Appendix A

Monitoring Plans and Forms including the Ashton Wildlife Enhancement Program Monitoring Plan (Revised May 9, 2016)

ASHTON WILDLIFE ENHANCEMENT PLAN

MONITORING PLAN

REVISION DATE: May 9, 2016

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1.0 Introduction

The Ashton Wildlife Enhancement Plan (WEP) is implemented by PacifiCorp to improve, create, or protect habitat in designated areas near or adjacent to Ashton Reservoir.

The purpose of this monitoring plan is to provide PacifiCorp personnel with procedures and support materials (data sheets, maps, photos) necessary to assess the effectiveness of WEP enhancement measures and to allow for evaluation and discussion with regulatory partners. Procedures in this monitoring plan will also be updated as needed to maintain consistency with any changes made to the WEP.

This monitoring plan addresses the following components of the Ashton Wildlife Enhancement Plan: fencing; raptor perches; osprey (and bald eagle) nesting platforms; wetland easements and lease, shoreline easements and nesting enhancements.

Maps showing the locations of these features with the exception of the nesting enhancements are incorporated in the WEP. A map of the nesting enhancements will be developed as they are implemented. A schedule for monitoring activities is provided at the end of this plan.

2.0 Practices

2.1 Fencing

PacifiCorp will maintain the fences described in the WEP at Ashton Reservoir and at the Wetland Complex. The following procedures are to be used to record the results of inspection and maintenance activities.

Three types of fencing are used, three and four strand barbwire that is both permanent and laydown, and electric fence that is used on the eastern edge of Cordingly Pond.

2.1.1 Inspection and Maintenance Procedures

Inspections will be conducted in April and October of each year during operation and maintenance (i.e., put up or take down of laydown fences) to assess condition and conduct required maintenance. Completion dates for "put up" and "take down" of laydown fence at Ashton Reservoir are typically April 30 and October 30, respectively (subject to adjacent landowner's grazing practices).

Fence inspection checklists (Figure 1-1 and 1-2) will be used to record date(s) when the fence is put up or taken down, the locations of problems, and maintenance required. Minor maintenance may be conducted during the spring or fall inspections and major maintenance would be conducted when scheduling permits.

Figure 1-1. Fence Inspection Checklist - Ashton Reservoir Shoreline		
Inspector:		**Type of Inspection** ☐ Spring ☐ Summer ☐ Fall
Date of Inspection:		**Comments:**
Area: Ashton Reservoir	**Inspections**	
1) South Shore PacifiCorp Fee Property	Check fence hardware	Maintenance Needs (Describe and flag site)
	☐ Letdown clips present	
	☐ Posts secure	
	☐ Corner braces secure	
	☐ Wire strung tight (spring)	
	☐ Bottom wire 17" from the ground	
Comments (sign of animal use, trespass, cut wires, etc.)		
2) South Shore Jenkins Conservation Easement	Check fence hardware	Maintenance Needs (Describe and flag site)
	☐ Letdown clips present	
	☐ Posts secure	
	☐ Corner braces secure	
	☐ Wire strung tight (spring)	
	☐ Bottom wire 17" from the ground	
Comments (sign of animal use, trespass, cut wires, etc.)		
3) South Shore Nedrow/Baker Conservation Easement	☐ Check buffer marker posts	Maintenance Needs (Describe and flag site)
Comments (sign of animal use, trespass, cut wires, etc.)		
4) North Shore Western Two PacifiCorp Fee	Check fence hardware	Maintenance Needs (Describe and flag site)

Properties	☐ Letdown clips present	
	☐ Posts secure	
	☐ Corner braces secure	
	☐ Wire strung tight (spring)	
	☐ Bottom wire 17" from the ground	
Comments (sign of animal use, trespass, cut wires, etc.)		
5) North Shore Western BLM	Check fence hardware	Maintenance Needs (Describe and flag site)
	☐ Letdown clips present	
	☐ Posts secure	
	☐ Corner braces secure	
	☐ Wire strung tight (spring)	
	☐ Bottom wire 17" from the ground	
Comments (sign of animal use, trespass, cut wires, etc.)		
6) North Shore Eastern PacifiCorp Fee Ownership	Check fence hardware	Maintenance Needs (Describe and flag site)
	☐ Letdown clips present	
	☐ Posts secure	
	☐ Corner braces secure	
	☐ Wire strung tight (spring)	
	☐ Bottom wire 17" from the ground	
Comments (sign of animal use, trespass, cut wires, etc.)		
7) North Shore Eastern BLM	Check fence hardware	Maintenance Needs (Describe and flag site)
	☐ Letdown clips present	
	☐ Posts secure	

	☐ Corner braces secure	
	☐ Wire strung tight (spring)	
	☐ Bottom wire 17" from the ground	
Comments (sign of animal use, trespass, cut wires, etc.)		

REMEDIAL ACTION		
Location	**Action Taken**	**Date**

Revised May 2016

Signature Date

Figure 1-2. Fence Inspection Checklist – Wetland Complex		
Inspector:		**Type of Inspection** ☐ Spring ☐ Summer ☐ Fall
Date of Inspection:		**Comments:**
Area: Wetland Complex	**Inspections**	
8) PacifiCorp Pond	Check fence hardware	Maintenance Needs (Describe and flag site)
	☐ Letdown clips present	
	☐ Posts secure	
	☐ Corner braces secure	
	☐ Wire strung tight (spring)	
	☐ Bottom wire 17" from the ground	
Comments (sign of animal use, trespass, cut wires, etc.)		
9) Cordingly Pond Eastern Shore Electric Fence	Check fence hardware	Maintenance Needs (Describe and flag site)
	☐ Letdown clips present	
	☐ Posts secure	
	☐ Corner braces secure	
	☐ Wire strung tight (spring)	
	☐ Bottom wire 17" from the ground	
Comments (sign of animal use, trespass, cut wires, etc.)		
10) Cordingly Pond Western Shore	Check fence hardware	Maintenance Needs (Describe and flag site)
	☐ Letdown clips present	
	☐ Posts secure	
	☐ Corner braces secure	
	☐ Wire strung tight (spring)	
	☐ Bottom wire 17" from the ground	

Comments (sign of animal use, trespass, cut wires, etc.)		
11) Cordingly Pond North End Marshal Lease	Check fence hardware	Maintenance Needs (Describe and flag site)
	☐ Letdown clips present	
	☐ Posts secure	
	☐ Corner braces secure	
	☐ Wire strung tight (spring)	
	☐ Bottom wire 17" from the ground	
Comments (sign of animal use, trespass, cut wires, etc.)		

REMEDIAL ACTION

Location	**Action Taken**	**Date**

Revised May 2016

Signature Date

2.1.2 Reporting

Upon completion of required maintenance, an updated copy of the form (remedial action section) will be completed on-site. A summary of inspections and maintenance actions will be included in the five year reports to the agencies and FERC.

2.2 Raptor Perches

Fifteen raptor perches, mostly associated with osprey nest platforms, were installed around the reservoir as part of WEP enhancement measures. An additional three perches were installed on Rocky Mountain Power distribution lines around the reservoir.

2.2.1 Inspection and Maintenance Procedures

An annual inspection will be conducted by PacifiCorp personnel during the early spring (concurrent with inspection of osprey nest platforms). For perches located close to osprey nest platforms, maintenance will be conducted outside of the osprey nesting season (April 15 - July 30) to avoid disturbance of nesting birds; generally as soon as possible during the summer work period. The perches will be inspected for structural integrity. A monitoring checklist (Figure 2-1) will be filled out on-site to document condition and required remedial actions.

2.2.2 Reporting

Upon completion of required maintenance, an updated copy of the form (remedial action section) will be completed. A summary of maintenance and remedial actions· will be included in the five year report to the agencies and FERC.

2.3 Osprey Nesting Platforms and Eagle Nest

2.3.1 Inspection and Maintenance Procedures

An annual inspection will be conducted by PacifiCorp personnel during the early spring (before April 15). Maintenance will be conducted before the osprey nesting season (April 15 - July 30, if possible). The platforms will be inspected for structural integrity and presence of nesting material (baiting). An inspection checklist (Figure 2-2) will be filled out on-site to document condition and required remedial action.

2.3.2 Occupancy Survey

An occupancy survey will be conducted in July. If there is evidence of recent use by osprey, the nest platform will be considered occupied and noted on an inspection checklist. If other species are using the nest, those species will be listed on the inspection checklist.

Figure 2-1. Raptor Perch Monitoring Checklist

Inspector:	**Date of Inspection:**

Comments:

Perch Number (see map)	**Condition**	**Maintenance Required**
P1		
P2		
P3		
P4		
P5		
P6		
P7		
P8		
P9		
P10		
P11		
P12		
P13		
P14		
P15		

Wildlife Observations:

REMEDIAL ACTION

Perch No.	**Date**	**Action Taken**

Updated May 2016

_____ _____

Signature Date

Figure 2-2. Osprey Nesting Platform Monitoring Checklist

Inspector:	**Date**

Type of Inspection: ☐ **Maintenance** ☐ **Occupancy**

Platform No. (see map)	**Condition (structure)**	**Nest***			**Maintenance Required?**
		Nest Material?	**Species Present?**	**# of Young, if present**	
N1					
N2					
N3					
N4					
N5					
N6					
N6B					
N6C					
N7					
N8					
N9					
N10					
E1 – Eagle Nest					No Maintenance

Wildlife Observations: *(optional)*

**Nest* **July inspection*

REMEDIAL ACTION

Perch No.	**Date**	**Action Taken**

Signature Date

2.3.3 Reporting

Upon completion of required maintenance, an updated copy of the form (remedial action section) will be completed. A summary of maintenance and remedial actions will be included in the five year reports to the agencies and FERC.

2.4 Pacificorp-Held Wetland Preservation Easements and Lease Monitoring

Monitoring under this section will be performed for PacifiCorp held easements and the one lease at the wetland complex. Annual monitoring will occur at the following easements:

- Cordingly Preservation Easement of 112.7 acres with 7.3 acres of overlapping grazing rights around Cordingly Pond.

- Marshal Preservation Easement of 78.1 acres with overlapping lease of 10.8 acres of grazing rights at Cordingly Pond.

- Marshall Grazing Lease of 10.8 acres north end of Cordingly Pond.

The monitoring program objectives will be to record and report any observed vegetation or habitat changes, agricultural encroachments, and any filling or draining within easement areas. Any changes in the uplands or wetlands that may diminish wildlife habitat in the easements will be recorded.

The first year of the monitoring program consisted of aerial photography, cover typing, and photo documentation to evaluate and establish baseline conditions (1993). Future monitoring will consist of annual inspections (annual photo documentation and site visits) and visual comparisons of aerial photography (at 5-year intervals) to the baseline conditions.

2.4.1 Baseline Conditions

Baseline conditions were recorded using a combination of aerial photography, cover typing (vegetation mapping) and on-site photo documentation.

Outputs from the baseline inventory included (1) maps illustrating the distribution of distinctive wetland vegetation types; (2) refined delineations of easement boundaries; (3) tabular summaries of the areas, perimeters and attributes of vegetation type delineations in each easement; (4) digital files that can be used to quantify changes in the distribution of vegetation types relative to future conditions; and (5) descriptions of soil, vegetation and hydrologic attributes of each wetland vegetation type.

The baseline mapping and field inventory was completed in 1993.

2.4.1.1 Aerial Photography

Large-scale, natural color aerial photographs (1:6000 scale) were taken of the project area in September 1992. Stereo pairs were obtained with set control points to allow accurate mapping of specific features on the photo and transfer to a geographic information system (GIS). This will permit direct comparisons of features like the outer perimeter of the shrub/wetland edge or open water/emergent vegetation edge (see cover typing).

2.4.1.2 Cover Typing

The aerial photos were used as a base map for cover typing the wetlands. Vegetation types were accurately delineated using an AP-190 analytical plotting scope and magnified imagery. Delineations were saved as a digital file that were processed using ARC-INFO, a geographic information system. The smallest delineations were about 0.05 acres. Delineations were verified through on-site observations.

Description sites consisting of 5 x 10 meter plots were established in areas that are representative of each vegetated type. Description sites were established for each of the three ponds. Soil, vegetation, and hydrological attributes were recorded for each described site. A soil profile was described to a depth of 3 ft. Methods for soil description were similar to those used by the Soil Conservation Service. Plant species, aerial cover, and height were recorded in each site. Hydrologic attributes included water regime classes developed by Cowardin et al. (1979) for classification of wetlands. General site characteristics were also recorded for each site.

2.4.1.3 Photo Documentation

To provide an additional visual record of baseline habitat conditions contained within the preservation easement, on-site photo documentation was conducted. Permanent photo documentation stations were selected in representative cover types or key areas based on results of cover typing. Coordinates for photo points were obtained with a GPS unit and plotted on GIS maps (Figure 2-3). Descriptions and photo azimuths were also recorded.

2.4.2 Annual Inspections

2.4.2.1 Photo Documentation

Annual on-site photo documentation will be conducted using the specifications established for the permanent· photo stations. Photos will be compared with previous year's photos to insure wildlife habitat values are maintained and no filling, draining or agricultural encroachments have occurred.

2.4.2.2 Site Visit

To supplement the photo documentation, three or more walk-through inspections will be conducted to document general habitat conditions (high water year, dry summer, etc.) and to identify trespass or other problems which may not be detected during photo documentation. Field notes recording inspection results and incidental wildlife observations will be retained by PacifiCorp, along with the photo documentation. Resource agencies will be notified prior to site visits to provide an opportunity for participation.

2.4.3 Aerial Photography (5-year)

At 5-year intervals, aerial photos will be used and visual comparison of changes between years will be made. If changes in the wetland complex are evident (e.g., decrease in the outer perimeter of the shrub/wetland edge or open water/emergent vegetation edge).

2.4.4 Reporting

Photo documentation and a summary of inspections will be provided in the 5-year reports to the agencies and will include baseline and most recent 5-year aerial photos for comparison. Aerial photos, photo documentation photos will be retained by PacifiCorp.

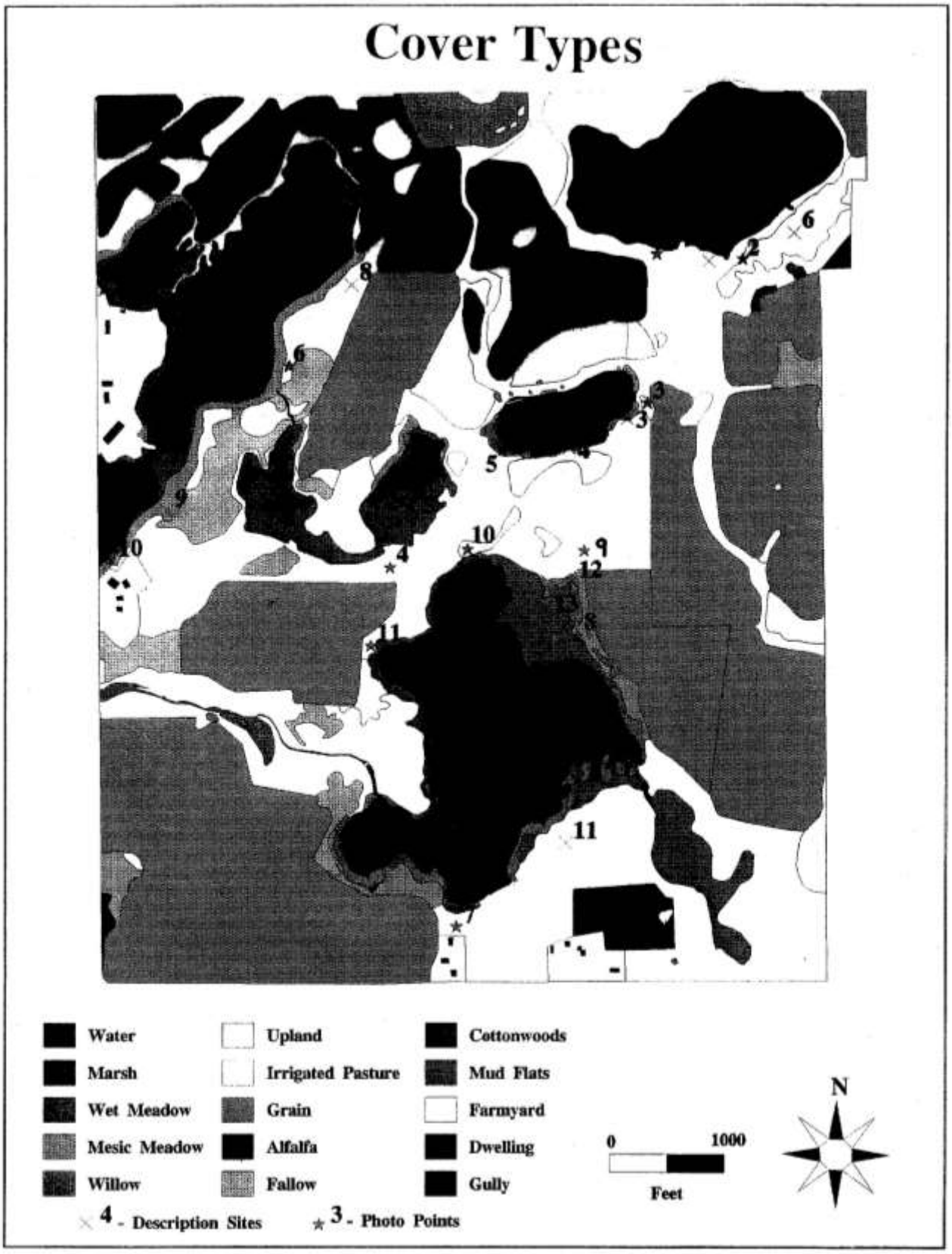

Figure 2-3. Photo Documentation Points on the Ashton Wetland Complex

2.5 Pacificorp-Held Shoreline Easements

Monitoring under this section will be performed on the PacifiCorp held easements on the reservoir shoreline. Annual monitoring will occur at the following easements:

- Jenkins Conservation Easement of 4.05 acres on the south shore of the reservoir.
- Baker Nedrow Temporary Conservation Easement of 23 acres on the south shore of the reservoir.

The monitoring program objectives will be to record and report any observed vegetation or habitat changes, agricultural encroachments, and any filling or draining within easement areas. Any changes in the uplands or riparian areas that may diminish wildlife habitat in the easements will be recorded.

The first year of the monitoring program will consist of preparation of a baseline report. This will occur in 2016. Future monitoring will consist of annual inspections (annual photo documentation and site visits).

2.5.1 Baseline Conditions

Baseline conditions will be recorded using a combination of aerial photography, cover type mapping (vegetation mapping) and on-site photo documentation. Baseline conditions will be documented in a baseline report.

2.5.1.1 Photo Documentation

To provide an additional visual record of baseline habitat conditions contained within the conservation easement, on-site photo documentation photo points will be established in the baseline report. These permanent photo documentation stations will be selected in representative cover types or key areas based on results of cover type mapping. Coordinates for photo points will obtained with a GPS unit and plotted on GIS maps.

2.5.2 Annual Inspections

2.5.2.1 Photo Documentation

Annual on-site photo documentation will be conducted using the specifications established for the permanent· photo stations. Photos will be compared with previous year's photos to insure wildlife habitat values are maintained and no filling, draining or agricultural encroachments have occurred.

2.5.2.2 Site Visit

To supplement the photo documentation, three or more walk-through inspections will be conducted to document general habitat conditions and to identify trespass or other problems which may not be detected during photo documentation. Fence maintenance will be conducted as needed. Field notes recording inspection results, annual photos and incidental wildlife observations will be retained by PacifiCorp. Resource agencies will be notified prior to site visits to provide an opportunity for participation.

2.5.3 Aerial Photography (5-year)

At 5-year intervals, aerial photos will be used and visual comparisons of changes between years will be made.

2.5.4 Reporting

Photo documentation and a summary of inspections will be provided in annual reports to the agencies and FERC. The 5-year reports to the agencies will include baseline and most recent 5-year aerial photos for comparison. Aerial photos, photo documentation photos, and be retained by PacifiCorp.

2.6 Nesting Enhancements

Monitoring of cavity nesting boxes and swan nesting platforms will begin as the measures are installed in the landscape.

2.6.1 Annual Inspections

Monitoring of cavity nesting boxes will occur after all young would typically be fledged. Boxes will inspected to ensure they are securely mounted and cleaned out every few years. While inspect the nest boxes records will be keep on box utilization for nesting.

Monitoring of swan nesting platforms will occur early in the year prior to nesting occurring. Floating platforms will be inspected to ensure they are level, securely anchored and have an adequate amount of freeboard.

2.6.2 Reporting

Annual monitoring results will be retained by PacifiCorp. A summary of inspections will be included in the five year reports to the agencies and FERC.

3.0 Monitoring Schedule

The schedule for conducting monitoring practices is presented in Table 3-1.

Table 3-1. Monitoring Schedule		
Practices		**Date**
Fencing	ASHTON Inspection and maintenance (annual)	April and October
Raptor Perches	Inspection and maintenance	February-March
Osprey Nesting Platforms	Inspection and maintenance Occupancy survey	February-March July
Wetland Easements and Lease	BASELINE (1993) Aerial photography (5 year intervals) Cover typing Photo documentation	 August-September July-August July-August
	ANNUAL INSPECTION Photo documentation Site visits (2 or more in spring/summer and 1 in the fall)	 July-August April-October
Shoreline Easements	BASELINE (2016) Aerial photography (5 year intervals) Cover typing Photo documentation	 August-September July-August July-August
	ANNUAL INSPECTION Photo documentation Site visits (2 or more in spring/summer and 1 in the fall)	 July-August April-October
Nesting Enhancements	Inspection and Maintenance	Discuss… if these are fall or spring items Nesting Boxes Swan Platforms