



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



## Hart Lake

BCS number: 48-14

### Site description author(s)

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### Site location (UTM)

Datum: NAD 83, Zone: 11, Easting: 0265777, Northing: 4699280

### Boundaries and ownership

*Boundaries:* Hart Lake is located 2 miles East of Plush, Oregon

*Ownership:* Hart Lake is bordered on the north by the Bureau of Land Management (BLM) Warner Wetlands Area of Critical Environmental Concern, on the northeastern side by the Hart Mountain National Antelope Refuge (USFWS), and the majority of the lake by private lands. The 10,200 acre lakebed (below high water line) is owned by the State of Oregon. See Figure 1 for BLM Lakeview District ownership map.

### Water levels

Hart Lake water levels are dependent upon snow pack in the Warner Mountains and spring runoff. When snow pack exceeds 120%, there is usually enough runoff to maintain Hart Lake water levels. Agricultural irrigation and evaporation are the two largest factors in lowering lake levels. Approximately 2 feet of the lake is drawn down each year by irrigation and another 2 feet in evaporation of the 6 to 8 feet at full.

**Focal species use and timing**

Secretive marsh birds, colonial nesters, ground based aquatic birds, and migrating shorebirds have been observed each spring and summer on Hart Lake.

<b>Focal Guild/Species</b>	<b>Wintering</b>	<b>Breeding</b>	<b>Migration</b>
Secretive Marsh Birds*			
Colonial Nesting Waterbirds			
Ground-based Aquatic Birds			
Migrating Shorebirds			
American White Pelican			
Barrow's Goldeneye			
Black-necked Stilt			
Bufflehead			
Dusky Canada Goose			
Franklin's Gull			
Greater Sandhill Crane			
Long-billed Curlew			
Snowy Egret			
Red-Necked Grebe			
Upland Sandpiper			
Western Snowy Plover			
Yellow Rail			

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

Focal species suspected to occur at Hart Lake are:

- American White Pelican
- Black-necked Stilt
- Bufflehead
- Long-billed Curlew
- Pied-billed Grebe
- Sandhill Crane
- Snowy Egret
- Yellow Rail

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

Functional Group	Type 1 Habitat	Type 2 Habitat
Ground Based Aquatic Birds	Perimeter of Lake	Wet meadows
Secretive Marsh Birds	Emergent Vegetation	n/a
Colonial Nesters	Emergent Vegetation, open water	Perimeter of Lake
Migrating Shorebirds	shoreline	Perimeter of Lake

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

Hart Lake is comprised of 10,200 acres of wetland habitat of which approximately 2,200 acres are Palustrine emergent, 800 acres are unconsolidated Palustrine, and 7,200 acres are open water Lacustrine habitat. The emergent habitat is comprised of Baltic rush, bulrush, cattails, and sedges. The Type I habitat is 2,200 acres of emergent Palustrine shoreline and the Type II habitat is 8,000 acres of unconsolidated bottom and open water habitat.

### Access to the Type 1 and 2 habitat and visibility/audibility of birds

The only public land access (hiking, vehicle, and boat) on Hart Lake is an undeveloped boat ramp on the northeastern corner, County Road 3-12 right-of-way on the northern end of the lake, and 2 to 3 miles of refuge property on the East side of the lake. The public/private fringe areas can be surveyed with a spotting scope or boat. During high water years, the lake can be accessed entirely by motorboat.

The area is large (10,200 acres), containing large areas of open water with very little emergent shoreline. Approximately 1 year in 10 the entire lake dries up so surveys would not be needed. Audibility is only a problem directly adjacent to loud irrigation pumps around the perimeter of the lake.

See Figure 3 for general road access to the area (Google Map 2009).

### Past and current surveys

Waterfowl brood counts have been conducted on the north and east side in the 1990's and into the 2000's with incidental sightings of secretive marsh birds noted. The 15,000 acre Crump Lake immediately to the south is monitored by ODFW and TNC for Pelican Island (pelican, gull, and nesting cormorants). Also, the new Caspian Tern Nesting Island is being weekly monitored by the United States Corps of Engineers (USCOE).

### Conservation issues

- Noxious weeds
- Mainly private land ownership

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

- Coordinated noxious weed management plan

### **Potential survey methods**

*a. Description:* The northeastern quarter of the lake could be surveyed by 4WD vehicle and hiking. The lower three-fourths of the lake would be best surveyed by boat since vehicular and foot access is restricted across private lands. Our waterfowl surveys usually begin in May but marsh bird surveys could possibly commence earlier. The majority of the lake could be surveyed by boat.

*b. Selection Bias:* The southern end of the lake around the narrows is thickly vegetated yet the majority of the birds could probably be counted.

*c. Measurement error and bias:* One could estimate total numbers through extrapolation of acres of similar habitat surveyed.

Manning and Hartley (2006) suggest that a ground-based survey for all aquatic birds, a secretive marshbird survey, a migrating shorebird survey, and a survey of breeding colonies would be valuable. These surveys would probably need to be conducted by staff.

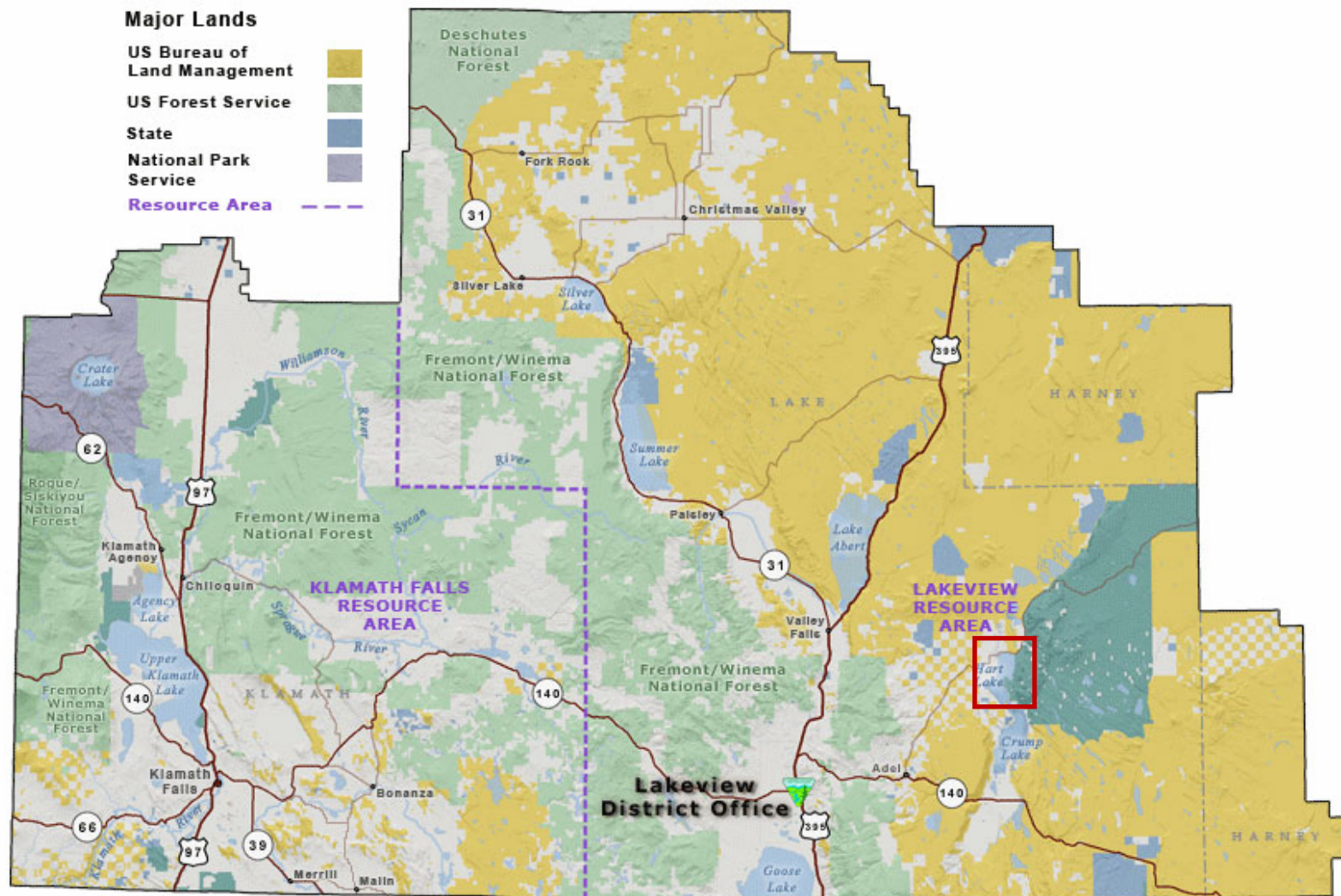
### **Potential pilot studies**

- Secretive marsh bird survey

## Literature cited

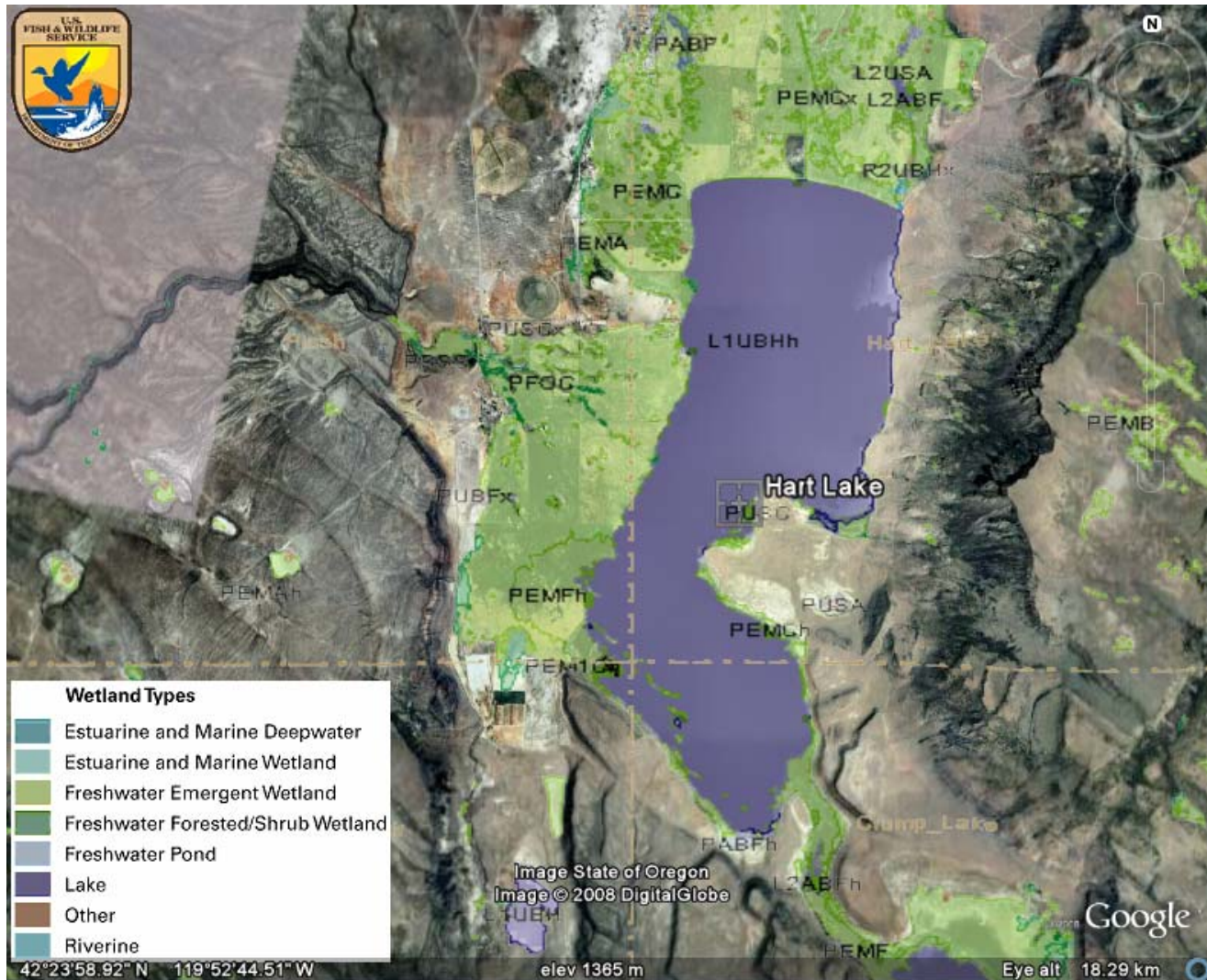
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**Figure 1:** BLM Lakeview District ownership map. The red box indicates Hart Lake.





**Figure 2:** Google Earth (2008) map of Hart Lake with the USFWS National Wetlands Inventory (2008) layer.



**Figure 3:** Google Map (2009) road view of Hart Lake.

