedge</td>
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<td>Carex scirpoides ssp. scirpoidea</td>
<td>Canadian single-spire sedge</td>
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<td>many-headed sedge</td>
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Carex tenera var. tenera  quill sedge  T
Carex tenuiflora  sparse-flowered sedge  T
Carex vallicola  valley sedge  S
Carex vernacula  foetid sedge  R1
Chaenactis thompsonii  Thompson's chaenactis  S
Chrysosplenium tetrandrum  northern golden-carpet  S
Cicuta bulbifera  bulb-bearing water-hemlock  S
Cirsium flodmanii  Flodman's thistle  R1
Coeloglossum viride  long-bract frog orchid  T
Comastoma tenellum  slender gentian  S
Crataegus phippsii  Phipps' hawthorn  R1
Cryptantha gracilis  narrow-stem cryptantha  S
Cryptantha leucophaea  gray cryptantha  S  SC
Cryptantha simulans  pine woods cryptantha  R1  H
Cryptantha spiculifera  Snake River cryptantha  S
Cryptogramma stelleri  Steller's rockbrake  S
Cryptopsis parviflorum  yellow lady's-slipper  T
Delphinium viridescens  Wenatchee larkspur  T  SC
Draba aurea  golden draba  S
Draba cana  lance-leaved draba  S
Eleocharis rostellata  beaked spike-rush  S
Elodea nuttallii  Nuttall's waterweed  R1
Eremothera pygmaea  dwarf evening-primrose  S
Erigeron elatus  tall bitter fleabane  E
Erigeron piperianus  Piper's daisy  S
Erigeron salishii  Salish fleabane  S
Eriophorum viridicarinatum  green-keeled cotton-grass  S
Eritrichium nanum var. elongatum  pale alpine forget-me-not  S
Erythranthe patula  stalk-leaved monkeyflower  T
Erythranthe pulcherae  Pulsifer's monkeyflower  S
Erythranthe suksdorffi  Suksdorff's monkeyflower  S
Erythranthe washingtonensis  Washington monkeyflower  X  H
Eurybia merita  Arctic aster  S
Gentiana glauca  glaucous gentian  S
Geum rivale  water avens  S
Geum rossii var. depressum  Ross' avens  E
Githopsis specularticoides  common bluecup  S
Hackelia cinerea  gray stickseed  S  H
Hackelia hispida var. disjuncta  sagebrush stickseed  S  H
Hackelia sp. 2  Taylor's Stickseed  T
Hackelia venusta  showy stickseed  E  LE
Iliamna longisepala  longsepal globemallow  S
Juncus tiehmii  Tiehm's dwarf rush  T
Juncus uncialis  inch-high rush  S
Kalmia procumbens  alpine azalea  T  H
Lathrocasis tenerrima  delicate gilia  S
Luzula arcuata ssp. unalaschkensis  curved woodrush  S
Lycopodium lagopus  one-cone ground-pine  R1
Micromonolepis pusilla  red poverty-weed  T
Monolepis spathulata  prostrate poverty-weed  S
Nicotiana attenuata  coyote tobacco  S  H
Ophioglossum pusillum  Adder's-tongue  T
Oxytropis campestris var. columbiana  Columbia crazyweed  E
Oxytropis campestris var. cusickii  Cusick's crazyweed  R1  H
Oxytropis campestris var. gracilis  slender crazyweed  S
Packera bolanderi var. harfordii  Harford's ragwort  S  H
Parnassia kotzebuei  Kotzebue's grass-of-paringusus  T
Pediocactus nigrispinus  snowball cactus  S
Pellaea brachyptera  Sierra cliffbrake  S
Pellaea breweri  Brewer's cliffbrake  S
Pellaea globella ssp. simplex  smooth cliff-brake  R2
Penstemon eriantherus var. whitedii  fuzzytongue penstemon  S
Petrophytum cinerascens  Chelan rockmat  E  SC
Phacelia lenta  sticky phacelia  T  SC
Phacelia tetramera  dwarf phacelia  S
Platanthera aquilonis  Sheviak's bog orchid  R1  H
Platanthera obtusata ssp. obtusata  small northern bog-orchid  S
Polemonium viscosum  skunk polemonium  S
Potamogeton obtusifolius  blunt-leaf pondweed  S
Potentilla nivea  snow cinquefoil  S
Potentilla pygmaea  dwarf buttercup  R1
Rotala ramosior  lowland toothcup  T
Rubus arcticus ssp. acaulis  nagoonberry  T
Salix glauca var. villosa  glaucous willow  S
Salix maccalliana  Maccall's willow  S
Salix pseudomonticola  false mountain willow  S
Salix tweedyi  Tweedy's willow  S
Salix vestita  rock willow  X  H
Sandbergia perplexa  puzzling rockcress  T
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<td>Schizachyrium scoparium var. scoparium</td>
<td>little bluestem</td>
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<td>Scutellaria angustifolia ssp. micrantha</td>
<td>narrowleaf skullcap</td>
<td>R1</td>
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<td>Sidalcea oregana var. calva</td>
<td>Wenatchee Mountain checkermallow</td>
<td>E LE</td>
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<tr>
<td>Silene sargentii</td>
<td>Sargent's catchfly</td>
<td>R1 H</td>
</tr>
<tr>
<td>Silene scouleri ssp. scouleri</td>
<td>Scouler's catchfly</td>
<td>S H</td>
</tr>
<tr>
<td>Silene seelyi</td>
<td>Seely's silene</td>
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<tr>
<td>Sisyrinchium montanum var. montanum</td>
<td>strict blue-eyed-grass</td>
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<tr>
<td>Sisyrinchium septentrionale</td>
<td>northern blue-eyed grass</td>
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<tr>
<td>Spiranthes diluvialis</td>
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<td>Spiranthes porrifolia</td>
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<td>Stuckenia filiformis ssp. occidentalis</td>
<td>western fineleaf pondweed</td>
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<td>Thelypodium sagittatum ssp. sagittatum</td>
<td>arrow thelypody</td>
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<td>Trichostema oblongum</td>
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<tr>
<td>Trifolium thompsonii</td>
<td>Thompson's clover</td>
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<tr>
<td>Triglochin palustris</td>
<td>marsh arrowgrass</td>
<td>R1 H</td>
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<td>Vaccinium myrtilloides</td>
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<tr>
<td>Viola renifolia</td>
<td>kidney-leaf white violet</td>
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</tbody>
</table>

**Description of Codes**

**Historic Record:**

H indicates most recent sighting in the county is before 1977.

**State Status**

**State Status** of plant species is determined by the Washington Natural Heritage Program.

E = Endangered. In danger of becoming extinct or extirpated from Washington.
T = Threatened. Likely to become Endangered in Washington.
S = Sensitive. Vulnerable or declining and could become Endangered or Threatened in the state.
X = Possibly extinct or Extirpated from Washington.
R1 = Review group 1. Of potential concern but needs more field work to assign another rank.
R2 = Review group 2. Of potential concern but with unresolved taxonomic questions.
**Federal Status**

**Federal Status** under the U.S. Endangered Species Act (USESA) as published in the Federal Register:

LE = Listed Endangered. In danger of extinction.
LT = Listed Threatened. Likely to become endangered.
PE = Proposed Endangered.
PT = Proposed Threatened.
C = Candidate species. Sufficient information exists to support listing as Endangered or Threatened.
SC = Species of Concern. An unofficial status, the species appears to be in jeopardy, but insufficient information to support listing.
Hi Jim,

Here is the information you requested.

**Species deleted from the list**
*Platanthera sparsiflora* (misapplied in Washington)

**Moved to Watch List:**
*Anagallis minima*
*Antennaria parvifolia*
*Cypripedium fasciculatum*

Watch status is assigned to each vascular plant taxon that is more abundant and/or less threatened in Washington than previously assumed. Although these species are no longer tracked in the database, some information about them is still gathered and stored in our files.

**Name Changes:**

<table>
<thead>
<tr>
<th>Previously Tracked as</th>
<th>Now Tracked as</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Camissonia pygmaea</em></td>
<td><em>Eremothera pygmaea</em></td>
</tr>
<tr>
<td><em>Gentianella tenella spp. perplexus</em></td>
<td><em>Comastoma tenellum</em></td>
</tr>
<tr>
<td><em>Halimolobos perplexus var. perplexus</em></td>
<td><em>Sandbergia perlexa</em></td>
</tr>
<tr>
<td><em>Loiseleuria procumbens</em></td>
<td><em>Kalmia procumbens</em></td>
</tr>
<tr>
<td><em>Mimulus patulus</em></td>
<td><em>Erythranthe patula</em></td>
</tr>
<tr>
<td><em>Mimulus pulsiferae</em></td>
<td><em>Erythranthe pulsiferae</em></td>
</tr>
<tr>
<td><em>Mimulus suksdorfii</em></td>
<td><em>Erythranthe suksdorfii</em></td>
</tr>
<tr>
<td><em>Mimulus washingtonensis</em></td>
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<tr>
<td><em>Potentilla rubricaulis</em></td>
<td><em>Potentilla jeppsonii</em></td>
</tr>
<tr>
<td><em>Salix vestita var. erecta</em></td>
<td><em>Salix vestita</em></td>
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</table>

Jasa Holt  
Washington Natural Heritage Program  
Washington State Dept. of Natural Resources (DNR)  
(360) 902-1642  
jasa.holt@dnr.wa.gov  
http://www.dnr.wa.gov/ResearchScience/Topics/NaturalHeritage/Pages/amp_nh.aspx
Appendix C

Consultation with Agencies and Colville Confederated Tribes
Wells Terrestrial Resource Working Group

Meeting Minutes

April 25, 2014

Meeting participants:

Jim McGee   Douglas PUD
Steve Lewis   U. S. Fish and Wildlife Service
Dan Peterson   Washington Department of Fish and Wildlife
Patrick Verhey   Washington Department of Fish and Wildlife
J A Vacca   U. S. Bureau of Land Management
Kirk Truscott   Colville Confederated Tribes

The meeting participants had no comments on the draft 2013 Annual Wildlife and Botanical Report (2014).

Anagallis minima, common name chaffweed is a wetland plant that was found on the Wells Reservoir during the 2006 rare plant survey and was classified as a Review group 1 plant under the Washington Natural Heritage Program (NHP). Review group 1 plants are classified as plants of potential concern but need additional field work to determine their status. In 2013, chaffweed was moved to NHP’s watch list. Watch status is assigned to each vascular plant taxon that is abundant and or less threatened in Washington than previously assumed.

The meeting participants discussed the removal of chaffweed from the list of rare vascular plant species that are tracked by the Washington Natural Heritage Program. Under the Section 4.2 of the Wells Hydroelectric Project Wildlife and Botanical Management Plan (WBMP) (2009), chaffweed is provided extra protection as a Rare, Threatened and Endangered (RTE) species. Special protection includes a five hundred foot, on Project land, around all wetlands where chaffweed is found, no ground disturbing activities are allowed and broadcast herbicide treatments are not allowed. It was decided that chaffweed, with its change of status, no longer needs the additional protection provided RTE species on Project lands under the WBMP. The wetlands containing chaffweed will still be protected by Douglas PUD’s Land Use Policy and other provisions of the WBMP.

Section 4.5 of the WBMP, Douglas PUD is required to repair the dikes on Cassimer Bar and Douglas PUD has been investigating how to repair the Cassimer Bar dikes. The options for repairing the dikes include rebuilding the dikes as they were originally build or to breach the dikes on the Okanogan River to allow water exchange. The Colville Confederated Tribes (CCT) representative expressed concerns about the work window for the dike repair or breaching would conflict with the tribal salmon fishery. By agreement the work window for construction activities will be September 16 through September 30, after the peak of the salmon fishery at the mouth of the Okanogan River.

The CCT representative also express concern that opening the sloughs to the Okanogan would provide free ingress and egress to the sloughs by northern pike minnow and largemouth and
smallmouth bass may increase their productivity and abundance as piscivorous predator populations. The group discussed the various options for repairing or breaching the dikes and determined that additional information was needed. The group also decided that whatever option is chosen should benefit native wildlife since that was the original reason for building the dikes.

Action Items:

- Douglas PUD to determine if opening the slough to the Columbia River is viable. Locate topography information on the area between the slough and the Columbia River.
- Douglas PUD to discuss the Cassimer Bar dike project with fisheries committee.

Cited Literature


From: Richard Whitney <Richard.Whitney@colvilletribes.com>
Sent: Tuesday, April 22, 2014 11:44 AM
To: Jim McGee; Daniel J Peterson (Daniel.Peterson@dfw.wa.gov); Erick Ellis; Jay Vacca (jvacca@blm.gov); Pat Irle; Patrick Verhey (verhepmv@dfw.wa.gov); Steve Lewis (Stephen_Lewis@fws.gov)
Cc: Kirk Truscott

Subject: RE: Wells Terrestrial Working Group Meeting Agenda

Hello Jim,

As stated previously, I will not be able to attend the meeting Friday. However, our Department has a few concerns about the plan.

(1) By opening the sloughs to the Okanogan and Columbia Rivers, free ingress and egress to the sloughs by Northern Pike Minnow, smallmouth bass and largemouth bass may increase their productivity and abundance as piscivorous predator populations. If these populations were to increase, we could expect to see increased predation in future years on spring Chinook (pending reintroduction in the Okanogan River Basin), summer steelhead and summer/fall Chinook.

(2) The dike removal will require substantial reduction in the Wells Reservoir elevations, so that the work can be done in the dry. Although the plan is to draft at a rate of less than 3 feet/day, any significant draft of the reservoir will negatively effect CCT's ability to get the purse seine boat and broodstock barges close enough to the shoreline to effectively off-load tribal sockeye and Chinook salmon harvest catches as well as the off-loading of summer/fall Chinook broodstock to support the CJH program. Both of these efforts (harvest and broodstock) are extremely important to current/future CCT subsistence/ceremonial fisheries and hatchery production.

(3) Substantial reservoir drawdown may preclude mooring the purse seine and broodstock barges in the lower Okanogan River and waterway access to the Okanogan River confluence area. The concerns here are obvious (i.e. no where to moor the water vessels critical to harvest broodstock and access from the mooring area to the fishing and broodstock collection area.

(4) It appears as if the construction staging area is at or near the DCPUD fishing access area located near the Hwy. 97 Bridge near the confluence of the Okanogan River. This area is and has been the primary staging area for CCT's purse seine harvest effort as well as the broodstock collection effort for CJH. Construction staging and access to the dikes adjacent to the Okanogan River from this location may compromise access to this site by CCT harvest and broodstock collection efforts (i.e. congestion/blocking of access etc.).

(5) A substantial reservoir drawdown in August will provide for a greater expanse of warm water dispersion downstream from the Okanogan/Columbia confluence and may dissuade summer/fall Chinook and sockeye adults from holding in the tribal fishing/broodstock collection area (immediate area of the historical mouth of the Okanogan River). If this were to occur, CCT access to concentrated numbers of summer/fall Chinook and sockeye for harvest and summer/fall
Chinook broodstock could occur and result in negative impacts to CCT achieving its harvest allocation for sockeye and summer/fall Chinook as achieving the necessary broodstock collection objectives for the CJH program.

As you can see, we have identified some larger concerns that need additional attention/discussion. Let's try to setup a follow up conversation with our Anadromous folks.

Thank you.

Richard Whitney
Appendix D

2013 Wells Reservoir Raptor Perch Pole Inspection Map
Existing Pole

New Pole

Needs Repair

G_Line

Page 2 of 11
15

Existing Pole

G_Line

New Pole

Needs Repair

0 0.15 0.3 0.6 Miles
Appendix E

2013 Wells Reservoir Trees Protected From Beaver Damage Map
2013 Wells Reservoir Trees Protected From Beaver Damage
2013 Wells Reservoir Trees
Protected From Beaver Damage

Page 10 of 11
Appendix F

Wells Project Vegetation Management Plan
For copies of this Wells Project Vegetation Management Plan, contact:

Public Utility District No. 1 of Douglas County
Attention: Natural Resources
1151 Valley Mall Parkway
East Wenatchee, WA 98802-4497
Phone: (509) 884-7191
E-Mail: relicensing@dcpud.org
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<td>Figure 2.0-1</td>
<td>Wells Project Map</td>
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<td>Figure 2.0-2</td>
<td>Wells Project 230 kV Transmission Line Right of Way</td>
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APPENDIX A    RTE PLANT MAPS
1.0 INTRODUCTION

Douglas PUD received its license for the Wells Hydroelectric Project on November 9, 2012. The Wildlife and Botanical Management Plan (WBMP) and the tree clearing guidelines in the Wells 230 kV Transmission Line Avian Protection Plan (APP) were incorporated into the license. The Wells Project Vegetation Management Plan (VMP) provides direction for fulfilling noxious weed control guidelines in the (WBMP) and the tree clearing guidelines in the Wells (APP). The VMP will guide the selection of vegetation management option used to control Class A and Class B noxious weeds on Project lands, protect RTE plants on Project lands and in the Wells 230 kV right of way by guiding weed control actions specific to RTE buffer zones, and will guide tree clearing on the Wells 230 kV transmission line.

2.0 BACKGROUND

There are approximately 108 miles of reservoir shoreline in the Wells Project. Also within the Project Boundary are approximately 15 miles of shoreline around isolated ponds, the largest being Washburn Pond. Douglas PUD owns over 99 percent of the shoreline within the Wells Project Boundary. Lands within the Wells Project Boundary include shrub steppe; irrigated agriculture; wildlife habitat, such as the Wells Wildlife Area; and recreation lands, including parks in Pateros, Brewster, and Bridgeport. Douglas PUD owns approximately 2,649 acres of land adjacent to the Wells Reservoir within the Project Boundary (Figure 2.0-1). There is no private land ownership below the Project Boundary around Wells Reservoir.

Two 230 kV single-circuit transmission lines were built for the Wells Project. Each of the 230 kV transmission lines is capable of transmitting the entire output of the Wells Project. The lines run 41 miles (65.6 km) from the switchyard atop the dam to the Douglas Switchyard operated by Douglas PUD. The lines run parallel to each other on 45-85 foot steel towers along a common 235-foot wide right-of-way. Each phase has two parallel conductors suspended 96 inches to 105 inches (2.4 to 2.6 m) below the bridge and approximately 24 feet (7.3 m) between phases. There are also 1,117 acres within the 235 feet wide, 41 mile transmission line right-of-way (ROW), the majority of which are privately owned (Figure 2.0-2). There is no federal land ownership within the transmission line ROW.

The transmission lines begin at Wells Dam and cross the Columbia River from Carpenter Island in Chelan County to Douglas County. After crossing the river, the transmission lines travel southeast to the Boulder Park area then turn southwest across wheat fields, past the town of Waterville and over Badger Mountain. The Douglas Switchyard is located in close proximity to the Rocky Reach Switchyard, operated by Public Utility District No. 1 of Chelan County (Chelan PUD) and the Sickler Substation, operated by the Bonneville Power Administration (BPA). The 230 kV lines connect to the regional transmission grid at BPA’s Sickler Substation.
Figure 2.0-1 Wells Project Map
Figure 2.0-2  Wells Project 230 kV Transmission Line Right of Way
3.0 NOXIOUS WEED CONTROL

Noxious weeds are non-native plants introduced either deliberately (e.g., free seeding garden plants) or accidentally transported by human or animal activity. Because of their aggressive growth, physical characteristics and lack of natural enemies, these plants can be highly destructive, competitive, or difficult to control. These harmful exotic plant species can harm wildlife habitat and landscapes on Wells Project lands and invade adjoining properties.

Invasive non-native plants under Washington State law (17.10 RCW) are considered noxious weeds. The Washington State Noxious Weed Control Board annually develops a list of noxious weed species of statewide importance. The Chelan and Okanogan Noxious Weed Control Boards maintain a noxious weed list which includes those weed species found in their counties that must be controlled by landowners. Douglas County has not established a noxious weed control board, but still must follow Washington State noxious weed mandates. On each weed board list, noxious weeds are classified according to their current distribution and degree of concerns; control efforts are required of landowners for some weed classes (Table 3.0-1). However, numerous invasive species have been judged to be too widespread to control (e.g., Cheat grass (*Bromus tectorum*)), and as result are not listed.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Distribution and required management</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Limited distribution statewide. Eradication required in all areas.</td>
</tr>
<tr>
<td>B</td>
<td>Limited distribution, but well established in some parts of the state. Control required in non-infested areas (B designate); containment required in already infested areas (B non-designate).</td>
</tr>
<tr>
<td>C</td>
<td>Widespread. Management requirements are determined locally.</td>
</tr>
</tbody>
</table>

3.1 Licensing

All applications of herbicides will be applied by employees or contractors with Washington State Department of Agriculture Pesticide applicators license. Applicators will maintain their pesticide applicators license by annually attending pesticide training classes that provide the required credits (forty credits every five years) to maintain their license. All pesticide applicators will follow all Washington State regulations pertaining to herbicide applications and follow all safety precautions and use all safety equipment necessary for applying herbicides. No unlicensed person (employee or contractor) will apply herbicides on Wells Project lands or the Wells 230 kV transmission line right of way.

3.2 Weed Management Planning

Douglas PUD’s employees and contractors will careful plan the control of noxious weeds. Weed control will be carried out in a manner that minimizing damage to native plant communities or rare plants. The applicator will consider the following when planning each weed control project:
1. Consider the species of noxious weeds, density and size of the sites and surrounding vegetation when determining control measures (See 3.2.1).
2. Consider the land use of the site (See 3.2.1).
3. Acquire all environmental permits required (e.g., wetlands) (See 3.2.2).
4. Consult the Washington State Department of Agriculture (WSDA), pesticide-sensitive individuals list for properties adjacent to the control site (See 3.2.3).
5. Determine the effectiveness of various control options: tilling, digging, herbicide application by wicking, spot spraying or broadcast spraying, or biological control agent (See 3.3.1).
6. Determine the most effective physiological growth stages of the target weed to obtain maximum control with least impact to surrounding vegetation (See 3.2.1).
7. Control weeds using method(s) selected for the site.
8. Maintain weed control records as required by law (See 3.2.4).
9. Monitor all application sites to determine the effectiveness of the weed control. Provide additional control if needed.
10. Sites denuded by herbicide treatment will be replanted with native plant species appropriate to the site.

3.2.1 Noxious Weed Control

Douglas PUD will annually check the state and Chelan, Douglas and Okanogan counties Class A and Class B weed lists for changes, and will comply with legal requirements for noxious weed control. Applicators will maintain working knowledge of the biology of noxious weeds to be controlled and consult with weed control experts, when need, to determine the physiological growth stage when effective control can be achieved.

Applicators will choose the control method appropriate to the species of weed, density of the weeds and size of the stand to be controlled. The method used to control the weed may include tilling, digging, herbicide application by wicking, spot spraying or broadcast spraying, or biological control agent. The applicator will consider land use of project lands and adjacent property when they choose control methods (e.g. livestock, ornamental landscapes, vegetable gardens, crops and native habitat).

3.2.2 Permits

Douglas PUD will secure all permits necessary to control noxious weeds in wetlands or in the Columbia, Methow or Okanogan rivers. Depending on the weed control method selected, permit(s) may be required from Washington Department of Ecology for wetland or river herbicide application and county, state and federal agencies for mechanical control.

3.2.3 Notification of Pesticide-Sensitive Individuals

The law requires WSDA to maintain a list of physician certified pesticide-sensitive individuals and to distribute the list biannually to landscape and right-of-way applicators. Douglas PUD will maintain a current copy of the pesticide-sensitive individuals list provided by WSDA. Douglas
PUD will comply with the adjacent land owner notification requirements of RCW 17.21.420 and 17.21.430 of the Washington pesticides Application Act.

Douglas PUD employees and contractors will identify any person on the list living adjacent to a site where weed control will occur. Notification of the date and approximate time of the application shall be made in writing, in person or by telephone. This notification must be at least two hours prior to the application except in the case of an immediate service call in which case notification can be made at the time of the application. If the applicator is unable to make contact a written notice will be left at the residence of the individual listed on the pesticide-sensitive list at the time of the application.

3.2.4 Record Keeping

Washington State requires pesticide applicators to keep records of all applications, RCW 17.21.100 of the Washington pesticide Application Act and WAC 16-22801320 of the General Pesticide Rules. Douglas PUD employees and contractors applying herbicide on Wells Project lands and the Wells 230 kV transmission lines right of way will maintain records of all pesticide application for seven years. Pesticide application records will be recorded on WSDA approved forms or WSDA approved database.

Douglas PUD licensed applicators and contractors will maintain additional records for each pesticide application on Project lands and the Wells 230 kV transmission lines right of way. These records will include the location of all weed control operations, the type of control (tiling, cutting, herbicide application or biological), the name of the herbicide used and noxious weed controlled. A copy of these records will be provided to the Natural Resource Department each fall after the weed control season. These records will provide proof of compliance with the WBMP.

4.0 RTE PLANT BUFFER ZONES

Surveys of the Wells Project reservoir documented occurrences of three state-listed special-status plants: little bluestem (*Schizachyrium scoparium*) (State Threatened), chaffweed (*Centunculus minimus*) (State Review 1), and northern sweetgrass (*Anthoxanthum hirtum was Hierochloe odorata*) (State Review 1) (EDAW 2006). Surveys of the transmission line corridor document one occurrence of Thompson’s clover (*Trifolium thompsonii*) (State Threatened) (Parametrix, Inc. 2009). None of these species are afforded specific regulatory protections by Washington State.

Douglas PUD created a map of each RTE plant site utilizing ESRI’s ArcGis™. A five hundred foot buffer zone was created around each site on a map (Appendix A). The buffer zones begin at the Wells Project Boundary and extend to the river’s edge or edge of the wetland if it is further. The buffer extends five hundred feet upstream and down of the RTE plant site. The buffer zone for the Thompson’s Clover on the Wells 230kV transmission line was mapped and a five hundred foot buffer was drawn around the site.
Within the Wells Project boundary, Douglas PUD will not allow ground disturbing activities within the 500 foot buffer zone surrounding each RTE plant location and no land use permits will be issued for these buffer areas. Any weed control needed within the buffer zone will utilize the following methods outlined in Section 3.2 except the use of broadcast spray herbicide applications. Allowable herbicide control methods in the RTE plant buffer zones are listed in descending order of preference: biological control, hand pulling, and hand wiping of individual weeds with herbicide.

### 5.0 PREVENTING WEED INFESTATIONS

Noxious weeds are spread by the wind, birds, animals and people. People transport weed seeds on their clothing and shoes and on vehicles, farm machinery and construction equipment. To minimize the introduction of new weed species or the spread of existing weed species. Douglas PUD’s employees, consultants and contractors will implement prevention methods including limiting weed seed dispersal, minimizing soil disturbance and properly managing desirable native vegetation. The following practices are intended to minimize new weed infestations on Project lands and on the Wells 230 kV transmission line right of way:

1. Use certified weed free straw and mulch and seed for habitat restoration projects.
2. Limit public vehicle traffic to designated roads on Project lands.
3. Douglas PUD employees, consultants and contractors will be instructed to check their vehicle undercarriage for weeds before driving on undeveloped Project lands.
5. Manage healthy native vegetation and replant native vegetation disturbed by recreation activities, adjacent land owners and Douglas PUD’s management activities.

### 6.0 WELLS 230 KV TRANSMISSION LINE TREE CLEARING

The transmission line corridor passes through 64 acres of Douglas fir (*Pseudotsuga menziesii*) and ponderosa pine (Parametrix, 2009). The conifer canopy closure varies from sparse open canopy to closed canopy. When vegetation grows in close proximity to a transmission line the potential for flash over to ground can occur and result in a prolonged disruption of energy to customers in Douglas County and to utilities throughout the Pacific Northwest that utilize project power. Douglas PUD must maintain North America Electric Reliability Corporation (NERC) standards of 25 feet separation between conductors and vegetation to insure the reliability of transmission lines.

To protect nesting birds, Douglas PUD will only perform tree clearing on the transmission line right of way between August 31 and January 31.
7.0 REFERENCES


Appendix A

RTE Plant Maps
Not for Public Dissemination
Appendix G

Wells Wildlife Area Annual Report for 2013 by Dan Peterson
2013 ANNUAL REPORT
Wells Wildlife Mitigation Program

Submitted by:

Dan Peterson
Manager, Wells Wildlife Area
Washington State Department of Fish and Wildlife
Executive Summary

The Public Utility District No. 1 of Douglas County provides annual operation and maintenance funding for the Wells Wildlife Area as agreed to in the Off-License Settlement Agreement between Douglas PUD (DCPUD) and Washington Department of Fish and Wildlife (WDFW). Per the Agreement, Douglas PUD provides WDFW with $200,000 in 2007 dollars that is adjusted for annual inflation on January 1 of each year. Using this formula, the 2013 operation and maintenance funding for the wildlife area was $217,000. Table 1 displays the wildlife area budget for 2013.

The Wells Wildlife Area is located in Douglas and Okanogan counties of Washington State and consists of six units -- three shoreline riparian units and three upland units. Bridgeport Bar (502 acres), Okanogan (100 acres) and Washburn Island (261 acres) are located along the shoreline of the Wells Reservoir and a portion of each unit lies within the Project Boundary. West Foster Creek (1,025 acres), Central Ferry (1,602 acres) and Indian Dan Canyon (4,716 acres) are upland units and are entirely outside the Wells Project Boundary. WDFW leases 1,550 acres of land from the Washington Department of Natural Resources and 180 acres Bureau of Land Management land located within the Indian Dan Unit boundary.

The original management goal for the Wells Wildlife Area was to enhance and manage upland game habitat and release upland birds for public hunting. The goal of the program was broadened, after the pheasant release program ended, to include the development of winter and migratory waterfowl food plots and to further enhance upland bird habitat. The goal of the program has expanded to include the enhancement of native riparian, wetland and shrub steppe habitat to support native wildlife species diversity on Wells Wildlife Area lands both within and adjacent to the Wells Project.

This annual report presents the management accomplishments and challenges as well as the enumeration of certain wildlife and recreational uses on the Wells Wildlife Area in 2013.
A. Expenditures

Fiscal year 2013 Operation and Maintenance Budget is summarized in Table 1.

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<td>C) Barley</td>
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<td>22</td>
<td>ADMINISTRATIVE OVERHEAD (12.5%)</td>
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**TOTAL OPERATIONS AND MAINTENANCE:** $217,000

Table 1. 2013 Operation and Maintenance Budget
C. Wildlife Habitat Management and Related Activities:

- **Grain Food Plot and Waterfowl Habitat Development:**

  In 2013 we produced 142 acres of irrigated grain crops on the Bridgeport Bar and Washburn Island units. Additionally, in September, we planted 8.5 acres on the Bridgeport Bar unit to winter wheat. Total crop acreage on DCPUD project lands this year was 105 acres (70% of total crops). Species planted included spring wheat (77 acres), winter wheat (8.5 acres) barley (38 acres) and corn (27 acres). We planted 19 fields with wheat or barley; field size ranged from 2 to 22 acres. Thirteen (13) corn rows were established and averaged 2 acres each. The majority of the work on Washburn Island was funded through a Migratory Bird Stamp Grant.

  To accomplish the required field work we used a variety of DCPUD and non-DCPUD funded equipment. DCPUD funded equipment included the John Deere 7810 tractor (150hp) to mow and disk the fields, the Kubota 6030 tractor (70hp) to seed and spray herbicides, the International Harvester 510 grain drill to seed wheat and barley, a 4-row corn planter and a 3-point sprayer. Non-DCPUD funded equipment included a John Deere 7730 tractor (150hp) and Schulte S-150 mower both funded by the Sagebrush Flat Wildlife Area (SBF) and a 22-foot wide Krause disk purchased in 1998 by the Chelan Wildlife Area.

- **Maintenance of Riparian Habitat:**

  Wildlife area staff maintained 90 acres of irrigated riparian plantings on the Bridgeport Bar and Washburn Island units. About 50 acres of this total are located on DCPUD project lands: 14 acres on Washburn Island and 36 acres on Bridgeport Bar. These plantings are distributed across 50 individual sites and irrigated via 6 miles of sprinkler lines. Each site is irrigated at least once per week during the April – October irrigation season. Annual maintenance of these sites includes: replacing worn/damaged sprinklers and gaskets, repairing broken risers, clearing brush from sprinkler lanes, and periodic mowing between rows of younger shrub plantings.

  The Foster Creek Conservation District secured funding to repair a large headcut in West Foster Creek. In the last 5 years the headcut and resulting incision had moved upstream approximately 40 feet. Left unchecked, the headcut threatened the integrity of the surrounding meadow and a loss of riparian habitat. The repair work took place in June and required significant excavation to de-water the creek, reslope the existing streambank, construct 14 rock weirs over a distance of 250 feet, install erosion control fabric and seed the entire construction footprint. The project cost approximately $125,000 and was funded by the Washington State Conservation Commission.

- **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 Creek and Indian Dan Canyon Units as needed.

- For the first time in since 1995 the lower lake at Indian Dan Canyon dried up.

- **Wildlife Feeding and Watering:**
  
  - Filled and maintained 20 upland game bird feeders. Staff constructed and placed 4 new feeders at Central Ferry Canyon to replace those lost in the 2012 fire.

- **Artificial Nesting Structures:**
  
  - Volunteer Richard Hendrick inspected, repaired and, as needed, replaced wood duck, kestrel and blue bird nest boxes. The wildlife area has approximately 60 wood duck boxes, 5 kestrel boxes and more than 40 blue bird boxes. Rick visits each box at least once during the year. The boxes are located on the Indian Dan Canyon, Central Ferry Canyon, Bridgeport Bar, Washburn Island and the Okanogan River units.

- **Fences:**
  
  - We hired a WCC crew to remove fencing from the Central Ferry Canyon unit that had been destroyed by the 2012 Crane Road Fire. After 4 weeks of work they had removed approximately 6 miles of fencing material from the unit’s interior and boundary. All materials were hauled out of the area by hand and moved to our shop yard for disposal.

  - Prior to the deer hunting season staff repaired several gates and checked several miles of fence following a cattle trespass incident on the Indian Dan Unit.

  - Staff repaired fencing on the Okanogan Unit that had been damaged when a vehicle drove off the county road and through the fence. This activity has become an annual event.

- **Vegetation Control:**
  
  - Performed mechanical weed control (disking) on 154 acres of food plot sites. The field seeded to winter wheat required multiple treatments.

  - Performed chemical control on 162 acres of food plot sites. Two fields required multiple treatments to control the annual grasses long-spine sandbur and crabgrass. To achieve control of those annuals we treated the fields with glyphosate after the standing grain crop had matured and the annuals had yet
to produced seed. This method and timing produced excellent results and we may duplicate it next year in other fields as needed.

- Treated a variety of weeds with herbicide including: Puncture vine *(Tribulus terrestris)* 2 acres, quackgrass *(Elytrigia repens)* 10 acres, Dalmatian toadflax *(Linaria dalmatica)* 30 acres, Canada thistle *(Cirsium arvense)* 2 acres and cheatgrass *(Bromus tectorum)* 10 acres.

- Treated with herbicides approximately 15 acres of roadside.

- Mowed approximately 36 miles of wildlife area roads.

- Released 1,750 of the bio-control insect *Larinus minutus* to treat diffuse knapweed where the use of herbicides is not a practical alternative. Release sites were on the Bridgeport Bar, Washburn Island and Indian Dan Canyon units. Washington State University Extension in Puyallup provided the insects.

- Released 1,500 insects in the *Galerucella* genus as a bio-control to treat purple loosestrife. Release sites were on the Bridgeport Bar unit. Washington State University Extension in Puyallup provided the insects.

- Released 1,500 of the bio-control insect *Mecinus janthinus* to treat Dalmatian toadflax where the use of herbicides is not a practical alternative. Release sites were on the Central Ferry Canyon, Bridgeport Bar, West Foster Creek and Washburn Island units.

- **Firebreaks and Fire Control:**

  - Maintained one mile of firebreak on the West Foster Creek Unit and two miles on the Bridgeport Bar Unit.

- **Buildings, Public Use Facilities and Equipment:**

  - Maintained buildings and parking areas. Cleared snow from roads, parking areas and headquarter area and replaced signs as needed.

  - Staff removed the pheasant pens located at the headquarters area. Last used for their intended purpose in 1982, we were able to salvage and reuse most of the wood posts. The gates were surpluses. Everything else was scrapped and the space is now used for equipment parking.

  - Staff cleaned up and organized the equipment yard. In the process a 30-yard dumpster was filled with scrap metal collected from the yard as well as the open shed at Indian Dan Canyon. Simon Metals of Tacoma provided the dumpster and hauling service.
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- A new heating/cooling system was installed in the bunkhouse. Douglas PUD funded one-half the cost of replacement.

- We purchased 8 beds from Fort Lewis surplus for the bunkhouse and purchased mattresses for them from the Apple Valley Bargain Barn.

- Replaced the worn-out 1986 Chevrolet S-10 used by our irrigator, a seasonal employee, with a 2000 Ford Ranger transferred from the WDFW Habitat Program.

- Purchased a new grain drill. The 10-ft wide John Deere BD110 has closer row spacing and much improved depth control than the 35 year-old International used here since 1978. The Douglas PUD Capital Equipment Fund provided the funding.

- **Other:**

  - Applied for and received a grant through the Migratory Bird Stamp and Art Print Program to fund our production of grain crops on the Washburn Island unit.

E. **Hunting**

- **Upland Game Bird:**

  - WDFW recorded 776 upland bird hunters registering (hunter days) on the wildlife area with a harvest of 554 birds during the 2013 (includes data from January 2014) season (see Appendix B). This represents a harvest of 0.71 birds per hunter day. Compared with 2012, the number of hunters in the field increased by 12.6%. The overall harvest also increased by 11% over the 2012 season. As in every year since 1983, California quail was the most heavily harvested bird on the area representing 93% of the total. Pheasant and gray partridge harvest numbers were 29 and 6 respectively. The 29 pheasants was the greatest number taken since 2008. Ten pheasants were taken at West Foster Creek. Washburn Island and Bridgeport Bar rounded out the total with 9 and 8 respectively.

Table 2 summarizes California quail and total upland game harvest information collected on the wildlife area between 1983 and 2012 excluding Washburn Island and the Okanogan Units where hunting registration information is lacking. Quail hunting success during this reporting period was below average.
Table 2. Wells Wildlife Area Upland Bird Hunting Data – 1983-2013 Hunting Seasons

<table>
<thead>
<tr>
<th></th>
<th>Hunters</th>
<th>Quail</th>
<th>Quail/Hunter</th>
<th>Upland Birds</th>
<th>Upland Bird/Hunter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>854</td>
<td>745</td>
<td>0.85</td>
<td>838</td>
<td>0.96</td>
</tr>
<tr>
<td>Minimum</td>
<td>496</td>
<td>320</td>
<td>0.44</td>
<td>397</td>
<td>0.55</td>
</tr>
<tr>
<td>Maximum</td>
<td>1,284</td>
<td>1,659</td>
<td>1.65</td>
<td>1,721</td>
<td>1.71</td>
</tr>
<tr>
<td>2012</td>
<td>678</td>
<td>442</td>
<td>0.65</td>
<td>491</td>
<td>0.72</td>
</tr>
<tr>
<td>2013</td>
<td>776</td>
<td>519</td>
<td>0.67</td>
<td>554</td>
<td>0.71</td>
</tr>
</tbody>
</table>

- **Waterfowl:**
  - With Douglas PUD Wildlife Biologist Jim McGee, staff surveyed Canada goose nesting on the Wells Pool on March 29 and May 8. A total of 69 nests were located and total of 284 eggs were documented (Appendix A). Complete clutches were documented in 52 of the 69 nests. The 48 ground nests and 4 nests in artificial structures with known clutch sizes averaged 5.33 and 5.50 eggs respectively. A of 245 eggs were known to have hatched. Two ground nests were lost to predators. No nests were found on the Bridgeport Bar Islands. The lack of nesting on these islands was due to raccoon activity.
  - Biologists from WDFW conducted an aerial waterfowl survey of Wells Pool on November 21, 2013. Results of this survey are summarized in Appendix C.
  - Waterfowl hunters reported hunting 719 days on the Bridgeport Bar Islands, the Bridgeport Unit and the Washburn Island Unit and harvesting 66 geese and 1469 ducks (Appendix B). This represents an average of 2.04 waterfowl per hunter day. When compared to the previous hunting season, hunter participation increased by 11% while their success declined by 3%. Waterfowl hunting data for Bridgeport Bar (1978 – 2013 and for Washburn Island (1981 to 2013), the two principal waterfowl hunting units, is summarized in tables 3 and 4. As shown, waterfowl hunting success continues to be above average for both locations.

Table 3.

<table>
<thead>
<tr>
<th>Bridgeport Bar 1978 - 2013</th>
<th>Hunters</th>
<th>Ducks</th>
<th>Ducks \ Hunter</th>
<th>Geese</th>
<th>Geese \ Hunter</th>
<th>Total</th>
<th>Total Waterfowl \ Hunter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>445</td>
<td>721</td>
<td>1.65</td>
<td>58</td>
<td>0.14</td>
<td>779</td>
<td>1.72</td>
</tr>
<tr>
<td>Minimum</td>
<td>51</td>
<td>81</td>
<td>0.67</td>
<td>10</td>
<td>0.05</td>
<td>91</td>
<td>0.72</td>
</tr>
<tr>
<td>Maximum</td>
<td>851</td>
<td>1396</td>
<td>3.02</td>
<td>183</td>
<td>0.40</td>
<td>1435</td>
<td>3.09</td>
</tr>
<tr>
<td>2012</td>
<td>531</td>
<td>1379</td>
<td>2.60</td>
<td>22</td>
<td>0.04</td>
<td>1401</td>
<td>2.64</td>
</tr>
<tr>
<td>2013</td>
<td>616</td>
<td>1396</td>
<td>2.27</td>
<td>39</td>
<td>0.06</td>
<td>1435</td>
<td>2.33</td>
</tr>
</tbody>
</table>
Table 4. Washburn Island Hunters Ducks Geese Total Waterfowl

<table>
<thead>
<tr>
<th>Year</th>
<th>Hunters</th>
<th>Ducks</th>
<th>Ducks \ Hunter</th>
<th>Geese</th>
<th>Geese \ Hunter</th>
<th>Total</th>
<th>Total Waterfowl \ Hunter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>81</td>
<td>71</td>
<td>0.76</td>
<td>34</td>
<td>0.56</td>
<td>105</td>
<td>1.32</td>
</tr>
<tr>
<td>Minimum</td>
<td>5</td>
<td>0</td>
<td>0.00</td>
<td>11</td>
<td>0.08</td>
<td>15</td>
<td>0.54</td>
</tr>
<tr>
<td>Maximum</td>
<td>207</td>
<td>242</td>
<td>1.99</td>
<td>94</td>
<td>3.00</td>
<td>258</td>
<td>3.00</td>
</tr>
<tr>
<td>2012</td>
<td>118</td>
<td>137</td>
<td>1.16</td>
<td>49</td>
<td>0.42</td>
<td>186</td>
<td>1.58</td>
</tr>
<tr>
<td>2013</td>
<td>103</td>
<td>73</td>
<td>0.71</td>
<td>27</td>
<td>0.26</td>
<td>100</td>
<td>0.97</td>
</tr>
</tbody>
</table>

- **Non-Game:**
  - Surveyed the Central Ferry Unit for Columbian sharp-tailed grouse (*Tympanuchus phasianellus*) leks. No birds were observed at the traditional lek sites or elsewhere on the unit. Sharp-tailed grouse have not been found using the historic lek sites or winter habitat on this unit for several years.
  - Between January 2013 and mid-February 2013, wildlife area staff and volunteers recorded 7 sightings of sharp-tailed grouse on the West Foster Creek Unit. Numbers of grouse observed ranged from 2 to 16. In recent years the number and frequency of observations on this unit has increased.
  - Eurasian collared-dove (*Streptopelia decaocto*) and fox squirrels (*Sciurus niger*), both invasive species, in the last few years, have become common on the Bridgeport Bar Unit.
Appendix A

<table>
<thead>
<tr>
<th>Wells Pool Canada Goose Nesting Survey</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Natural</td>
<td>Artificial</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>Sites</td>
<td>Structures</td>
<td></td>
</tr>
<tr>
<td>Total nests visited</td>
<td>63</td>
<td>6</td>
<td>69</td>
</tr>
<tr>
<td>Total eggs produced</td>
<td>259</td>
<td>25</td>
<td>284</td>
</tr>
<tr>
<td>Nests with unknown total clutch size, due to laying at time of visit</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Nests with unknown clutch size due to nest having hatched prior to visit</td>
<td>13</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>Nests with known clutch</td>
<td>48</td>
<td>4</td>
<td>52</td>
</tr>
<tr>
<td>Total eggs</td>
<td>256</td>
<td>22</td>
<td>278</td>
</tr>
<tr>
<td>Average clutch</td>
<td>5.33</td>
<td>5.50</td>
<td>5.35</td>
</tr>
<tr>
<td>Nests with known fate and clutch</td>
<td>43</td>
<td>2</td>
<td>45</td>
</tr>
<tr>
<td>Total eggs</td>
<td>243</td>
<td>11</td>
<td>254</td>
</tr>
<tr>
<td>Total hatch</td>
<td>236</td>
<td>9</td>
<td>245</td>
</tr>
<tr>
<td>Percent hatch</td>
<td>97.1</td>
<td>81.8</td>
<td>96.5</td>
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<tr>
<td>Hatched eggs per nest</td>
<td>5.5</td>
<td>4.5</td>
<td>5.44</td>
</tr>
<tr>
<td>Eggs abandoned</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Eggs predated</td>
<td>6</td>
<td>0</td>
<td>6</td>
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<tr>
<td>Total loss</td>
<td>7</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Nests with known clutch and unknown fate</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Total eggs</td>
<td>13</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>Nests with unknown total clutch size due to laying at time of visit</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Total eggs observed at visit</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
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</table>
Appendix B

Wells Wildlife Area
Hunter Bag Check Summary
2013 Hunting Season

<table>
<thead>
<tr>
<th></th>
<th>Bridgeport Bar</th>
<th>Washburn Island</th>
<th>West Foster</th>
<th>Central Ferry</th>
<th>Indian Dan</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UPLAND GAME BIRDS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hunters</td>
<td>323</td>
<td>66</td>
<td>164</td>
<td>54</td>
<td>169</td>
<td>776</td>
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<tr>
<td>Pheasant</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>29</td>
</tr>
<tr>
<td>California Quail</td>
<td>308</td>
<td>38</td>
<td>40</td>
<td>33</td>
<td>100</td>
<td>519</td>
</tr>
<tr>
<td>Gray Partridge</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Chukar</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Total upland game</td>
<td>316</td>
<td>47</td>
<td>50</td>
<td>36</td>
<td>105</td>
<td>554</td>
</tr>
<tr>
<td>Upland game per hunter</td>
<td>0.98</td>
<td>0.71</td>
<td>0.30</td>
<td>0.67</td>
<td>0.62</td>
<td>0.71</td>
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<tr>
<td><strong>WATERFOWL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hunters</td>
<td>616</td>
<td>103</td>
<td>0</td>
<td></td>
<td></td>
<td>719</td>
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<tr>
<td>Ducks</td>
<td>1396</td>
<td>73</td>
<td>0</td>
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<td>1469</td>
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<tr>
<td>Canada Geese</td>
<td>39</td>
<td>27</td>
<td>0</td>
<td></td>
<td></td>
<td>66</td>
</tr>
<tr>
<td>Total Waterfowl</td>
<td>1435</td>
<td>100</td>
<td>0</td>
<td></td>
<td></td>
<td>1535</td>
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<tr>
<td>Waterfowl per hunter</td>
<td>2.33</td>
<td>0.97</td>
<td>0.00</td>
<td></td>
<td></td>
<td>2.13</td>
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<tr>
<td><strong>MOURNING DOVE</strong></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Dove Hunters</td>
<td>31</td>
<td>5</td>
<td>17</td>
<td></td>
<td></td>
<td>53</td>
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<td>Dove Taken</td>
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<td>0</td>
<td>55</td>
<td></td>
<td></td>
<td>62</td>
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<tr>
<td>Dove per hunter</td>
<td>0.23</td>
<td>0.00</td>
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<tr>
<td><strong>MULE DEER</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Deer Hunters</td>
<td>21</td>
<td>57</td>
<td>68</td>
<td>45</td>
<td></td>
<td>191</td>
</tr>
<tr>
<td>Deer Taken</td>
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<td>0</td>
<td>3</td>
<td>0</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Deer per hunter</td>
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<td></td>
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Appendix C

<table>
<thead>
<tr>
<th>WATERFOWL SURVEY</th>
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<tr>
<td>Survey Region: Wells Pool</td>
<td></td>
</tr>
<tr>
<td>Survey Date: November 21, 2013</td>
<td></td>
</tr>
<tr>
<td>SPECIES</td>
<td>Number</td>
</tr>
<tr>
<td>Tundra Swan</td>
<td>0</td>
</tr>
<tr>
<td>Trumpeter Swan</td>
<td>0</td>
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<tr>
<td>Undifferentiated Swan</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2</td>
</tr>
<tr>
<td>Western Canada Goose</td>
<td>10</td>
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<tr>
<td>Lesser Canada Goose</td>
<td>0</td>
</tr>
<tr>
<td>Undifferentiated Canada Goose</td>
<td>70</td>
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<tr>
<td>Other Goose</td>
<td>0</td>
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<tr>
<td>TOTAL GEESE</td>
<td>80</td>
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<tr>
<td>Mallard</td>
<td>1495</td>
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<tr>
<td>Gadwall</td>
<td>80</td>
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<tr>
<td>American Wigeon</td>
<td>1385</td>
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<tr>
<td>Green-winged Teal</td>
<td>89</td>
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<tr>
<td>Blue-winged Teal</td>
<td>0</td>
</tr>
<tr>
<td>Cinnamon Teal</td>
<td>0</td>
</tr>
<tr>
<td>Unidentified Teal</td>
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</tr>
<tr>
<td>Northern Shoveler</td>
<td>0</td>
</tr>
<tr>
<td>Northern Pintail</td>
<td>0</td>
</tr>
<tr>
<td>Wood Duck</td>
<td>0</td>
</tr>
<tr>
<td>SUBTOTAL PUDDLE DUCKS</td>
<td>3049</td>
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<tr>
<td>Redhead</td>
<td>905</td>
</tr>
<tr>
<td>Canvasback</td>
<td>215</td>
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<tr>
<td>Scaup</td>
<td>3767</td>
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<tr>
<td>Ringneck</td>
<td>200</td>
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<tr>
<td>Goldeneye</td>
<td>760</td>
</tr>
<tr>
<td>Bufflehead</td>
<td>440</td>
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<tr>
<td>Ruddy</td>
<td>400</td>
</tr>
<tr>
<td>SUBTOTAL DIVING DUCKS</td>
<td>6687</td>
</tr>
<tr>
<td>Common Merganser</td>
<td>10</td>
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<tr>
<td>Hooded Merganser</td>
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</tr>
<tr>
<td>Unknown ducks</td>
<td>125</td>
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<tr>
<td>TOTAL DUCKS</td>
<td>9871</td>
</tr>
<tr>
<td>TOTAL WATERFOWL</td>
<td>9953</td>
</tr>
<tr>
<td>Coots</td>
<td>12400</td>
</tr>
<tr>
<td>SURVEY TOTAL</td>
<td>22353</td>
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