



Oregon Coordinated Aquatic Bird Monitoring:  
Description of Important Aquatic Bird Site



## Cold Springs National Wildlife Refuge

BCS number: 48-7

### Site description author(s)

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### Site location (UTM)

NAD 83, Zone: 11, Easting: 333244, Northing: 5081169

### General description

“The 3,117 acres of this refuge include and surround the 1,517-acre Cold Springs Reservoir. The remainder of the refuge consists of marsh, grasslands, sagebrush, and trees. During mid- to late summer, as the reservoir level drops, vegetation grows in the formerly shallow-water lakebed” (National Audubon Society 2008).

A riparian component of willow and cottonwood provides refuge for birds, mammals, and other animals in this unique desert environment. Located in Umatilla County near Hermiston, Oregon, the refuge was established in 1909 as a preserve and breeding ground for native birds.

“Management has broadened to include conservation and restoration of native habitat and species characteristic to this desert ecosystem. Refuge wetlands support large numbers of wintering waterfowl while adjacent riparian habitat supports a rich abundance of songbirds and healthy populations of western mule deer and desert elk. Refuge visitors have easy access to this popular refuge for hunting, fishing, and wildlife watching” (USFWS Cold Springs NWR website).

### Boundaries and ownership

*Boundaries:* Cold Springs NWR is located east of Hermiston, Oregon, and approximately 5 miles south of the Columbia River.

*Ownership:* Cold Springs NWR is an overlay refuge – the Bureau of Reclamation manages the water resources, while the USFWS manages non-lake, upland portions of the refuge. See Figure 1 for the BLM Prineville District ownership map.

### Water levels

The reservoir fills up in fall and winter, and is drawn down in spring and summer for irrigation. It is not known to go dry, but may be lowered to ~30% of its high winter volume. The Memorial Marsh portion of the refuge is flooded in fall and winter, and drawn down in spring and summer to encourage the growth of moist soil plants for waterfowl management.

### Focal species use and timing

<b>Focal Guild/Species</b>	<b>Wintering</b>	<b>Breeding</b>	<b>Migration</b>
Secretive Marsh Birds*	Unknown	Maybe	Unknown
Colonial Nesting Waterbirds	Present	Present	Present
Ground-based Aquatic Birds			
Migrating Shorebirds	Present	Present	Present
American White Pelican	Present	Present – not breeding	Present
Barrow’s Goldeneye	Maybe	Absent	Maybe, low numbers
Black-necked Stilt	Absent	Present	Present
Bufflehead	Present	Absent	Present
Dusky Canada Goose	Unknown	Absent	Unknown
Franklin’s Gull	Maybe	Absent	Maybe
Greater Sandhill Crane	Maybe	Absent	Maybe
Long-billed Curlew	Absent	Present –not known to breed	Probably
Snowy Egret	Absent	Absent	Absent
Red-Necked Grebe	Present	Absent	Present
Upland Sandpiper	Absent	Absent	Absent
Western Snowy Plover	Absent	Absent	Absent
Yellow Rail	Absent	Absent	Absent
Bald eagle	Present		
Waterfowl (tundra swan, white-fronted goose)	Present in large numbers		

\*The focal species for Oregon’s secretive marsh bird monitoring are PBGR, LEBI, AMBI, VIRA, SORA, YERA.

### Location of Type 1 and 2 habitat within the site\*

Functional Group	Type 1 Habitat	Type 2 Habitat
Ground-based Aquatic Birds		
Secretive Marsh Birds	Tall emergent vegetation, Memorial Marsh (maybe)	Unknown
Colonial Nesters	Hérons, trees in riparian area along a creek that feeds reservoir	Unknown
Migrating Shorebirds	Lake shoreline, Memorial Marsh	Uplands during migration/breeding (grassland habitat)

\*See Figure 2 for USFWS National Wetlands Inventory (2008) layer in Google Earth (2008).

### Access to Type 1 and Type 2 habitats

On the lake, surveys can only be done with a boat (non-motorized or electric-motor). Lake shore areas are accessible only by foot, however flooded conditions and dense vegetation could inhibit access to these areas. It would be best to contact the refuge before planning a survey, as they can give permission for access and suggest options for access. See Figure 3 for general road view of Cold Springs National Wildlife Refuge (Google Map 2009).

### Audibility/visibility of focal species

There is no noise from highways or roads. Vegetation can be very dense, which may obstruct audibility/visibility of birds.

### Conservation issues

The continuous draw down of water during spring and summer to ~ 30% of high winter volume.

### Conservation measures taken, in progress, or proposed

Implemented conservation measures include active management of Memorial Marsh, and restoration plantings in riparian (willow, cottonwood) and upland areas (native grasses).

### Past and current surveys

Periodic aerial surveys once per month in November, December, and January; mid-winter Bald Eagle surveys; participation in flyway-wide White-fronted Goose surveys (September); constant effort mist netting for passerines in riparian areas in fall (~1996-1997 by a graduate student at the University Idaho with volunteers and technicians).

**Potential survey methods**

Useful potential surveys would include breeding passerines; MAPS station and point counts, colonial nesting birds (some informal work has been done, and formal surveys are needed), and secretive marsh birds (especially an investigation of whether active management in Memorial Marsh has any impact on this guild).

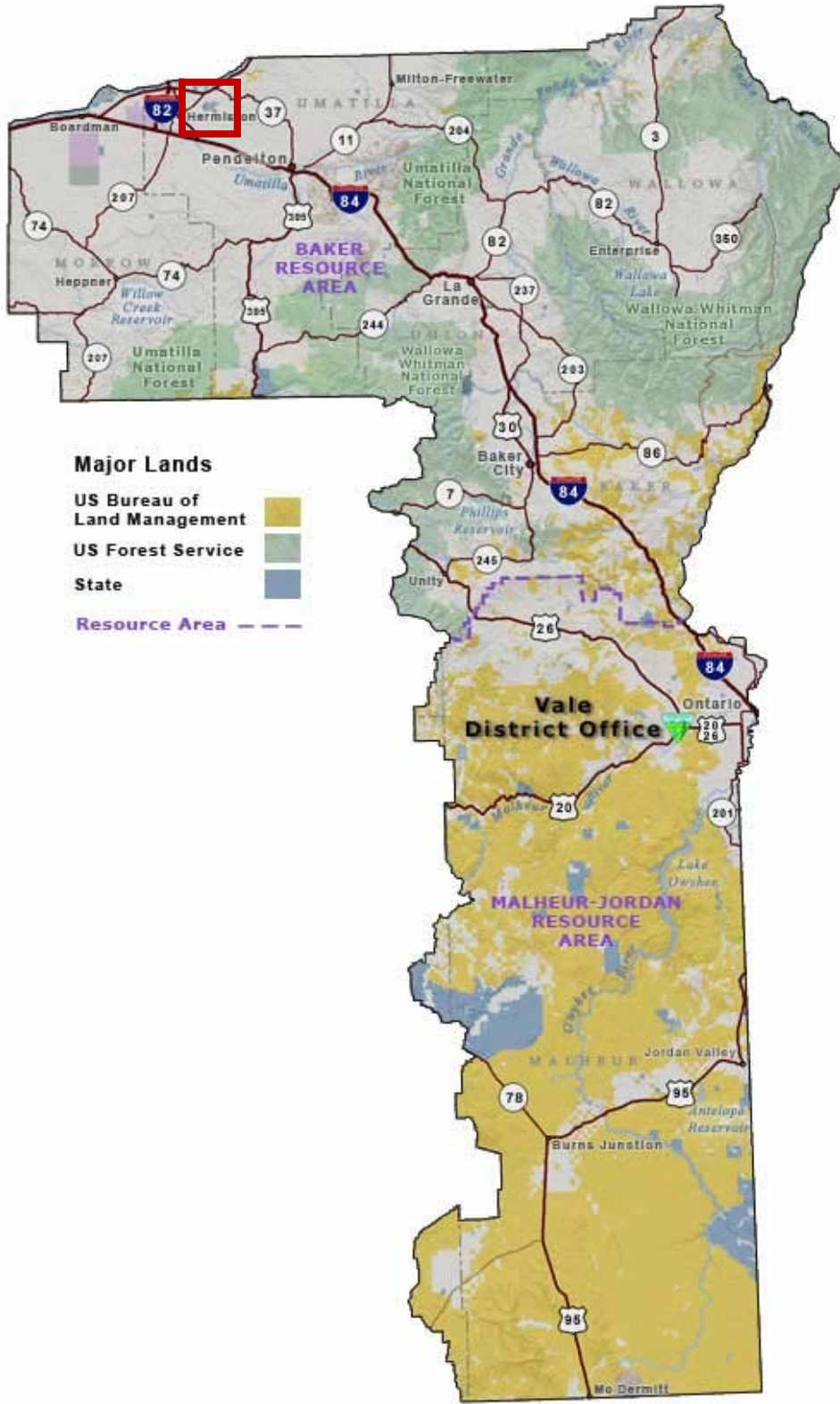
Manning and Hartley (2006) suggest that a ground-based survey for all aquatic birds, as well as a migrating shorebird survey, would be valuable and might be able to be conducted by volunteers.

**Potential pilot studies**

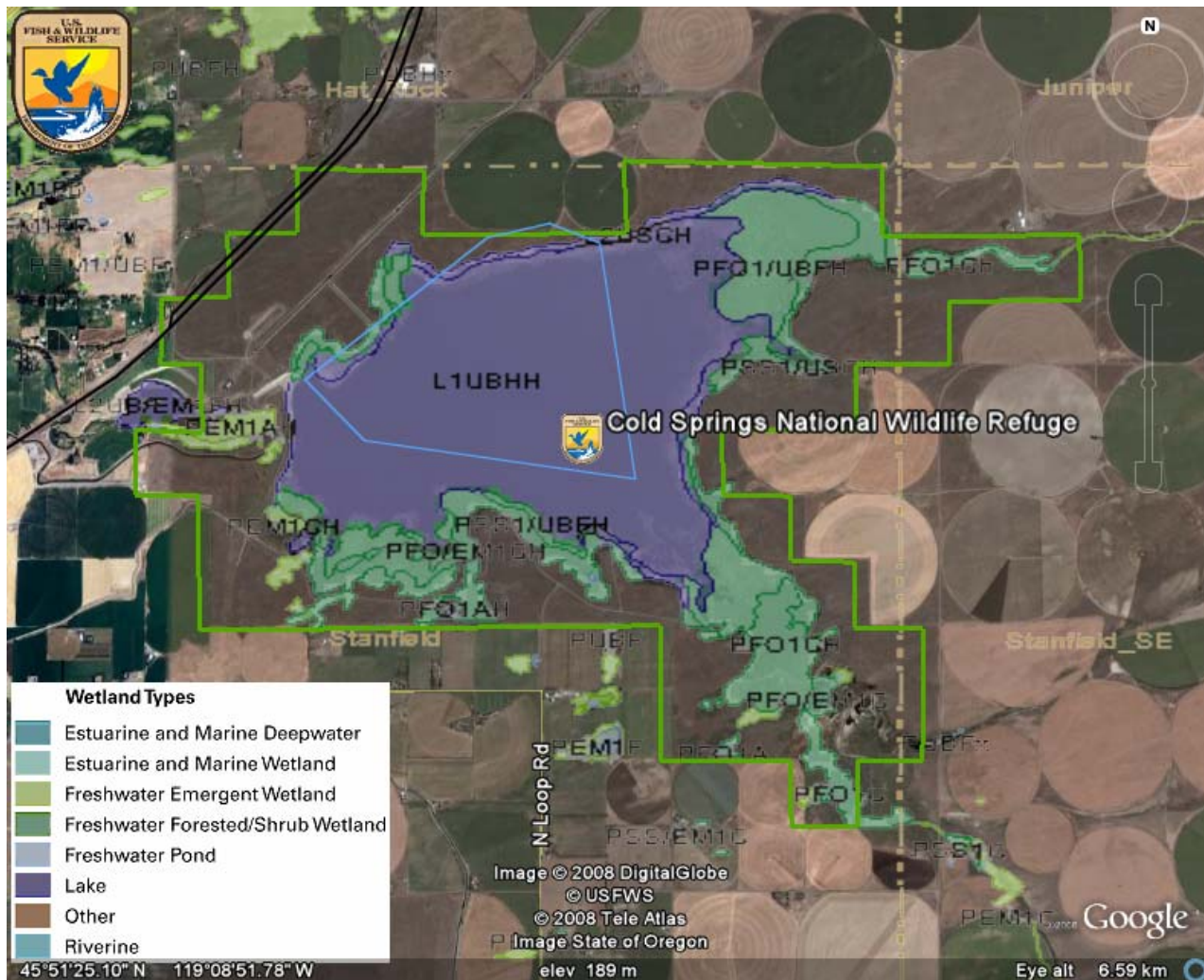
## Literature cited

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**Figure 1:** BLM Vale District ownership map. The red box indicates Cold Springs National Wildlife Refuge.



**Figure 2:** Google Earth (2008) map of Cold Springs National Wildlife Refuge with the USFWS National Wetlands Inventory (2008) layer.



Description updated 4/29/2010

**Figure 3:** Google Map (2009) road view of Cold Springs National Wildlife Refuge.



Description updated 4/29/2010