



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



Umatilla National Wildlife Refuge

BCS number: 48-27

Site description author(s)

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Site location (UTM)

Datum: NAD 83, Zone: 11, Easting: 298060, Northing: 5086722.

General description

The refuge is located “in north-central Oregon along the Columbia River, north and northeast of Boardman, northern Morrow County. Habitats consist of wetlands and sloughs influenced by John Day pool; riparian areas consisting of cottonwood, willow and non-native woody species; and shrub-steppe uplands containing some sagebrush, bitterbrush, rabbitbrush, and native bunchgrasses, but now largely dominated by annual grasses due to recent fire history.” Approximately 800 hectares (National Audubon Society 2008).

Boundaries and ownership

Boundaries: The refuge straddles the Oregon/Washington border and is bounded to the north by route 14 and to the south by routes 730 and 30/84.

Ownership: Combination of US Corps of Engineers and United States Fish and Wildlife Service (USFWS) land.

Water levels

Tied to John Day pool – water levels on the refuge depend on how water is being used in the pool. Changes in water levels are not as dramatic farther from the open river, but still experience some fluctuation. Water level fluctuation can vary based on dam activity daily or seasonally and can be very dramatic, even from day to day. There is a general lowering of water levels through summer, but this is likely less than historic seasonal changes due to the influence of current dam activity.

Focal species use and timing

“Wetland and riparian habitats on the Umatilla NWR host many thousands of migrating and wintering waterfowl and passerines. A significant number of Bald Eagles (30) spend the winter at the refuge. A large Great Blue Heron nesting colony, as well as a smaller Black-crowned Night-Heron colony exists on refuge islands” (National Audubon Society 2008).

“The scarcity of wetlands and other natural habitats in this area make Umatilla Refuge vital to migrating waterfowl, Bald Eagles, colonial nesting birds, and other migratory and resident wildlife. It is strategically located within the Pacific Flyway to provide Arctic nesting geese and ducks a wintering site and a resting stopover” (Umatilla NWR).

Focal Guild/Species	Wintering	Breeding	Migration
Secretive Marsh Birds	Present	Present	Present
Colonial Nesting Waterbirds	Present	Present	Present
Ground-based Aquatic Birds	Unknown	Unknown	Unknown
Migrating Shorebirds	Present	Present	Present
American White Pelican	Resent	Present, not breeding	Present
Barrow’s Goldeneye	Maybe	Unknown	Unknown
Black-necked Stilt	Absent	Present	Present
Bufflehead	Present	Absent	Present
Dusky Canada Goose	Most likely	Absent	Most likely
Franklin’s Gull	Most likely	Absent	Most likely
Greater Sandhill Crane	Absent	Absent	Maybe
Long-billed Curlew	Absent	Present	Present
Snowy Egret	Absent	Absent	Absent
Red-Necked Grebe	Unknown	Unknown	Rare
Upland Sandpiper	Unknown	Unknown	Unknown
Western Snowy Plover	Unknown	Unknown	Unknown
Yellow Rail	Unknown	Unknown	Unknown

*The focal species for Oregon’s aquatic secretive marsh bird monitoring are PBGR, LEBI, AMBI, VIRA, SORA, YERA. In general focal species above are present from late March through November.

Wintering Species

Bald Eagle

Waterfowl - *present in large numbers, thousands of Snow Geese*

Breeding Species

Great Blue Heron

Forster's Tern

Black-crowned Night-Heron

Location of Type 1 and 2 habitat within the site

Functional Group	Type 1 Habitat	Type 2 Habitat
Ground Based Aquatic Birds	Unknown	Unknown
Secretive Marsh Birds	Emergent vegetation	Riparian areas?
Colonial Nesters	Trees (willow), cobble gravel islands in the Columbia river (terns)	Unknown
Migrating Shorebirds	Shoreline of river, wetlands	Unknown

Primarily Lake, Freshwater Forested/Shrub Wetland, and Freshwater Emergent Wetland. See Figures 1 and 2 for Google Earth (2008) map with the USFWS National Wetlands Inventory (2008) layer.

Also classified as Water / Open water / Lake / Pond / River / Wetlands / Emergent Herbaceous Wetlands / Shrubland / Shrubsteppe / Desert Riparian / Cultivated / Pasture by the National Audubon Society (2008).

Access to Type 1 and Type 2 habitats

“The refuge is a varied mix of open water, sloughs, shallow marsh, seasonal wetlands, cropland, islands, and shrub-steppe upland habitats. It is divided into six units—two in Oregon, three in Washington, and one in the middle of the Columbia River. The Columbia River portion of the refuge is accessible by boat. Boat ramps are located in Irrigon and Umatilla, Oregon; in Plymouth, Washington; and on the Patterson Unit in Washington. Most areas of the refuge are very remote” (USFWS Umatilla NWR 1994). Dense vegetation may present access difficulties. Coordinate with the refuge for closed areas. See Figures 3, 4 and 5 for road access to Umatilla NWR.

Audibility/visibility of focal species

Noise from farming equipment and powerboats on the river may be an issue. Vegetation can be very dense, which may obstruct audibility/visibility of birds.

Conservation issues

Operation of water levels on river last few years has seen John Day pool lower than normal, causing loss of established riparian habitat. Wildfire has affected both upland and riparian areas, wiping out sage brush, and destroying large cottonwoods (potential nesting habitat). Several invasive species occur in riparian areas and wetland edges, including false indigo, phragmites, and Canada thistle.

Conservation measures taken, in progress, or proposed

“Management practices include restoration of wetlands, manipulation of seasonal wetlands to encourage native food supplies, farming, prescribed burning, planting native willows and cottonwoods in riparian areas, improving uplands through the removal of exotic weed species, and planting native grasses” (USFWS Umatilla NWR 1994). There have also been native planning efforts in riparian areas. Marsh management has opened up the shoreline for rail habitat.

Past and current surveys

- Periodic aerial surveys once per month in November, December, and January
- Mid-winter bald eagle surveys
- 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)
- Spring mist net and point counts (~1996-1997 by refuge staff)
- Mule deer surveys
- In 2008, KBO surveyed for six focal secretive marsh bird species (Pied-billed Grebe, American Bittern, Least Bittern, Yellow Rail, Sora, and Virginia Rail) during peak breeding season (May and June). Many American Bittern, Sora, and Virginia Rail, as well as some Pied-billed Grebes, were detected.

Potential survey methods

- a. Description:* Useful potential surveys would include colonial nesting bird and marsh birds.
- b. Selection bias:*
- c. Measurement error and bias:*

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

Potential pilot studies

Literature cited

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Figure 1: Google Earth (2008) map of upper portion of Umatilla NWR with the USFWS National Wetlands Inventory (2008) layer.



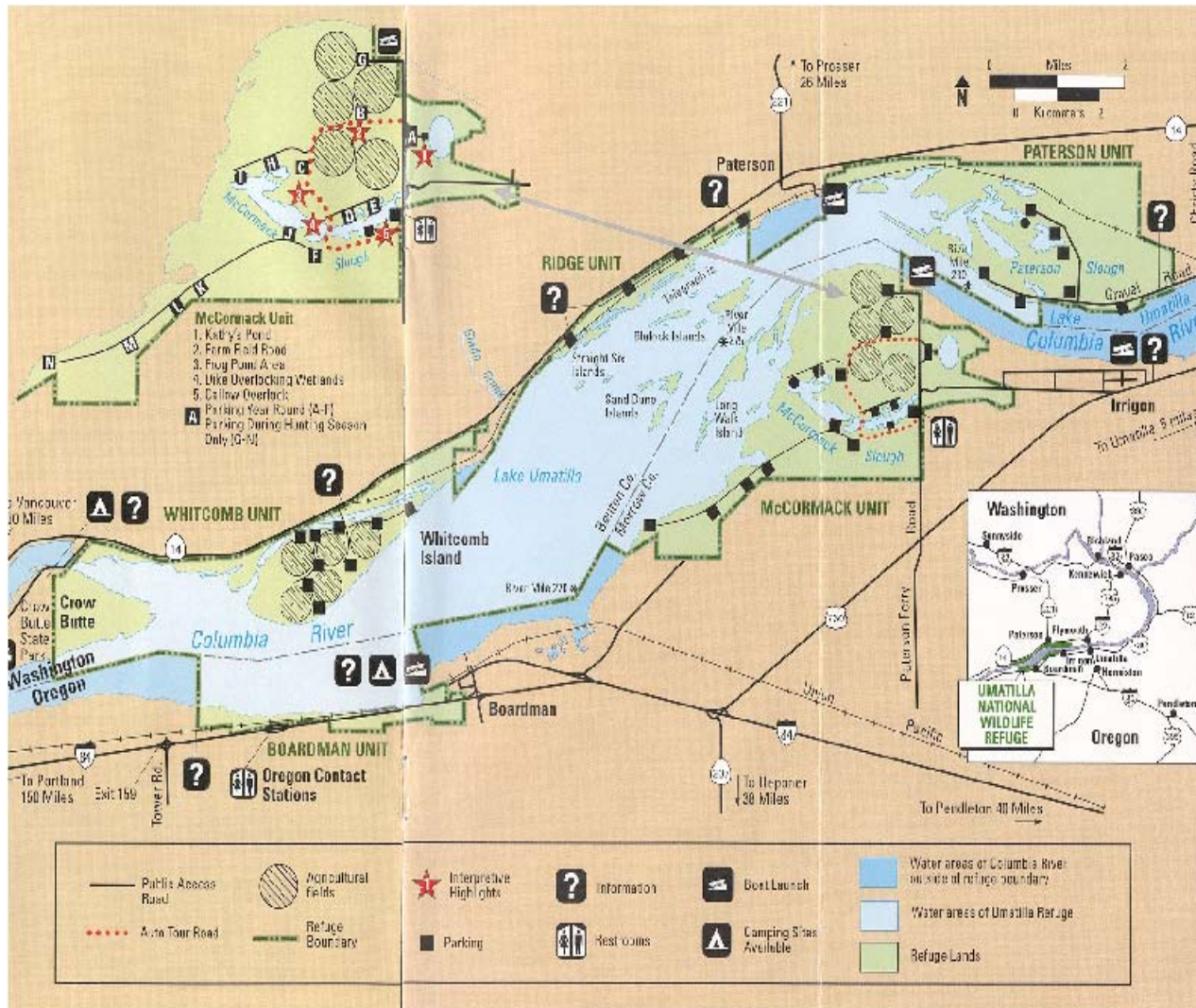
Description updated 4/29/2010

Figure 3: General location of Umatilla NWR (Umatilla, Oregon).



Description updated 4/29/2010

Figure 4: Specific information about the Umatilla NWR area (Umatilla, Oregon).



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