



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



Ladd Marsh Wildlife Area

BCS number: 49-3

Site description author

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Primary contact for this site

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Site location (UTM)

Datum: NAD 83, Zone: 11, Easting: 418894,
Northing: 5012674

Boundaries and ownership

Boundaries: Ladd Marsh Wildlife Area is bounded generally by Hot Lake Lane to the south; private land ½ mile east of Peach Road on the east; private land south of Airport Road, the City of La Grande wastewater treatment facility and private land adjacent to Foothill Road on the north; and private land on Glass Hill to the west. The wildlife area is crossed by an interstate highway, a state highway, 5 county roads and a Union Pacific Railroad track.

Ownership: Seventy-eight percent or 4689 acres is owned by Oregon Department of Fish and Wildlife, 14%, or 850 acres is owned by the Rocky Mountain Elk Foundation and 8% or 480 acres is owned by the City of La Grande.



Water levels

Water levels on Ladd Marsh are a function of water availability based on snow melt and rainfall combined with management of over 70 water control structures on the area. The area also receives treated wastewater from the City of La Grande, Oregon. Treated city water is limited during the hot summer months when evaporation is high and the treatment plant must maintain minimum depths for bio-remediation. Water levels on the area are managed for vegetation management and control, waterfowl nesting and brood cover, shorebird habitat and other management needs. Therefore, an area that is quality marsh bird habitat one year may be dry the next year. Further, spring water depth is not

entirely within management control as some areas flood from Ladd Creek and seasonal springs. Thus, water depths may exceed optimum for marsh birds in some areas.

Water levels are highest in the spring and decline throughout the summer until autumn rains begin to fill the wetlands again. By the end of summer, Ladd Creek is usually dry and many of the wetland cells also generally dry up.

Focal species use and timing

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

* Marsh birds generally absent but 1 or more VIRA frequently observed during Christmas Bird Count (CBC) in areas of warm springs.

** American white pelicans are present during the breeding season but are not known to nest on Ladd Marsh. Those present are assumed to be non-breeding birds.

Location of Type 1 and 2 habitat within the site

Guild	Type 1 Habitat	Type 2 Habitat
Secretive Marsh Birds	Emergent wetland and pond edges	Flooded meadows
Ground-based Aquatic Birds	Emergent wetland	Unknown
Migrating Shorebirds	Mud flats and edges of low-water ponds	Shallow shorelines
Colonial Nesters	Robust emergent vegetation	unknown

*See Figure 1 for USFWS National Wetlands Inventory (2008) layer in Google Earth (2008).

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

Access to many of the survey stations is via earthen dikes. These dikes become impassible following rain. Some stations are reached on foot and require wading through uneven flooded meadows or marsh. The wildlife area is closed to public access; surveys are currently conducted by Oregon Department of Fish and Wildlife (ODFW) staff.

Visibility is limited due to dense emergent vegetation at many of the stations. Audibility can be intermittently challenging due to the proximity of a state highway and a busy railroad track.

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

Past and current surveys

Secretive Marsh Bird surveys have been conducted following the North American Marsh Bird Monitoring Protocol for three seasons (2006 – 2008). Surveys were completed according to the protocol of the National Marsh Bird Monitoring Project (Courtney Conway) with one to three replicates at each station depending on available time and weather (i.e., weather was cold and rainy in 2008 so some stations were surveyed twice, others 3 times).

Previous data on secretive marsh birds on the area is limited to marsh birds observed during monthly all-bird surveys or incidental observations, neither of which is a reliable indicator of marsh bird presence/absence, abundance, or trends.

See Figure 3 for Ladd Marsh Wildlife Area Secretive Marsh Bird Surveys conducted.

Conservation issues

There is limited water availability and fluctuating water levels, which are not entirely within our control.

Conservation measures taken, in progress, or proposed

The Nature Conservancy has purchased a 308-acre parcel immediately north of the wildlife area's Water Board Tract and worked with ODFW, NRCS and Ducks Unlimited to secure funding to return Ladd Creek to its historic channel and restore the property to seasonally flooded, shallow wetlands. The conservancy purchased a 160-acre property about 7 miles to the northeast of Ladd Marsh that includes Conley Lake, a seasonal lake that provides one of the valley's largest blocks of remaining native habitat and receives heavy use by migrating white-fronted geese and other waterfowl. ODFW is also working with NRCS and Ducks Unlimited to restore 200 acres of wetlands on its existing ownership under the Wetlands Reserve Program. (Oregon Habitat Joint Venture).

Other conservation measures include:

- State ownership and management of the land will conserve the habitat.
- Large habitat restoration projects since 2000 have converted 1500 acres of agricultural land to wetlands.
- Ongoing annual vegetation management including chemical and mechanical control to open up and reduce density of robust emergent vegetation in specific areas.

Potential survey methods

a. Description: The North American Marsh Bird Monitoring Protocol works well at this site. Although some areas have issues with road and/or railroad noise, this can be dealt with by timing surveys for low traffic periods or by waiting for a train to pass. On occasion, a train will pass during the survey playback but it generally affects only a portion of the 10 minute survey. Given visibility issues, acoustic lure surveys are the only practical method.

b. Selection Bias: Site selection bias can be introduced by selecting only sites with “quality” habitat. However, the bias would eventually be compensated for as the habitat quality changes with maturation of vegetation as well as water levels and vegetation management activities. Accessibility for surveys introduces another source of selection bias if stations need to be accessed by vehicle.

The currently established stations for marsh bird monitoring were selected by overlaying a 400 meter grid onto an aerial photo of the wildlife area and numbering all grid junctions within potential marsh bird habitat. A random number generator was used to select 50 of those numbers. Selected sites within the wetlands were moved to the nearest road, dike or shoreline to permit survey access. If more time were available for surveys, accessibility bias could be avoided by allowing stations to be within the wetlands.

c. Measurement error and bias are both introduced by the hearing acuity and call identification skill of the surveyors. The distance of the calling bird from the listener can be difficult to estimate and even very rough estimates require some experience. Some surveyors may hear the low range calls of American bittern very easily while others will hear only those bitterns that are close by. Multiple-observer surveys can help minimize this bias.

Error can also be caused by moving birds. Many secretive marsh birds will approach the speaker during call playback and afterward but, if they are not visually observed, may be recorded as more than one bird.

Manning and Hartley (2006) suggest that a migrating shorebird survey and a survey of breeding colonies would be valuable, and would probably need to be conducted by staff.

Potential pilot studies

Literature cited

Google Earth version 4.3. 2008. Image: Ladd Marsh Wildlife Area, Oregon. Accessed October 10, 2008.

Google Map. 2009. Map of Ladd Marsh Wildlife Area, Oregon.
<http://maps.google.com/maps?ll=45.261151,-118.01561&z=14&t=h&hl=en>
Accessed March 20, 2009.

Manning, Ann and Laura Hartley. March 2006. Important sites for aquatic birds in Eastern Oregon. Version 2.0.

Oregon Habitat Joint Venture. Blue Mountain Projects: Ladd Marsh.
<http://www.ohjv.org/projects/bluemt.html#ladd> . Accessed December 3, 2008.

U. S. Fish and Wildlife Service (USFWS). 2008. National Wetlands Inventory website.
U. S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.
<http://www.fws.gov/wetlands/>. Accessed October 23, 2008.

Figure 1: Google Earth (2008) map of Ladd Marsh Wildlife Area with the USFWS National Wetlands Inventory (2008) layer.

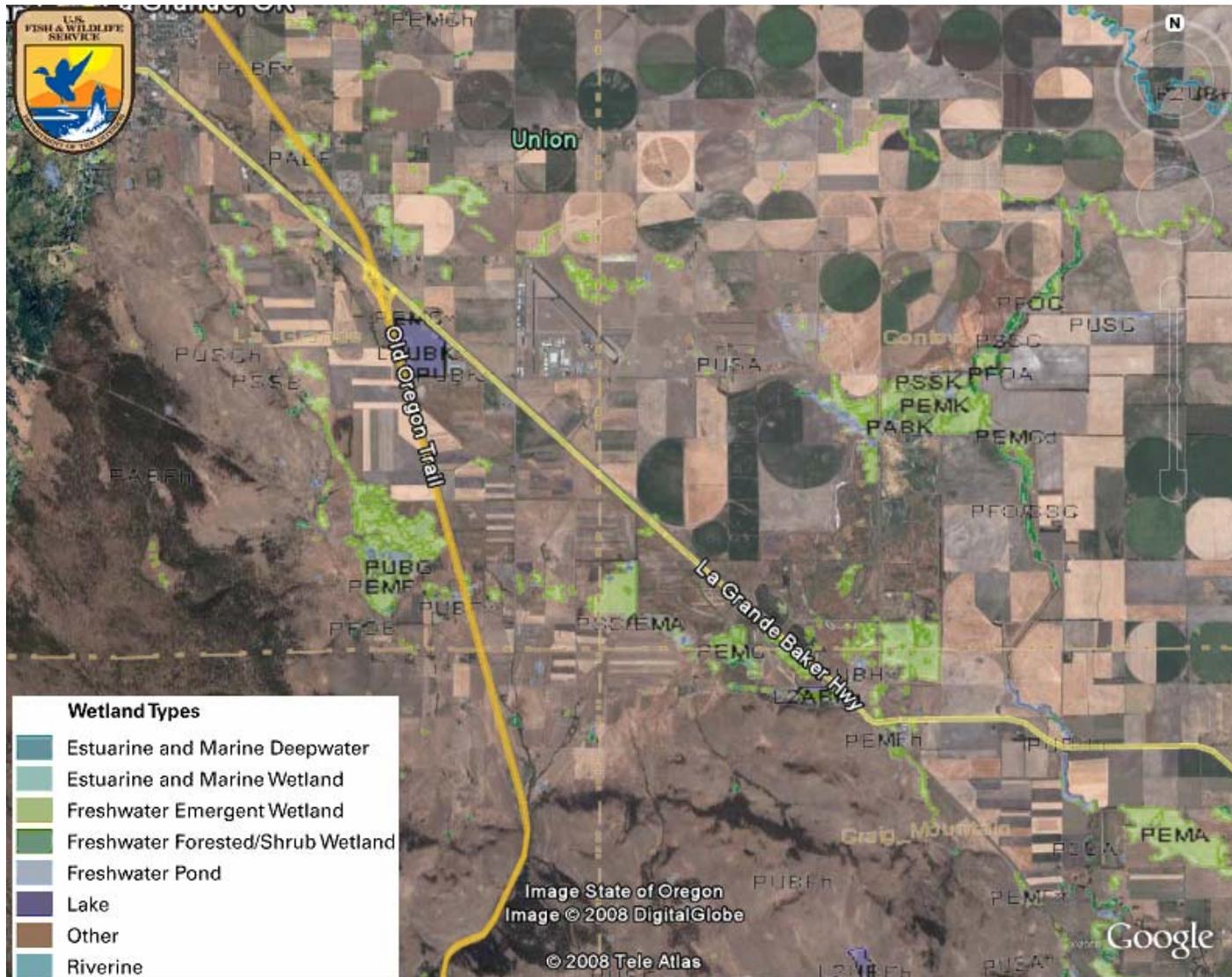


Figure 2: Google Map (2009) road view of Ladd Marsh Wildlife Area.

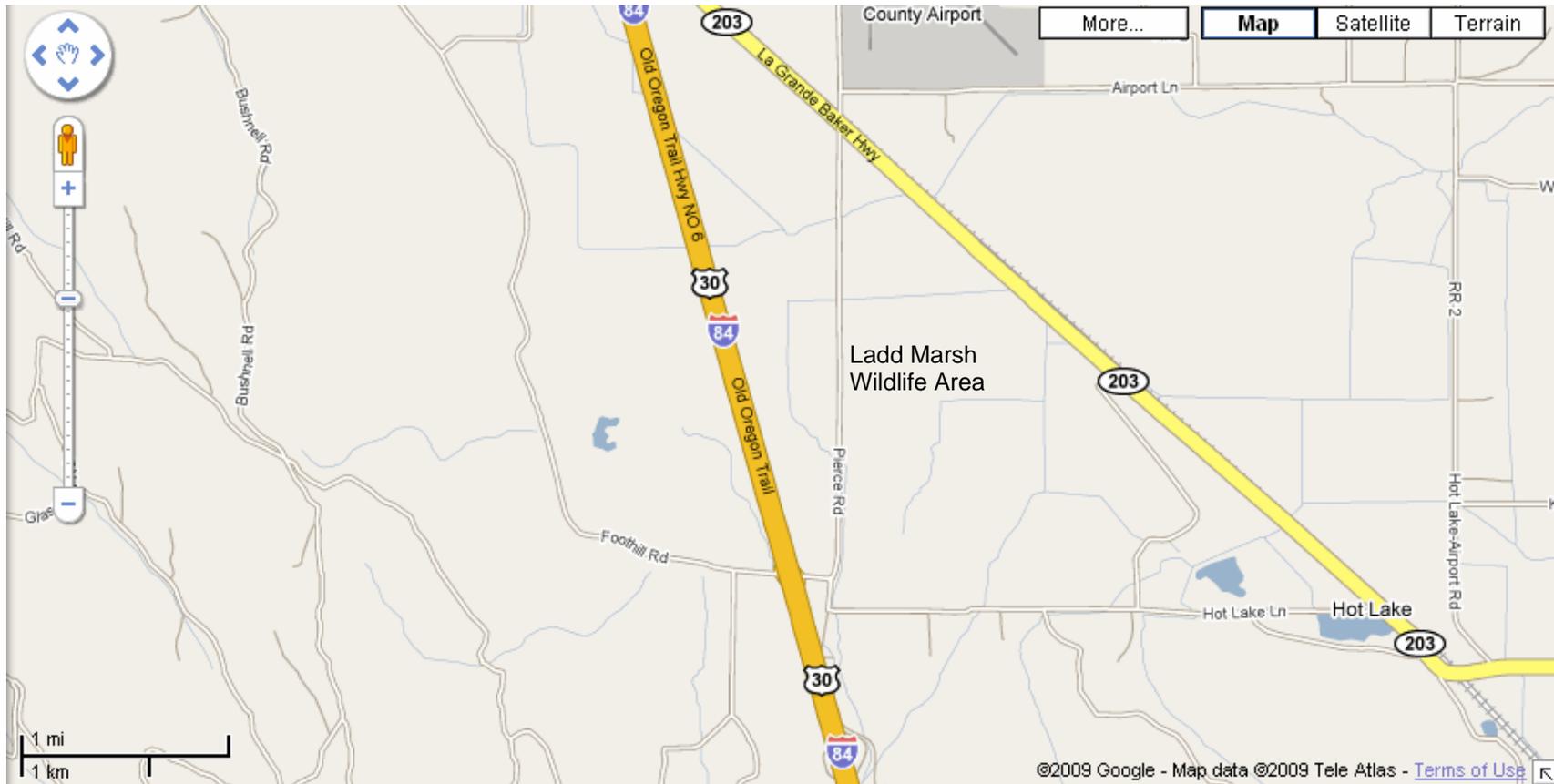


Figure 3: Ladd Marsh Wildlife Area Secretive Marsh Bird Surveys

