

Environmental Assessment

For

**Construction of Headquarters Facilities at
Conboy Lake National Wildlife Refuge**

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April 10, 2009

TABLE OF CONTENTS

1.0 Background.....	1
1.1 Proposed Action.....	2
1.2 Need and Purpose for the Proposed Action.....	2
1.3 Public Involvement.....	3
2.0 Alternatives.....	3
3.0 Environmental Setting.....	5
4.0 Affected Environment and Environmental Consequences.....	6
4.1 Alternative A.....	
4.1.1 Wetland Habitat Impacts.....	6
4.1.2 Upland Habitat Impacts.....	6
4.1.3 Wildlife Impacts.....	7
4.1.4 Endangered and Threatened Species Impacts.....	8
4.1.5 Public Use Impacts.....	9
4.1.6 Cultural Resources.....	10
4.1.7 Environmental Justice.....	10
4.2 Alternative B.....	10
4.2.1 Wetland Habitat Impacts.....	10
4.2.2 Upland Habitat Impacts.....	11
4.2.3 Wildlife Impacts.....	11
4.2.4 Endangered and Threatened Species Impacts.....	11
4.2.5 Public Use Impacts.....	11
4.2.6 Cultural Resources.....	11
4.2.7 Environmental Justice.....	11
4.2.8 Cumulative Impacts.....	11
4.3 Alternative C.....	11
4.3.1 Wetland Habitat Impacts.....	12
4.3.2 Upland Habitat Impacts.....	13
4.3.3 Wildlife Impacts.....	13
4.3.4 Endangered and Threatened Species Impacts.....	13
4.3.5 Public Use Impacts.....	15
4.3.6 Cultural Resources.....	16
4.3.7 Environmental Justice.....	16
4.4 Cumulative Impacts.....	16
5.0 List of Preparers.....	17
6.0 References.....	17
7.0 Appendices.....	18
Appendix 7.1. Conboy Lake Refuge Location Map.....	18
Appendix 7.2 Proposed Construction Site for Preferred Alternative.....	19
Appendix 7.3 Conboy Lake NWR Land Status Map.....	20
Appendix 7.4 List of Federal Threatened and Endangered Species for Klickitat County, WA.....	21
Appendix 7.5 Comments and Responses on the Draft EA.....	22

1.0 Background

Conboy Lake National Wildlife Refuge (Refuge) is managed by the U. S. Fish and Wildlife Service (Service) under the Department of the Interior, and is a unit of the National Wildlife Refuge System (System) (Appendix 7.1 Conboy Lake NWR Location Map).

The mission of the U.S. Fish and Wildlife Service is:
“To conserve, protect, and enhance fish, wildlife and their habitats for the continuing benefit of the American people.”

The mission of the National Wildlife Refuge System is: (National Wildlife Refuge System Administration Act of 1966, as amended):

"To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans."

The goals of the National Wildlife Refuge System are (601 FW 1):

- Conserve a diversity of fish, wildlife, and plants and their habitats, including species that are endangered or threatened with becoming endangered.
- Develop and maintain a network of habitats for migratory birds, anadromous and inter-jurisdictional fish, and marine mammal populations that is strategically distributed and carefully managed to meet important life history needs of these species across their ranges.
- Conserve those ecosystems, plant communities, wetlands of national or international significance, and landscapes and seascapes that are unique, rare, declining, or underrepresented in existing protection efforts.
- Provide and enhance opportunities to participate in compatible wildlife-dependent recreation.
- Foster understanding and instill appreciation of the diversity and interconnectedness of fish, wildlife, and plants and their habitats.

In support of the Service’s mission, the National Wildlife Refuge System Improvement Act of 1997 specifically directs the Service to provide *for the conservation of fish, wildlife, and plants* on refuges; maintain the *biological integrity, diversity, and environmental health* and *monitor the status and trends of fish, wildlife, and plants* of the System. The Refuge System Improvement Act also provided additional direction and support for compatible wildlife-dependent public uses including hunting, fishing, wildlife observation, photography, environmental education, and interpretation.

Conboy Lake National Wildlife Refuge Purposes and Objectives:

Conboy Lake National Wildlife Refuge was established in 1964 by the Migratory Bird Commission. The Refuge was established “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” (Migratory Bird Conservation Act) and “...suitable for...(1) incidental fish and wildlife-oriented recreational development, (2)

the protection of natural resources, (3) the conservation of endangered species or threatened species...” (Refuge Recreation Act).

Conboy Lake National Wildlife Refuge goals are (Conboy Lake NWR Wildlife and Habitat Management Review, 2003):

1. To restore and enhance native wetland habitats for breeding and migrating waterfowl and other aquatic migratory birds.
2. To restore, enhance, and protect, where practicable, the native diversity of habitats and associated plants and animals of the Camas Prairie as well as the adjacent ponderosa pines and Douglas-fir zones.
3. To provide opportunities for compatible wildlife-dependent public uses including hunting, fishing, wildlife observation, photography, environmental education, and interpretation.

Conboy Lake NWR is administered by Mid-Columbia River National Wildlife Refuge Complex, Burbank, WA and the Refuge Manager is headquartered at Toppenish NWR, Toppenish, WA. In the spring of 2009, a career-seasonal maintenance worker will be stationed at Conboy Lake NWR. Typical staffing patterns include seasonal biologists, and visiting crews of maintenance and fire personnel.

The Mid-Columbia River National Wildlife Refuge Complex office, headquartered at 64 Maple Street, Burbank, WA, includes eight refuges: Conboy Lake, Toppenish, Columbia, McNary, Umatilla, Saddle Mountain, McKay Creek, Cold Springs, and Hanford Reach National Monument.

1.1 The Proposed Action

The Service is proposing to develop suitable facilities for refuge management at Conboy Lake National Wildlife Refuge. Identified facility needs include an office, shop, bunkhouse, residence, volunteer camper pads, and an improved public access entry road.

1.2 The Need and Purpose for the Proposed Action

The current office/residence structure at Conboy Lake NWR is a farmhouse in excess of 50 years old that has become deteriorated, unsafe, and obsolete. USFWS facilities inspectors found the building does not meet current structural building codes, National Electrical Code (NEC) standards, Americans with Disabilities Act (ADA) standards, National Fire Protection Association Life Safety Code (NFPA 101) standards, Safe Water Drinking Act standards, or Model Energy Code. Additional issues were identified with potential seismic dangers and vinyl asbestos tile (VAT) used as flooring material. For the safety of the agency staff and the general public, the building needs to meet code standards or be replaced.

The current shop and storage facilities structures are pole barns which are inadequate for the immediate and long term needs of the Refuge. These buildings do not meet federal security or safety requirements.

The current bunkhouse is an aging single-wide trailer located off-refuge in Glenwood. A new bunkhouse located on the Refuge near shop and office facilities is needed to provide

temporary housing for volunteers, fire fighters, and other Refuge staff. A new residence is needed to provide housing for one employee managing day-to-day maintenance operations on the Refuge. Consolidating these structures at one location will greatly improve construction and maintenance cost, staff efficiency and site security.

The current public access entry road is inadequate for heavy equipment traffic combined with vehicular use and needs to be widened with vehicle turn-outs and improved with additional surface material.

1.3 Public Involvement

Public response to the draft environmental assessment was substantive, resulting in feedback from at least 15% of the population and over 30% of the households of the local Glenwood area. The draft environmental assessment identified construction of new facilities at the Brumbaugh Tract as the preferred alternative.

Issues raised during the Draft EA are summarized in Appendix 7.4, along with Service responses to comments received on the draft environmental assessment.

2.0 Alternatives Including the Proposed Action

Several locations were assessed as possible facility locations.

2.1 Alternative A (Proposed Action)

The proposed action is to construct a 4,000-square-foot shop/office building, a 1,960-square-foot bunkhouse, a 1,600-square-foot employee residence and two volunteer camping (recreational vehicle) pads on Conboy Lake National Wildlife Refuge at the site of the current headquarters (Township 6N, Range 12E, Section 32). The proposed project will include improving the public access entrance road to the new facilities. Although the construction of a new equipment storage building will occur at a later phase, it is included in this alternative (Appendix 7.2, Proposed Construction Site).

2.2 Alternative B (No Action)

Alternative B is the no action alternative. Under this alternative the bunkhouse, shop/office, and employee residence would not be constructed. The residence/office could not be used due to not meeting ADA and life/safety standards. Bunkhouse facilities would continue at its current site in Glenwood. Refuge equipment would still continue to be stored in the existing unprotected and unsecured pole barn.

2.3 Alternative C

Alternative C is to construct the proposed shop/office, bunkhouse, and residence on the Brumbaugh Tract located in the north central part of the Refuge on the east side of the BZ-Glenwood Highway (Township 6N, Range 12E, Section 27).

Other Alternatives Considered but Eliminated from Further Study:

Rehabilitation of the existing residence/office.

Inspection of the existing residence/office by USFWS facility inspectors found that for the building to meet current building codes, life/safety codes, and ADA requirements the following work would need to be conducted:

- Remove and replace the entire electrical system to bring it up to NEC standards. This would require all walls to be opened up.
- Repair wood rot on areas from the house's first phase of construction.
- Repair irregularities and add studs in the roof rafters, stud walls, and floor joists to bring up to current building code standards.
- Remove all vinyl asbestos tile.
- Remove two masonry chimneys to meet seismic safety standards.
- Add secondary access points for the second floor to meet NFPA 101 standards.
- Replace the non-functioning furnace.
- Test and replace (as needed) all interior plumbing for age and lead based solder.
- Replace exterior siding damaged by woodpeckers.
- Retrofit entire building, including second floor to be made ADA accessible.

Estimated cost for this complete rehabilitation is estimated at \$650,000 - \$725,000. A lower cost option would be to demolish the first two phases of the house construction and rehabilitate the newest portions of the building is estimated to cost \$575,000. Removal of the existing residence, remediation of contaminated soils, and replacement with a facility that meets modern building codes is estimated to cost \$425,000 - \$475,000. Due to estimated additional cost of rehabilitation rather than replacement, this option was removed from consideration.

Rehabilitation and use of the Gamble House

Inspection of the existing residence/office by USFWS facility inspectors found that for the building to meet current building codes, life/safety codes, and ADA requirements the following work would need to be conducted:

- Removal of asbestos concrete tile siding and replacement.
- Strip the two original roof layers (rotted wood shake, composition shingle) and replacing the existing metal roof.
- Replace the entire electrical system to meet NEC standards.
- Remove the unreinforced masonry chimney.
- Retrofit building (entry and hallways) to make it ADA accessible.
- Install additional exterior steel doors to bedrooms to make it NFPA 101 compliant.

Estimated cost for this rehabilitation is estimated to exceed \$350,000. The current replacement value of the residence is \$249,000. Under, USFWS property standards this building would be replaced rather than rehabilitated for savings to the taxpayer.

In addition, it would be desirable for operational reasons for all Refuge facilities to be located together. This location does not have the space to encompass the desired facilities without increasing required fill to expand the existing pad and potentially filling wetlands and affecting wildlife habitat. Due to these site limitations, this alternative was removed from further consideration.

Rehabilitation and use of the Kelley Tract House for residence or bunkhouse.

Inspection of the existing residence/office by USFWS facility inspectors found that its condition rated to be “less than poor” and “hazardous to life,” after the identification of aspergillus mold in two of the rooms. The presence of aspergillus mold resulted in a recommendation of “demolition,” due to the danger to human life. Due to the facility inspector’s findings, this potential alternative was removed from further consideration.

3.0 Environmental Setting

Conboy Lake National Wildlife Refuge is located near the town of Glenwood, Washington in northwest Klickitat County. The Refuge encompasses approximately 3182 acres (58%) of the remaining 5450 acres of functional wetland system formed by the historic Camas Prairie, Conboy Lake, and Swan Lake; the remaining 42% is in private inholdings, creating a mosaic of refuge and private lands within the basin (Appendix 7.3, Conboy Lake NWR Land Status Map).

The 6,500 acre Refuge is a mosaic of approximately 4,500 acres of predominantly wetland habitat interspersed with upland grasslands, and 2,000 acres of forest. This wetland complex as well as lands surrounding the Refuge, north to the town of Glenwood is generally referred to as the Glenwood Valley.

The Refuge lies at an elevation of approximately 1,800 feet. The area receives an average of 30.7 inches of annual precipitation with much of it (66%) in the form of snowfall between November and February. Most of the Refuge is located on the valley bottom, a shallow, marshy wetland. The area is located within the Klickit River watershed. Outlet Creek and Bird Creek are the main stream courses carrying water to the Klickitat. Both streams have been rerouted to carry water from an extensive system of ditches in the Glenwood Valley originally constructed by settlers to drain land for agriculture.

Forested habitats occupy approximately 2,000 acres, located on the periphery of the Refuge, and in isolated patches within the wetland complex. Conboy Refuge forest stands can be roughly lumped into 5 categories; (1) Ponderosa pine forest, located on the western edge of the Refuge, and in slightly elevated locations within the wetland complex; (2), lodgepole pine stands, occupying wet sites adjacent to wetlands and along stream courses; (3) mixed conifer forest stands (Douglas-fir, grand fir, ponderosa pine, located on relatively moist, yet well-drained sites, primarily on northerly and easterly slopes; (4) Quaking Aspen stands located within the wetland complex, usually in association with lodgepole pine; and (5) Oregon White Oak woodlands, small patches on shallow soils, usually associated with surrounding mixed conifer forests.

Soil types mapped for upland forest types typically include Fanal, Kreft, Sedigal, and Kaiders Sandy Loams. Some ponderosa pine stands include Guler Stony Sandy Loam. Soil types in mixed conifer stands typically include Bezee Cobbly Loam, Panak Cobbly Loam, and Underwood Loam. Soils are mostly deep and well-drained, in volcanic ash and colluvium from basalt. Mixed lodgepole and ponderosa pine stands likely contain associated soil types such as Conboy or Grayland series, which are on old lake bottoms and are poorly drained.

The seasonal wet meadows occupy the elevation below the grassland, and acreage varies with the amount of rainfall and snow-melt each year. Introduced reed canary-grass is dominant, although native sedges and rushes are common in less disturbed sites. Cattails, bulrush, and smartweed as well as other native species dominate in areas managed for longer duration water regimes. Soil types for the Refuge's managed wetland complex lie under the historic Conboy lakebed and largely consist of soils of the Conboy and Grayland Series. These soils are characterized as poorly drained, slow permeability, very slow runoff, and having high water tables.

Upland grasslands provide a transition between the forested ridges and include bunchgrass and introduced species. Shrubs and forbs are an important part of the habitat, with bitterbrush and spirea being the dominant species. Areas previously used for agriculture are often dominated by meadow grass cultivars. These areas are underlain by Conboy, Sedigal, and Grayland soil series.

4.0 Affected Environment and Environmental Consequences

4.1 Alternative A (Preferred Alternative)

Proposed building site

The proposed building site is a relatively flat location overlooking the valley. It is not wooded except for a clump of ponderosa pines that will be outside of the proposed building site plans. The four acre footprint of new construction will overlay the two existing shops and a portion of the parking area. Access to the site is through the one-mile gravel road off the Trout Lake-Glenwood Highway (Appendix 7.2, Proposed Construction Site).

Hydrology and Soils

The soil of the area is characterized by 1 to 4 feet of silty sand overlaying cobbles with occasional boulders, gravel and sands to depths of 3.5 to 9 feet. Basalt bedrock underlies these materials (Geo Engineers Geotechnical report 2009).

Surface pits dug to the basalt bedrock did not encounter the water table. Well logs in the area obtained from the Washington Department of Ecology indicate that the static water table in the area ranges between roughly 40 and 80 feet below ground surface (Geo Engineers Geotechnical report 2009).

4.1.1 Wetland Habitat Impacts

The closest wetland is approximately 250 feet from the main construction site, therefore no impacts to wetlands are expected from the construction of the new facilities.

4.1.2 Upland Habitat Impacts

Typical vegetation at the proposed construction site consists of herbaceous species including common yarrow (*Achilea millefolium*), quackgrass (*Agropyron repens*), orchardgrass (*Dactylis glomerata*), meadow fescue (*Lolium pratense*) and littlepod false flax (*Camelina microcarpa*) with several ponderosa pine (*Pinus ponderosa*) trees

scattered throughout the site (Geotechnical Engineers wetland report, 2009). Much of the proposed building area has already been disturbed by previous activity from work in construction of the neighboring parking area and storage of equipment and material.

Construction of the shop/office, bunkhouse, and residence in this location will require the removal of several small ponderosa pine trees. The construction area is on the southeast edge of a 600+ acre tract of ponderosa forest managed by the Refuge with approximate stem densities of 400+ trees per acre. As the removal of as many as 15 small ponderosa pines represents less than 0.03% of the trees from that management unit, the impact to nesting or foraging bird species would be minimal.

Additionally, about four acres of grassland/forb habitat would be impacted by construction activities. Approximately 3 acres of land would be disturbed as a result of new construction. Demolition of existing buildings and site restoration would mitigate those losses by approximately one acre. The Refuge manages approximately 500 acres of upland grassland habitat; the potential area of disturbance represents 0.4% of that habitat type. Thus impacts to upland habitats are considered insignificant.

4.1.3 Wildlife Impacts

Removal of the ponderosa pines may directly affect breeding bird productivity for species nesting in ponderosa pines on the proposed building site such as yellow-rumped warbler or chipping sparrow. Direct impact to these species is anticipated to be negligible due to the low number of trees and their small size (see 5.1.2 above).

Displacement of foraging area for some birds and small mammal species also will occur from the filling of upland grassland habitat. Direct impact to these species is anticipated to be negligible due to small percentage of the local habitat that is disrupted (see 4.1.2 above).

This alternative may have some short-term temporary impacts on adjacent wildlife during the construction of the new shop/office, bunkhouse, residence, and removal and remediation of old structures. Disturbance from these activities could cause disruptions to feeding and/or nesting activities adjacent to the construction site. This disturbance would be reduced following construction, however some disturbance on the site would continue permanently due to activities of Refuge personnel possibly causing wildlife to be displaced. Disturbance levels would be similar to current activities.

Currently, there is human generated noise from activities at the Refuge headquarters and shops. The site is subject to regular use by visitors driving through, and using the parking/overlook area. During demolition and construction activities, the project site would be subjected to an increase in noise and activity. When construction is completed the noise and activity would return to a similar level to present conditions. Since disturbance to wildlife during construction will be of short duration and post-construction conditions on site will be much like existing conditions, impacts to wildlife from construction and operation of the new facilities are expected to be minor.

The maintenance building would use and properly store a small volume of hazardous chemicals, which includes paints, petroleum-based products, and solvents. All chemicals

used would be stored and disposed of according to their individual Material Safety Data Sheet requirements as designated by the Occupational Safety and Health Act. Vehicles and boats would be serviced on-site in the shop building using approved spill prevention procedures. By following these best management practices, impacts to wildlife, if any, are expected to be negligible.

4.1.4 Endangered and Threatened Species Impacts

No federally listed endangered or threatened species occur on or near the proposed building site. However, the Oregon spotted frog (*Rana pretiosa*) is a Candidate for listing under the Federal Endangered Species Act and is listed as endangered by the Washington Department of Fish and Wildlife and occurs in many of the wetlands on the Refuge.

Oregon spotted frogs occur in the spring-fed wetland bordering Camas Prairie, approximately 250 feet east of the proposed building site. Oregon spotted frogs are highly aquatic (McAllister and Leonard 1997) and generally do not use upland areas. Indirect effects may occur after construction due to disturbance, at lower levels than now occur due to the further distance from the wetlands than the existing structures. Construction of the buildings will likely not have a direct effect on spotted frogs. There is the potential for impacts to water quality from removal of existing structures and remediation activities. Barriers to sedimentation will be used during the construction and demolition activities to minimize these impacts, thus impacts to frogs, if any are expected to be minor or negligible.

The Mardon skipper butterfly (*Polites mardon*) which is also a federal candidate occurs on parts of Conboy Refuge. Mardon skippers depend on open, fescue grassland habitats for their survival (Potter et al. 1999). The butterfly has not been identified within the construction site. The loss of approximately one acre of grassland habitat may potentially have an effect on feeding or reproduction of Mardon skippers. Adults using the area may become displaced. Maintenance of facilities following construction such as mowing around buildings may cause disturbance and continued displacement in the facilities area. Given that low percentage of habitat disturbed (see 4.1.2 above) and that Mardon skippers have not been observed specifically using the area, any negative effects are not likely.

Several federal species of concern occur on the refuge at various times of the year and include:

Birds

olive-sided flycatcher (*Contopus cooperi*)

Peregrine falcon (*Buteo regalis*)

Mammals

long-eared myotis (*Myotis evotis*)

Townsend's big-eared bat (*Corynorhinus townsendii*)

Olive-sided flycatchers may nest in the pine trees on or adjacent to the construction site (Joe Engler pers. comm.). Removal of pine trees may

result in a loss of future nesting habitat indirectly affecting olive-sided flycatchers, however this would not be significant due to the small number of trees that would be removed (see 5.1.2 above). Peregrine falcons would not be affected. The effect on bats is unknown, but is expected to be minimal due to little or no impacts to suitable habitat.

Eight plants listed by the state of Washington occur on Conboy Lake Refuge and include:

Suksdorf's milk-vetch (*Astragalus pulsiferae* var. *suksdorfii*) – State Endangered
Kellogg's rush (*Juncus kelloggii*) – State Endangered
Rosy owl-clover (*Orthocarpus bracteosus*) – State Endangered
Oregon coyote-thistle (*Eryngium petiolatum*) – State Threatened
Dwarf rush (*Juncus hemiendytus* var. *hemiendytus*) – State Threatened
Long-bearded sego-lily (*Calochortus longebarbatus* var. *longebarbatus*) – State Sensitive
Pulsifer's monkey-flower (*Mimulus pulsiferae*) – State Sensitive

The proposed construction site does not contain any of the preferred habitats for these species, and no documentation of these species at or near the proposed site exists.

Sandhill cranes (*Grus canadensis*) which are listed as endangered by the State of Washington are present on the Refuge from March through October. In order to downlist to threatened, the sandhill crane recovery plan objectives are to achieve approximately 50 pairs in the Glenwood Valley (most of which would be on the Refuge), and 15 pairs outside the Glenwood Valley. Currently, the refuge contributes 23 pairs towards the goal of 50 in the Glenwood Valley (Jessica Stocking, pers. comm.).

A pair of cranes nested in the vicinity in 2008. The Washington Department of Fish and Wildlife recommends a 0.25 mile area around existing crane nests where disturbance should be eliminated or minimized. The distance to the 2008 nesting location from the preferred alternative site is 0.41 miles. Construction activities could cause cranes to be temporarily displaced from nearby nesting or foraging areas due to disturbance. Due to the distance to the nesting location and the relative abundance of nesting cranes in the area, the possible disruption to a single potential nesting area is not deemed to be a significant impact. Following construction, disturbance by Refuge personnel at the shop/office complex is anticipated to be the same as recent and historical use of the location. Overall, impacts to cranes on Conboy Refuge due to construction of an office/shop, bunkhouse, and residence would be minimal.

4.1.5 Public Use Impacts

The new construction will require realignment of the access road to the parking/overlook area, and will temporarily disrupt access to the current visitor parking/overlook area and to the Whitcomb/Cole Cabin. This disruption may include complete closure or limited access depending on construction activities. Access to the Willard Springs trail from the current office/residence would be disrupted during demolition and site rehabilitation.

Access to the trail would be limited to the trailhead on the entrance road. Future plans include extending the second trailhead to connect with the existing parking area/overlook.

The majority of travel to and from the Glenwood Valley lies along the BZ-Glenwood Highway and the Glenwood-Goldendale Highway. Visitors to the Refuge can find it confusing locating the Refuge Headquarters because it does not lie along these two major routes. In comparison to the other construction alternative (Brumbaugh tract), the existing HQ site is approximately four miles more distant from the town of Glenwood and not directly accessible off a major traffic route. Expected visitation to the preferred alternative location will continue at similar levels to the present.

This alternative will provide improved Refuge orientation and welcoming conditions for visitors. The entrance road will be improved with a new, more visible entrance sign and pullouts will be provided to facilitate recreational vehicle traffic. Additional signs will improve flow of visitor traffic to a visitor contact area with interpretive materials, including the trailhead. Interpretive materials and displays will be available in the visitor contact area to provide Refuge information and orient visitors.

4.1.6 Cultural Resources

A cultural resource, the Whitcomb-Cole cabin, has been identified within the boundaries of the Conboy Lake NWR headquarters site. The Whitcomb-Cole cabin is listed on the National Register of Historic Places and was moved to the Refuge headquarters in 1987. Consideration of the view shed and surrounding landscape have been included in the project design to reduce any impacts to this listed historic property as per Section 106 of the National Historic Preservation Act. A survey of the compound has been completed by the USFWS Region 1 Cultural Resources Team and a cultural clearance has been received. Consultation with the SHPO will be completed prior to project implementation.

4.1.7 Environmental Justice

This alternative would have no negative impact on low-income or minority populations. Potential benefits to the local economy include temporary employment in the form of construction jobs and contracting.

4.2 Alternative B (No Action alternative)

4.2.1 Wetland habitat Impacts

No construction would be conducted. Wetlands at the existing headquarters site could face minor disturbance by demolition of failing and unusable structures. Habitat could be indirectly impacted by impaired management capability due to lack of adequate facilities or equipment.

4.2.2 Upland Habitat Impacts

No direct impacts to upland habitat would occur as the construction project would not be initiated. Indirectly habitat could be impacted by impaired management capability due to lack of adequate facilities or equipment.

4.2.3 Wildlife Impacts

There would be no direct wildlife impacts. Wildlife populations could be indirectly impacted by impaired management capability due to lack of adequate facilities or equipment.

4.2.4 Endangered and Threatened Species Impacts

There would be no effect to any federal or state listed threatened or endangered species. Species populations could be indirectly impacted by impaired management capability due to lack of adequate facilities or equipment.

4.2.5 Public Use Impacts

Public use would be impaired as the Refuge would not have a central visitor contact station or adequate facilities to house on site personnel.

4.2.6 Cultural Resources

There would be no impacts to cultural resources from refuge operations but the lack of a gate on the access road and lack of on-site presence increases the potential for vandalism of the historic cabin.

4.2.7 Environmental Justice

This alternative would have no impact on low-income or minority populations.

4.2.8 Cumulative Impacts

Since the project would not be constructed under this alternative, there would be no cumulative impacts.

4.3 Alternative C (Brumbaugh Tract)

Proposed building site:

The proposed building site is within the Brumbaugh Tract and is primarily a flat grassland area. Several small temporary wetland depressions ranging in size from 0.06 to 0.3 acres in size are located in the immediate vicinity.

A semipermanent wetland lies further to the east, approximately 60 feet from the eastern edge of the building site. The vicinity of the building site also includes clumps of ponderosa pines. The building site is bordered on the west by the BZ-Glenwood Highway, on the north by open pasture land, and to the east and south by mature

ponderosa forest. The area has been recently grazed and an existing barn structure lies just to the south of the proposed building area.

Upland vegetation is characterized by birdsfoot trefoil (*Lotus denticulatus*), oxeye daisy (*Leucanthemum vulgare*), Kentucky bluegrass (*Poa pratensis*), white clover (*Trifolium repens*), hawksbeard (*Crepis occidentalis*) and ponderosa pine (*Pinus ponderosa*.) The wetland vegetation of the Category IV wetlands included Drummond's rush (*Juncus drummondi*), meadow foxtail (*Alopecurus pratensis*), and red fescue (*Festuca rubra*). The category III wetland vegetation also included Hardhack (*Spirea douglasii*), reed canarygrass (*Phalaris arundinacea*), colonial bentgrass (*Agrostis capillaries*), and cattail (*Typha latifolia*).

Hydrology and soils

The soil of the area is characterized by silt, sandy silt, silt loam, and sandy loam to depths of up to three feet. Though the water table was not encountered, soil characteristics indicated a high water at some portion of the year (Geo Engineers wetland delineation report 2008).

4.3.1 Wetland Habitat Impacts

In response to public comments from the draft EA, the USFWS retained GeoEngineers, Incorporated based in Portland, Oregon as professional wetland consultants. GeoEngineers biologists completed a wetland assessment on July 10, 2008, and visited the site on August 5, 2008, to conduct field investigations and delineate wetland features found within the site area limits. GeoEngineer's report concluded there are three non-jurisdictional wetlands, two jurisdictional wetlands and a jurisdictional roadside ditch located in the immediate vicinity of the proposed construction area. The three non-jurisdictional wetlands are isolated depressions with no outlets ranging in size from 0.005 to 0.05 acres. One of the jurisdictional wetlands (0.01 acres) is connected to the roadside ditch, which extends into Bird Creek. The second jurisdictional wetland continues offsite to the south and west as part of a much larger wetland complex that also extends to Bird Creek. The portion of this wetland located onsite is 1.97 acres. The portion of the jurisdictional roadside ditch located onsite is 0.19 acres. The total non-jurisdictional wetland acres located within the site is 0.095. The total jurisdictional wetland acres located within the site is 1.98.

According to the site plan for this alternative, a small (.005 acre) non-jurisdictional wetland would be filled to provide an adequate parking area. There will be minor impacts (less than .05 acre) to the roadside ditch jurisdictional wetland to accommodate site access. Based on GeoEngineer's initial discussions with the COE, it is expected that habitat conditions at the ditch crossings can be improved with appropriate project design measures that provide an overall increase in habitat functions and values, such as using an oversized culvert to accommodate the movement of organisms through the culvert. These measures and proposed buffer enhancement activities will be outlined in a Habitat Management Plan. This process will eliminate the need for a mitigation plan.

Of these wetlands, only .005 acres of Category IV seasonally flooded wetlands will be directly impacted by filling and 0.02 acres of jurisdictional (ditch) wetlands. Another approximately 2.07 acres of total wetlands in the area could be indirectly impacted by construction activities. Much of this acreage is taken up by a single 1.97

acreage Category III jurisdictional wetland that has recorded spotted frog breeding activity. Silt barriers to sedimentation will be used during the construction phase to minimize the impacts on these wetland areas. The potential loss of a single .005 acre wetland and possible impacts to up to 2.07 acres of adjoining wetlands is minimal given their presence in a mosaic of hundreds of acres of wetland parcels.

4.3.2 Upland Habitat Impacts

Construction of the shop/office, bunkhouse, and residence in this location will require the removal of approximately 12-15 Ponderosa pine trees. This would result in a permanent loss of potential nesting habitat for some individual birds at the building site. This area lies on the western edge of a 90 acre mature ponderosa pine forest, which is estimated to have 400+ stems per acre. The potential loss of 0.04% of the stems is deemed to be low impact.

Additionally, about 0.5-1 acre of grassland/forb habitat would be permanently lost. The Refuge manages approximately 500 acres of upland grassland habitat. The potential area of disturbance represents 0.2% of that habitat type.

4.3.3 Wildlife Impacts

Removal of ponderosa pines may affect breeding bird productivity for species nesting in ponderosa pines on the proposed building site such as yellow-rumped warbler or chipping sparrow. Displacement of some wildlife species also will occur from the filling of the small wetland areas and the loss of upland grassland/forb habitat.

This alternative may have some short-term temporary impacts on adjacent wildlife during the construction of the new shop/office, bunkhouse, and residence. Disturbance from these activities could cause disruptions to feeding and/or nesting activities adjacent to the construction site. This disturbance would be reduced following construction, however some disturbance on the site would continue permanently due to activities of refuge personnel possibly causing wildlife to be displaced.

4.3.4 Endangered and Threatened Species Impacts

No federally listed endangered or threatened species occur on or near the proposed building site. However, the Oregon spotted frog (*Rana pretiosa*) occurs in the large seasonal wetland approximately 65 feet east of the proposed building site (Joe Engler, pers. comm.). Oregon spotted frogs are highly aquatic (McAllister and Leonard 1997) and generally do not use upland areas. Construction of the buildings will likely not have a direct effect on spotted frogs even though an isolated temporary wetland will be filled. Because the wetland is small and goes dry early in the summer, it is unlikely that it supports spotted frogs. Indirect effects may occur after construction due to disturbance. There is the potential for impacts to water quality from construction activities and barriers to sedimentation will be used during the construction phase to minimize these impacts. Given the small percentage of potential habitat loss, the disturbance to spotted frog is appears to be minimal.

The Mardon skipper butterfly (*Polites mardon*) has not been identified within the construction site. The loss of approximately 0.5-1 acre of grassland habitat may

potentially have an effect on feeding or reproduction of Mardon skippers. Adults using the area may become displaced. Maintenance of facilities following construction such as mowing around buildings may cause disturbance and continued displacement in the facilities area. However, given that the construction area is relatively small and that Mardon skippers have not been observed specifically using the area, any negative effects would likely not be significant.

Several federal species of concern occur on the refuge at various times of the year and include:

Birds

olive-sided flycatcher (*Contopus cooperi*)
Peregrine falcon (*Buteo regalis*)

Mammals

long-eared myotis (*Myotis evotis*)
Townsend's big-eared bat (*Corynorhinus townsendii*)

Olive-sided flycatchers may nest in the pine trees on or adjacent to the construction site (Joe Engler, pers. comm.). Removal of pine trees may result in a loss of current and future nesting habitat directly and indirectly affecting olive-sided flycatchers. However, this impact would be minimal due to the small number of trees that would be removed. Peregrine falcons would not be affected. The effect on bats is unknown, but is expected to be minimal due to little or no impacts to suitable habitat.

Eight plants listed by the state of Washington occur on Conboy Lake Refuge and include:

Suksdorf's milk-vetch (*Astragalus pulsiferae* var. *suksdorfii*) – State Endangered
Kellogg's rush (*Juncus kelloggii*) – State Endangered
Rosy owl-clover (*Orthocarpus bracteosus*) – State Endangered
Oregon coyote-thistle (*Eryngium petiolatum*) – State Threatened
Dwarf rush (*Juncus hemiendytus* var. *hemiendytus*) – State Threatened
Long-bearded sego-lily (*Calochortus longebarbatus* var. *longebarbatus*)
State Sensitive
Pulsifer's monkey-flower (*Mimulus pulsiferae*) – State Sensitive

None of these plants occur in the proposed construction site.

Sandhill cranes (*Grus canadensis*) which are listed as endangered by the state of Washington are present on the refuge from March through October.

In 2006, a pair of cranes nested in a wetland to the south of the Brumbaugh tract boundary line (Jessica Stocking pers. comm.). The Washington Department of Fish and Wildlife recommends a 0.25 mile area around existing crane nests where disturbance should be eliminated or minimized.

A pair of cranes nested in the vicinity in 2007, however, the exact location of the nest is not known. A group of pine trees lies between the construction site and the previous nesting site. Maintaining this tree buffer may help to minimize disturbance to crane pairs using the area in the future. A crane pair and its colt was observed on one occasion in 2007 traveling through these pine trees and into the proposed construction site (Jessica Stocking pers. comm.). Sandhill cranes use portions of the Brumbaugh Tract for foraging (Joe Engler, pers. comm.). Construction at this site could result in the permanent loss of a small amount of crane foraging habitat. Cranes also forage in the fields west of the BZ-Glenwood Highway across from the proposed construction site.

Construction activities could cause cranes to be temporarily displaced from nearby foraging areas due to disturbance. Following construction, disturbance by refuge personnel at the shop/office complex could cause cranes to be displaced from the Brumbaugh tract and adjacent foraging area and to seek foraging habitat elsewhere. Overall, impacts to cranes on Conboy Refuge due to construction of an office/shop, bunkhouse, and residence would be low due to the amount of alternative foraging habitats and potential nesting areas.

In 2008, a pair of bald eagles (*Haliaeetus leucocephalus*) nested approximately 1300 feet southeast of the proposed area of construction on the Brumbaugh Tract. Nesting bald eagles are sensitive to disturbance near the nest. Bald eagles are no longer federally listed as threatened; however, the species is still protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The Bald and Golden Eagle Protection Act prohibits the Take of bald eagle. The definition of Take also includes disturb. Disturb is defined as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.” The new National Bald Eagle Management Guidelines (USFWS 2007) recommend a minimum buffer of 330 to 660 feet depending on whether the nest is visible from the area of activity. The nest is not visible from the area of construction activity as an area of trees approximately 400 feet wide is included within the distance from the nest and the proposed construction area. The guidelines also recommend that clearing, external construction, and landscaping between 330 feet and 660 feet should be done outside of the breeding season. It appears the nest used in 2008 blew down in the winter of 08-09. If the eagles return to the location in 2009, construction activities at the Brumbaugh Tract may cause minimal disturbance if undertaken during the breeding season.

Operation of the facilities by refuge personnel following construction may be a potential source of disturbance. Again, maintaining the existing tree buffer should eliminate or significantly reduce any potential disturbance. Refuge staff may need to monitor nest activities from a safe distance to determine nest status and success and assure that nesting eagles are not being disturbed. Overall this construction project would not have significant impacts on bald eagles on Conboy Lake NWR.

4.3.5 Public Use Impacts

The proposed construction site is part of the Brumbaugh property, formerly a privately owned tract purchased by The Nature Conservancy and donated to the Refuge. It is

likely that no public use existed prior to the property becoming part of the Refuge. After construction activities are completed, the shop office will be open to the public when staff is present. The remainder of the tract will likely remain closed to the public. The high visibility location will likely promote visitor contacts and increase awareness of the Refuge mission in both the visiting public and the local community. Public use could increase under this alternative due to higher visibility, proximity to town, and ease to locate, however, public use of the refuge would principally be shifted from the former headquarters site to this new site. Overall the effects of the anticipated changes in public use pattern do not represent a significant effect in the overall context of public use on the refuge.

4.3.6 Cultural Resources

A survey of the site was completed by the USFWS Region 1 Cultural Resources Team and a cultural clearance has been received. A cultural resource, the Whitcomb-Cole cabin, has been identified outside the boundaries of the proposed Brumbaugh site. Consultation with the SHPO was completed as per Section 106 of the National Historic Preservation Act.

4.3.7 Environmental Justice

This alternative would have no negative impact on low-income or minority populations. A possible positive effect may be the availability of short-term construction jobs to local residents.

4.4 Cumulative Impacts

Cumulative effects result from the incremental impact of the Preferred Alternative when added to other “past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions” (40 CFR 1508.7). The effects of an action may be insignificant when evaluated individually, but when added to other actions outside of the immediate project area may contribute cumulatively to environmental change. The scope for analysis of cumulative impacts is therefore larger than the immediate project area to more broadly consider the effects of other activities occurring within the adjacent landscape.

The Preferred Alternative proposes to construct new headquarters facilities on a site currently occupied by similar building facilities. Land use within the Glenwood Valley is currently comprised of agriculture and, to a lesser extent, commercial forestry activities. Land use within the valley, including areas outside the immediate project area will remain the same with the reasonable foreseeable future. Therefore, no cumulative effects will result from the Preferred Alternative.

5.0 List of Preparers

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6.0 References

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McAllister, K. R., and W. P. Leonard. 1997. Washington state status report for the Oregon Spotted Frog. Washington Department of Fish and Wildlife, Olympia, WA.

Potter, A., J. Fleckenstein, S. Richardson, and D. Hays. 1999. Washington state status report for the mardon skipper. Washington Department of Fish and Wildlife, Olympia, WA.

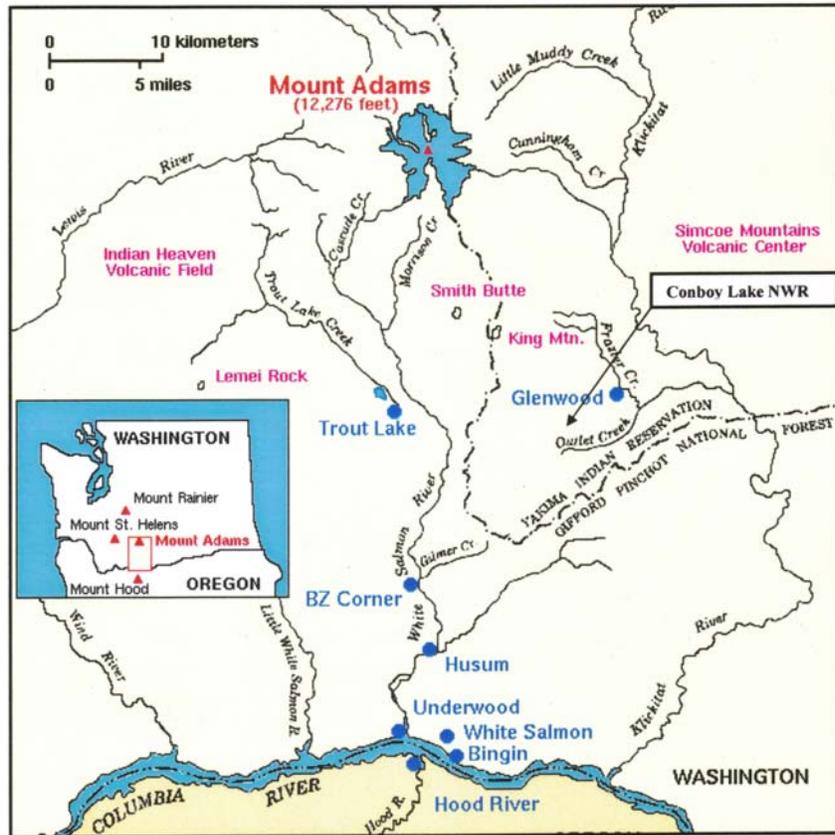
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Available at:

<http://www.fws.gov/migratorybirds/issues/BaldEagle/NationalBaldEagleManagementGuidelines.pdf>

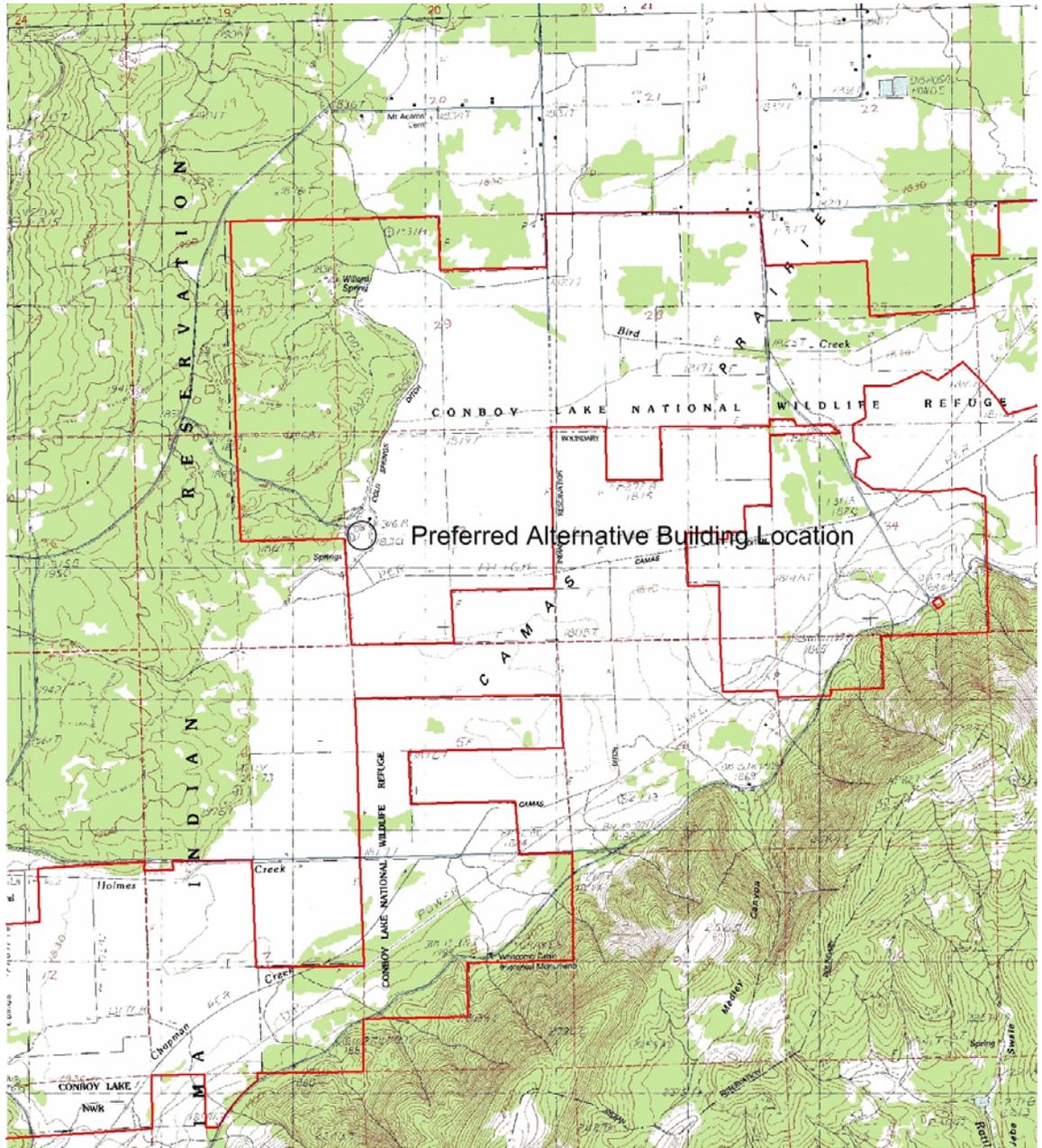
7.0 Appendices

7.1 Conboy Lake Refuge Location Map

Appendix 8.1 Conboy Lake Refuge Location Map.



7.2 Proposed Construction Site for Preferred Alternative

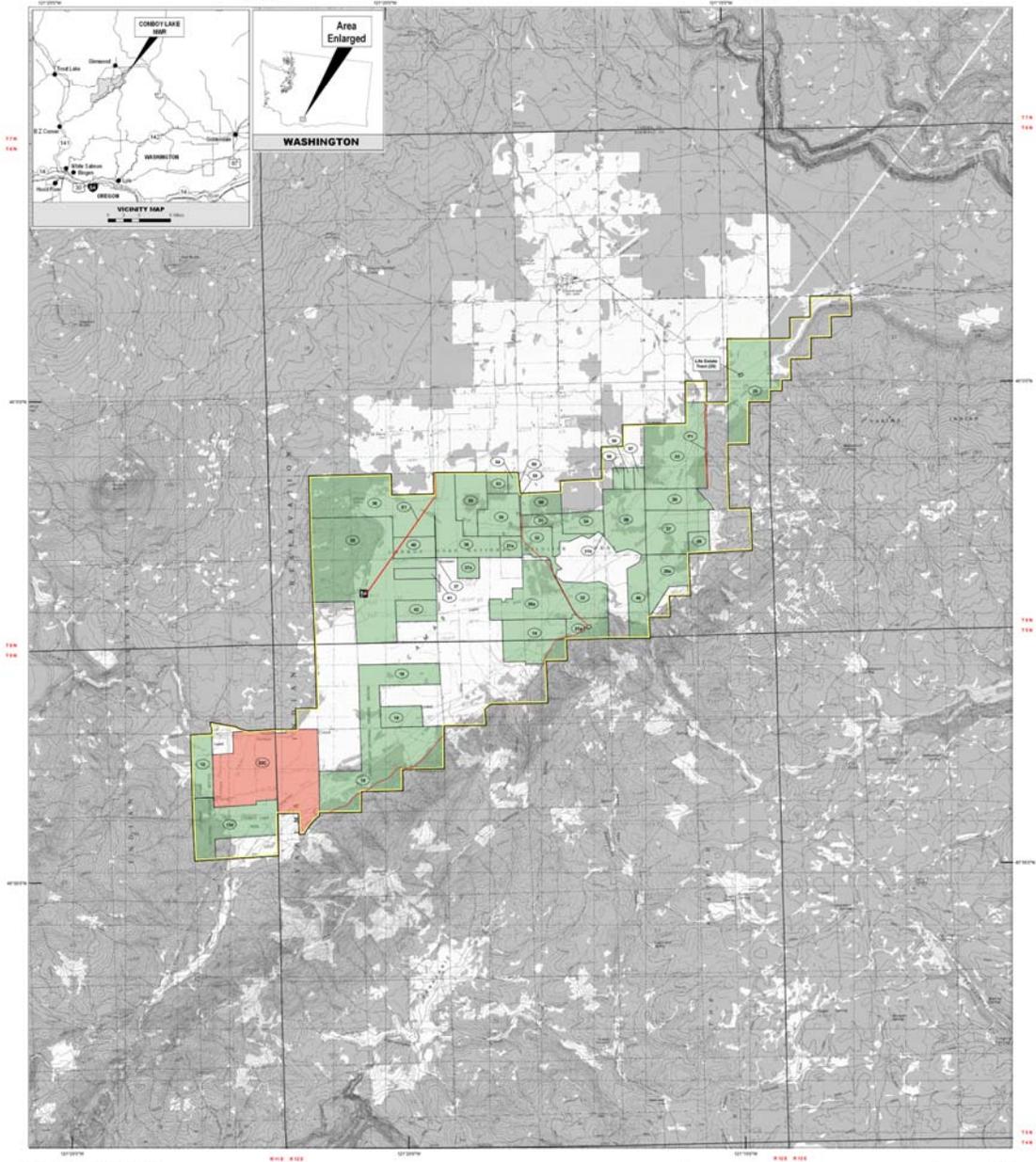


Appendix 7.3

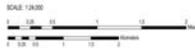


U.S. Fish & Wildlife Service
Conboy Lake National Wildlife Refuge
 Klickitat County, Washington

Land Status



Produced in the Division of Realty & Refuge Information
 Portland, Oregon
 Current to: 3/10/2015
 Revision: 02/01
 Modifier: B3/Barnes
 File: 03-2431-1.mxd



LEGEND:		Other FWS Facilities	
[Green Box] Fee Site	[Blue Box] BLM Boundary	[Wet Pond Symbol] Wet Pond	[Lake Trout Pond Symbol] Lake Trout Pond
[Red Box] Easement Land	[Yellow Line] Apparent Refuge Boundary		
[Blue Box] Agreement	[Red Line] Outports/FWS issued Permits		
[Blue Box] Agreement	[Black Line] Tract Boundary		



7.4 List of Federal Threatened and Endangered species for Klickitat County, WA

KLICKITAT COUNTY Updated 5/31/2007

LISTED

Endangered

Gray wolf (*Canis lupus*)

Threatened

Bald eagle (*Haliaeetus leucocephalus*)

Bull trout (*Salvelinus confluentus*) – Columbia River distinct population segment

Northern spotted owl (*Strix occidentalis caurina*)

Spiranthes diluvialis (Ute ladies'-tresses), plant

Designated

Critical habitat for the northern spotted owl

Critical habitat for the Columbia River distinct population segment of the bull trout

CANDIDATE

Fisher (*Martes pennanti*) - West Coast distinct population segment

Mardon Skipper (*Polites mardon*), butterfly

Oregon spotted frog (*Rana pretiosa*)

Yellow-billed cuckoo (*Coccyzus americanus*)

Artemisia campestris ssp. *borealis* var. *wormskioldii* (Northern wormwood), plant

SPECIES OF CONCERN

Animals

Burrowing owl (*Athene cunicularia*)

California floater (*Anodonta californiensis*), mussel

Ferruginous hawk (*Buteo regalis*)

Giant Columbia spire snail (*Fluminicola columbiana*)

Larch Mountain salamander (*Plethodon larselli*)

Loggerhead shrike (*Lanius ludovicianus*)

Long-eared myotis (*Myotis evotis*)

Northern goshawk (*Accipiter gentilis*)

Olive-sided flycatcher (*Contopus cooperi*)

Pacific lamprey (*Lampetra tridentata*)

Pacific Townsend's big-eared bat (*Corynorhinus townsendii townsendii*)

Pallid Townsend's big-eared bat (*Corynorhinus townsendii pallescens*)

Peregrine falcon (*Falco peregrinus*) (Delisted, monitor status)

Redband trout (*Onchrhynchus mykiss*)

7.5 Comments and Responses on the Draft EA.

The following issues were identified during public scoping of the proposed project. A summary response by the Service is included for each issue and all of the issues identified below have been addressed in detail in the revised EA.

Issue 1. There is concern the costs of building a new facility are excessive compared to the small investment needed to repair and maintain the existing structures, that the current shop and equipment storage building are adequate for storage and protection and that the current facilities are adequate for just one person.

The existing residence/office structure does not meet current building codes, life/safety codes, or Americans with Disabilities Act (ADA) requirements. Rehabilitation of the existing structure is estimated at \$650,000 - \$725,000. A lower cost option would be to demolish the first two phases of the house construction and rehabilitate the newest portions of the building is estimated to cost \$575,000. Replacement with a facility that meets modern building codes is estimated to cost \$425,000. Due to estimated additional cost of rehabilitation rather than replacement, this option was removed from consideration.

Issue 2. Concerns about wetland issues associated with the Brumbaugh tract alternative included: this alternative is a poor site due to water levels and saturated ground; the site of the new facility is a swamp; the entire site chosen for the new facility should be considered a wetland; there should be no filling of wetland habitat; the water table is approximately two feet below grade during the driest time of the year.

Placement of the office at the Brumbaugh tract would result in the fill of one small, non-jurisdictional wetland and have possible impact to a jurisdictional wetland. Implementing the preferred alternative (existing HQ site) will have less impact to wetland resources.

Issue 3. There is concern that three residences are currently available on the refuge for staff housing (volunteers or otherwise) in addition to the existing trailer.

The three available residences (Headquarters, Gamble, Kelley) do not meet current life/safety codes, building codes, or ADA requirements. Estimated rehabilitation and renovation costs of these structures is more expensive than replacement costs, so replacement is warranted.

Issue 4. There is concern the existing facilities may qualify as historic buildings.

USFWS Region 1 Cultural Resource Team concluded the headquarters does not constitute an important "historic property". The existing headquarters/office building was renovated and expanded in at least three stages, with the last occurring in the 1950's. This renovation has lowered the historic value of the building beyond consideration for state or federal listing.

Issue 5. There is concern the conflict between the access road to the current headquarters site and the existing nature trail is an inconvenience, not a serious conflict.

Under the preferred alternative some visitor services conflicts will continue to exist. The movement of heavy machinery in and out of the entrance road may conflict with visitor traffic use of the main trailhead or overlook given the width of the road. This type of conflict is not recommended by FWS visitor services guidelines. Future plans are to alleviate this issue with road improvements to the entrance road or trail realignment.

Issue 6. There is concern about the impact of human disturbance to the current eagle nest location and the loss of 10 to 15 ponderosa pines as a loss of potential nesting habitat for bald eagles at the site of the Brumbaugh tract alternative.

Under the current preferred alternative, no construction would occur at the Brumbaugh tract.

Issue 7. There is concern about impacts to elk habitat as elk have been observed in large numbers using the small wetlands located in the Brumbaugh tract alternative site.

Under the current preferred alternative, no construction would occur at the Brumbaugh tract.

Issue 8. There is concern about the lack of an intensive survey to determine the presence of Mardon skippers and the long-bearded sego-lily at the site of the Brumbaugh tract alternative.

Under the current preferred alternative, no construction would occur at the Brumbaugh tract.

Issue 9. There is concern about the loss of sandhill crane foraging habitat since crane have been observed using the site of the Brumbaugh tract alternative.

Under the current preferred alternative, no construction would occur at the Brumbaugh tract.

Issue 10. There is a concern the justification provided to the Migratory Bird Conservation Commission for purchasing the Gamble house was to provide additional work space and housing for staff, and volunteers.

Regardless of the original justification, the Gamble house does not meet current building codes, life/safety codes, ADA requirements, or federal standards for a bunkhouse. Estimated cost for renovation/rehabilitation is estimated to exceed \$350,000. The current replacement value of the residence is \$249,000. Under, USFWS property standards this building would be replaced rather than rehabilitated for savings to the taxpayer.

Issue 11. There is concern about a source for domestic water and the cost of developing a sewage system in the high water table at the site of the Brumbaugh tract alternative.

Under the current preferred alternative, no construction would occur at the Brumbaugh tract.

Issue 12. There is concern the Service is abandoning its responsibility to provide adequate protection to the Whitcomb/Cole hewn log house, a National Register of Historic Place.

Under the current preferred alternative, the headquarters would remain at the same location, providing a continued presence near the Whitcomb/Cole cabin.

Issue 13. There is concern the development should have been initiated as part of the Comprehensive Conservation Plan process.

The replacement of these buildings is considered to be a normal management activity, fully within the scope of existing and expected future management of the Refuge.

Issue 14. There is concern about the cold wind that passes all winter long through the site of the Brumbaugh tract, as this is the reason no one has ever lived at this location.

Under the current preferred alternative, no construction would occur at the Brumbaugh tract.

Issue 15. There are concerns about the chosen venue for public comments including: a Short comment period; notice of comment period placed in only one newspaper; the EA should have been mailed to every resident in Glenwood; the EA should have placed in the post office; there was an attempt to make the project happen without meeting the required public involvement process.

The comment period was advertised in the Goldendale Sentinel on June 19. While there is no “standard” for the duration of a comment period on a draft Environmental Assessment, the comment period was open until July 5, a period of 16 days and comments were accepted well after the official close of the comment period. The EA has been revised to address all comments received on the draft document and the revised EA will be made available for public inspection prior to project initiation.

