



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



Upper Klamath Lake and Klamath Wildlife Area

BCS number: 48-28

Site description author(s)

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Site location (UTM)

Datum: NAD 83, Zone: 10, Easting: 594220, Northing: 4664839

General description

“Klamath Wildlife Area (KWA) was established in 1958, with primary objectives of protecting and improving waterfowl habitat and providing a public hunting area. The wildlife area consists of four parcels of acreage in Klamath County, in south-central Oregon. The largest parcel is located along State Highway 97, six miles south and west of Klamath Falls and an additional parcel is located six miles downriver. The other two parcels are on the west side of Upper Klamath Lake. The wildlife area is 3,412 acres in size at present. Due to its geographic setting, species diversity and abundance of wildlife present, KWA is a popular destination for hunting, wildlife viewing and environmental education.

KWA is located in south-central Oregon, in Klamath County. The Area is adjacent to State Highway 97, six miles southwest of Klamath Falls. Outlying units of KWA are dispersed along the west bank of Upper Klamath Lake as well as ten miles downriver from Klamath Falls. The wildlife area consists of four disjunct parcels, which are divided into 16 Habitat Management Units. Headquarters for the wildlife area is located at 1850 Miller Island Road, six miles south and west of the city of Klamath Falls” (Oregon Department of Fish and Wildlife 2008).

Boundaries and ownership

Boundaries: Klamath Wildlife Area is made up of the following four main units; Shoalwater Bay (605.8 acres), bounded on the north by Upper Klamath Lake, on the west by private/timberlands, on the south by state forest, and the east by Jeld-Wen Timber Resource (JWTR) and Klamath County; Sesti Tgawaals Point (143.5 ac), bounded on the north by JWTR and state land, on the south and east by Upper Klamath Lake, and the west by JWTR; Miller Island (2464.6 ac), bounded on the north and west by the Klamath River, on the south by Tule Smoke Hunt Club, and on the east by private agricultural land; and Gorr Island (161.5), which is an island in the Klamath River.

Ownership: All units and lands therein owned by Oregon Department of Fish and Wildlife (ODFW) (~3412 acres total). See Figure 1 and 2 from ODFW Klamath Wildlife Area Management Plan (2008) for ownership map and land use of Klamath Wildlife Area.

Water levels

“Precipitation in the Klamath Basin averages 13 inches annually, with open pan evaporation loss averaging 48 inches (USGS, 2006). Such weather extremes play an important role in water management at KWA” (ODFW)

Shoalwater Bay - hemi-marsh and deep water marsh with very little upland habitat. Water levels fluctuate with Upper Klamath Lake.

Sesti Tgawaals Point – contains wetlands and some upland ponderosa pine habitat, 71 ft above lake level. Water levels fluctuate with Upper Klamath Lake.

Miller Island – ~1200 ac of palustrine emergent wetland. Most diverse habitats in this unit; most Wildlife Area management occurs here, including seasonal wetlands management. Water levels are relatively consistent due to proximity of the Klamath River

Gorr Island – 80% lacustrine / riverine wetlands, fully saturated, primarily rank vegetation (bulrush, cattail). Subject to river water levels.

Focal species use and timing

“The Klamath Basin is an important wintering and staging area for waterfowl in the Pacific Flyway. Recent counts indicate use peaks of one-half million birds in the spring and one million birds in the fall. Extensive food and resting areas are needed to support these populations and prevent depredation to private agriculture. As spring migrating geese increase in numbers and duration in the Klamath Basin, green forage resources become more important to maintain these birds on KWA and off adjacent basin agricultural lands.

Recent studies conducted by researchers from University of California at Davis and United States Fish and Wildlife Service (USFWS) reveal that snow, Ross’, white-fronted, and cackling Canada geese use Miller Island as their final stop before heading north to breeding grounds. Here they accumulate a 25 to 30% increase in body weight, as sub-abdominal fat, to be used to fuel their 2,000 mile plus journey to nesting grounds in Canada and Alaska” (ODFW).

Focal Guild/Species	Wintering	Breeding	Migration
Secretive Marsh Birds	Very few	Present	Present
Colonial Nesting Waterbirds	Very few	Probably	Present
Ground-based Aquatic Birds	Very few	Present	Present
Migrating Shorebirds	Very few	Present	Present
American White Pelican	Absent	Probably not	Present
Barrow’s Goldeneye	Absent	Probably not	Present
Black-necked Stilt	Absent	Present	Present
Bufflehead	Absent	Unknown	Present
Dusky Canada Goose	Probably not	Probably not	Probably not
Franklin’s Gull	Unknown	Unknown	Unknown
Greater Sandhill Crane	Absent	Present	Present
Long-billed Curlew	Absent	Unknown	Present
Snowy Egret	Absent	Unknown	occasional
Red-Necked Grebe	Absent	peripheral	Present
Upland Sandpiper	Unknown	Unknown	Unknown
Western Snowy Plover	Absent	Potentially	Present
Yellow Rail	Absent	Unknown	Present
<i>White face ibis</i>	<i>Absent</i>	<i>Present, not breeding</i>	<i>Present</i>

**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.*

Location of Type 1 and 2 habitat within the site

“A majority of the Miller Island Unit consists of a very shallow, managed alkaline and freshwater marsh below Klamath River level. Water depths in the marsh and ponds in all units rarely exceed 24 inches except in Shoalwater Bay Unit, large lakes or ponds, water transportation canals, and borrow pits along dikes. Unmanaged upland habitat on Miller Island Unit is characterized by a desert shrub community dominated by black greasewood (*Sarcobatus vermiculatus*), green rabbitbrush (*Ericameria teretifolia*), big sagebrush (*Artemisia tridentata*), and other alkaline adapted shrubs, forbs, and grasses. Due to department management actions and other influences outside of the wildlife area, KWA habitats are in a continual state of change. Acreage of specific habitat types on KWA varies over time, both between and within years” (ODFW). See Figures 3 through 6 for USFWS National Wetlands Inventory (2008) layers in Google Earth (2008) for habitat area types in the Klamath Wildlife Area.

Functional Group	Type 1 Habitat	Type 2 Habitat
Ground Based Aquatic Birds	Intermittently inundated/seasonal palustrine wetlands on Miller Island unit	Intermittently inundated lacustrine wetlands in Sesti Tgwaals Point and Shoalwater Bay units
Secretive Marsh Birds	Breeding - Emergent marsh (all units) Migration- Shallow water wetlands in Sesti Tgwaals Point, Shoalwater Bay, and Miller Island units	Gorr Island unit wetlands
Colonial Nesters	Breeding - Salt grass flats and intermittently inundated wetlands in Miller Island and Shoalwater Bay units	Probably none
Migrating Shorebirds	Foraging- Intermittently inundated lacustrine and palustrine wetlands Loafing- in open water and on mudflats adjacent to open water and close to foraging areas	None

Access to Type 1 and Type 2 habitats

Most habitats are accessible by vehicle or foot, with 30-40% accessible only by boat. Off-road vehicles are prohibited.

“The boat ramp on Miller Island Unit accesses the Klamath River, and is the only public boat launch between Klamath Falls and Keno (approximately 20 river miles). There is a wheelchair accessible concrete vault toilet available at the boat ramp parking lot” (ODFW).

See Figures 7 and 8 for general road access to these areas (Google Maps 2009).

Audibility/visibility of focal species

Visibility depends on the species – visibility is good for open water species, but poor for those using emergent vegetation such as secretive marsh birds. There is good audibility throughout the Wildlife Area, with little or no traffic noise. There may be some audibility issue at the north end of Miller Island near a mill and a plant.

Conservation issues

Conservation issues include wetland encroachment by vegetation (bull rush and cattail), particularly at Miller Island; invasion of exotic and noxious weeds; and a trend toward increased urbanization of the basin (potential future issues with increased public use).

Conservation measures taken, in progress, or proposed

- Seasonal closures, access restrictions, and no dogs at large on Miller Island February 1 through July 31 to minimize impacts on nesting birds.
- Reduction of large emergent vegetation on Miller Island
- IPM for noxious/exotic species – chemical, mechanical, and biological control

Past and current surveys

“Routine surveys include duck and goose pair surveys, waterbird nesting, and brood surveys done by department personnel. Waterfowl population surveys are completed bi-weekly by U. S. Fish and Wildlife Service pilots, during fall through spring months, to document migrant bird use of KWA, to meet Pacific Flyway management plan objectives and to provide information to the public. Special waterfowl surveys (Flyway-wide dark and white goose surveys, Winter Waterfowl Inventory) are coordinated with the Pacific Flyway Study Committee to monitor specific populations as per species-specific management plans.

Special surveys for breeding spring and fall shorebirds and colonial waterbird have been conducted annually but are frequently incomplete due to staffing shortages, conflict with other activities and inadequate funding.

A coordinated Pacific Flyway banding project was initiated in 1991 and continues to date. About 100 ducks and 100 geese are banded annually at KWA in association with monthly avian influenza sampling and public outreach. Banding data is used by the USFWS for flyway duck harvest, survival analysis and for hunting season regulation recommendations. Monitoring and reporting of neck-collared waterfowl and band encounter/recovery” (ODFW 2008). The Audubon Christmas Bird Count is conducted here annually.

In 2008, KBO surveyed at Shoawater Bay Klamath Wildlife Area 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). Pied-billed Grebes were found in abundance, but no other species were detected during the survey.

Klamath Bird Observatory (KBO) conducted Black Tern surveys at west and central Shoalwater Bay during the breeding season from 1997 to 2004.

Potential survey methods

a. Description: Callback surveys for secretive marsh birds.

b. Selection bias:

c. Measurement error and bias:

Potential pilot studies

Literature cited

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Figure 1: Klamath Wildlife Area Features and Ownership

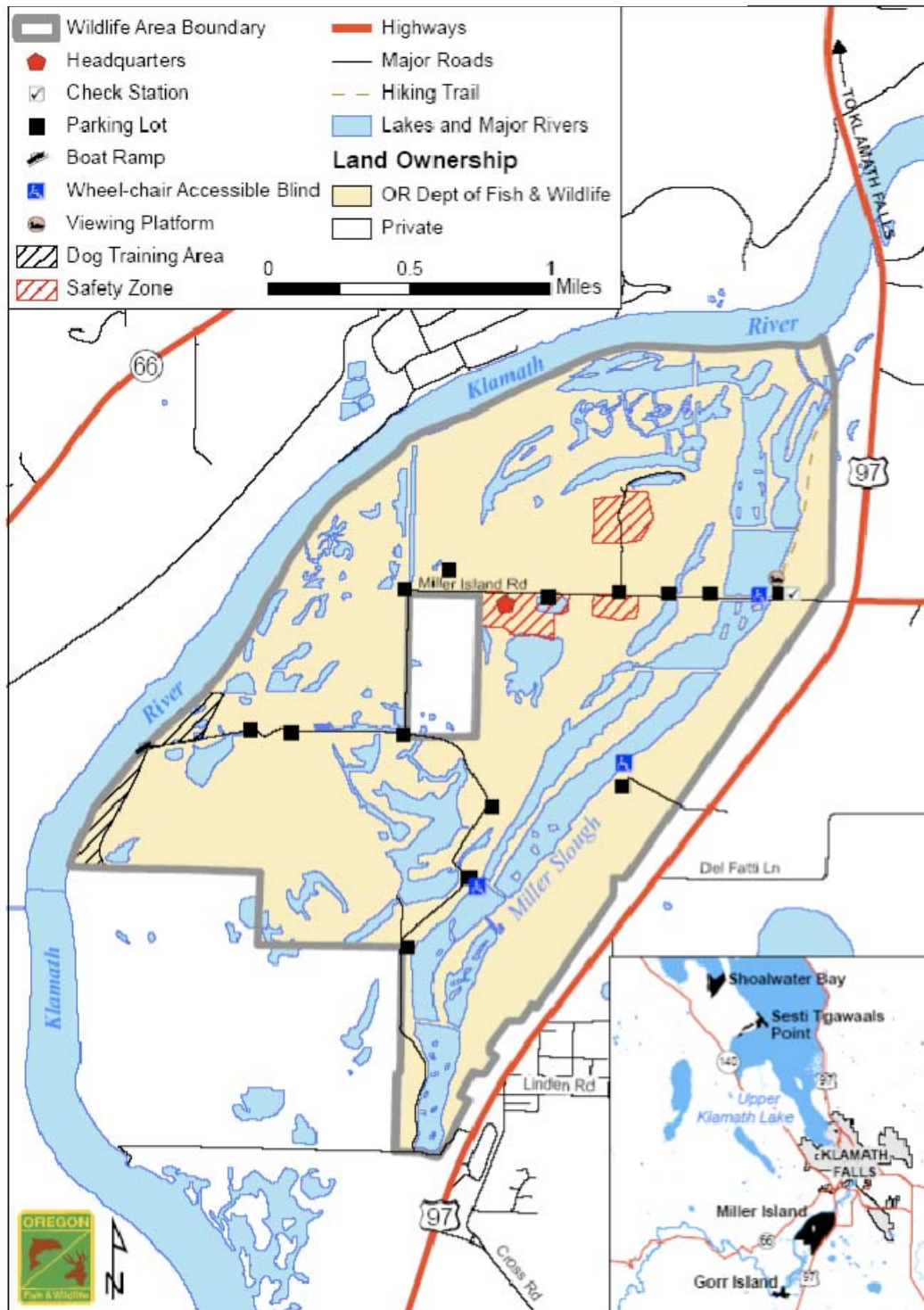


Figure 2: Land Use Surrounding Klamath Wildlife Area

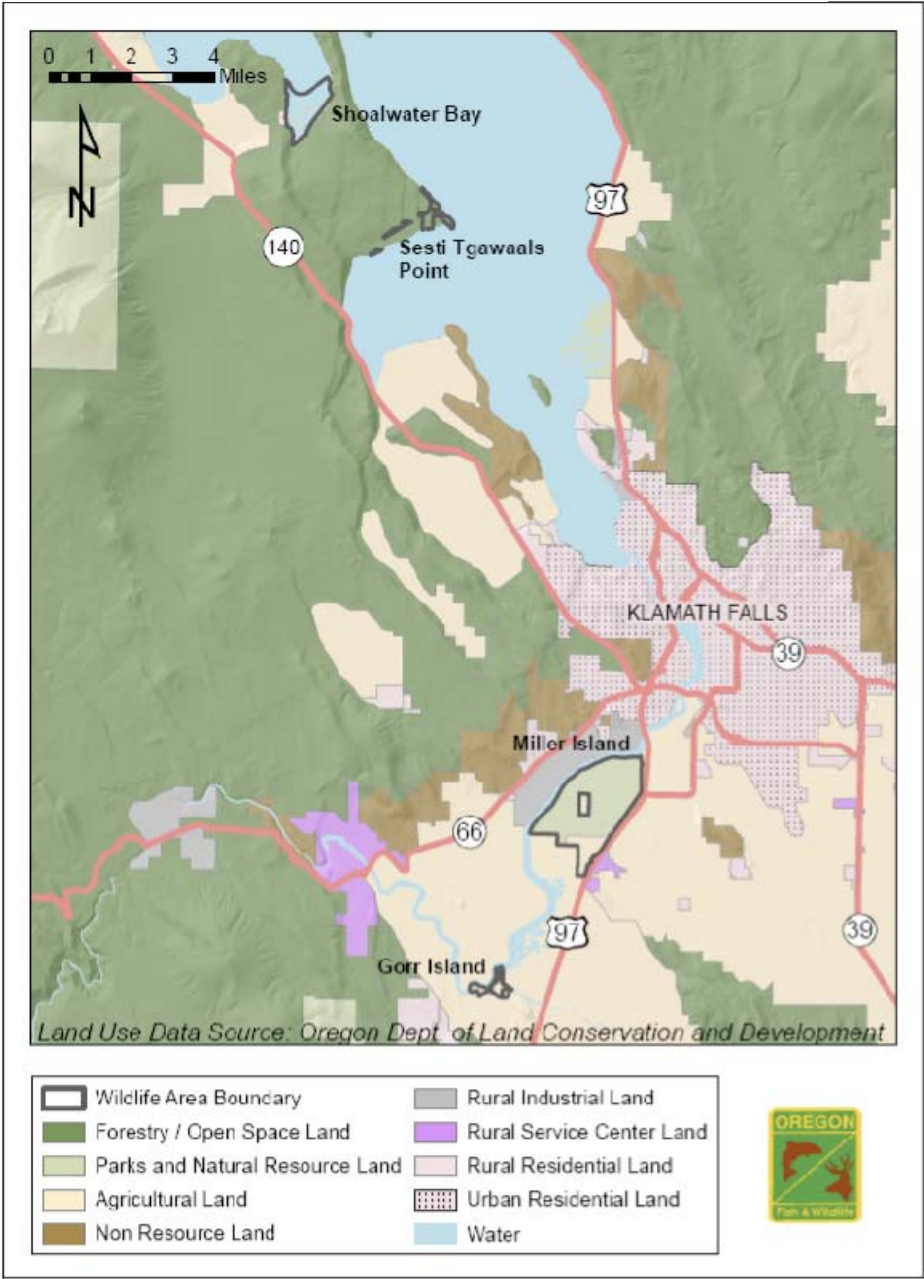


Figure 3: Klamath Wildlife Area Habitat and Remote Habitat Management Units

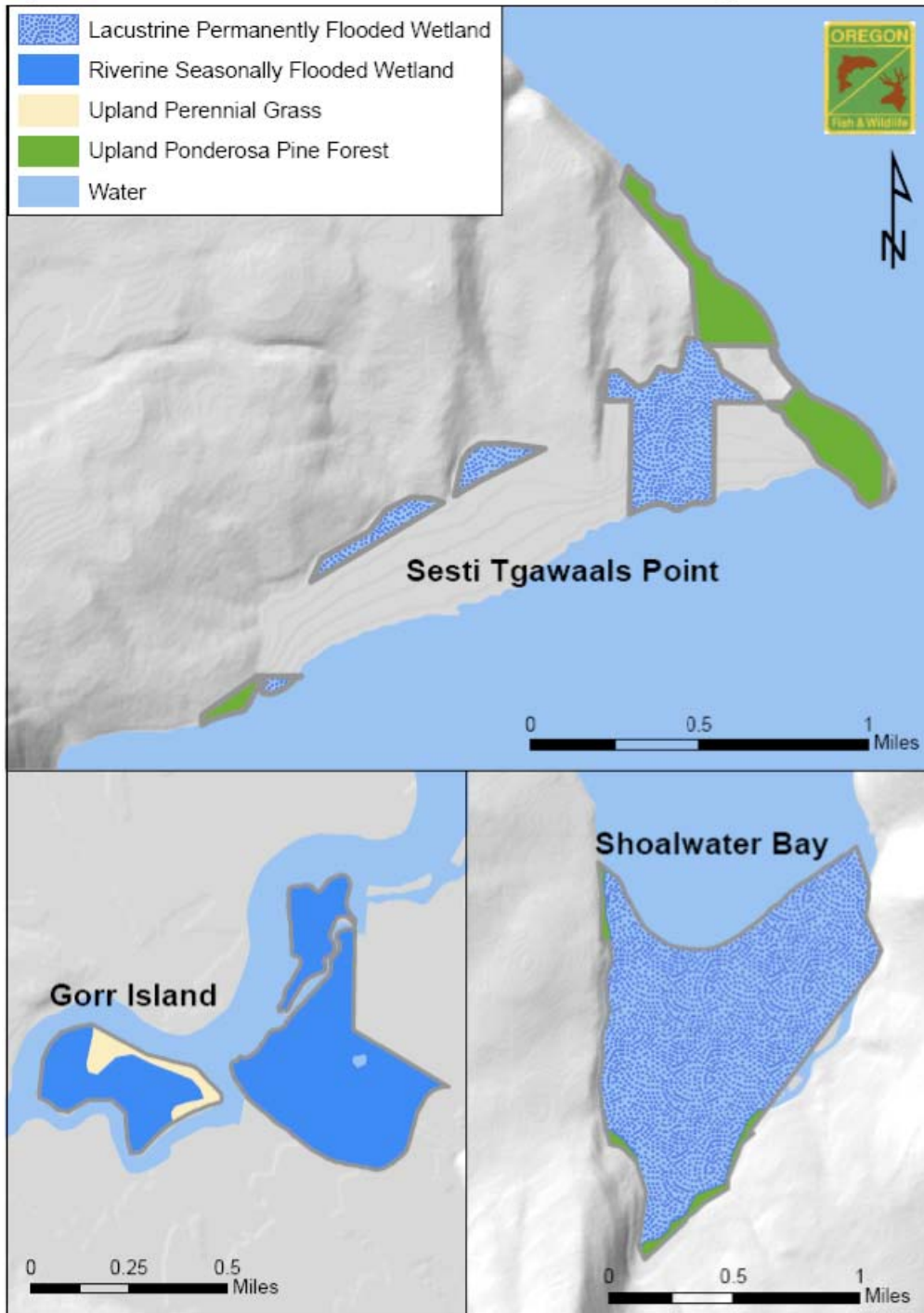


Figure 4: Miller Island Habitat Management Units and Habitat Types

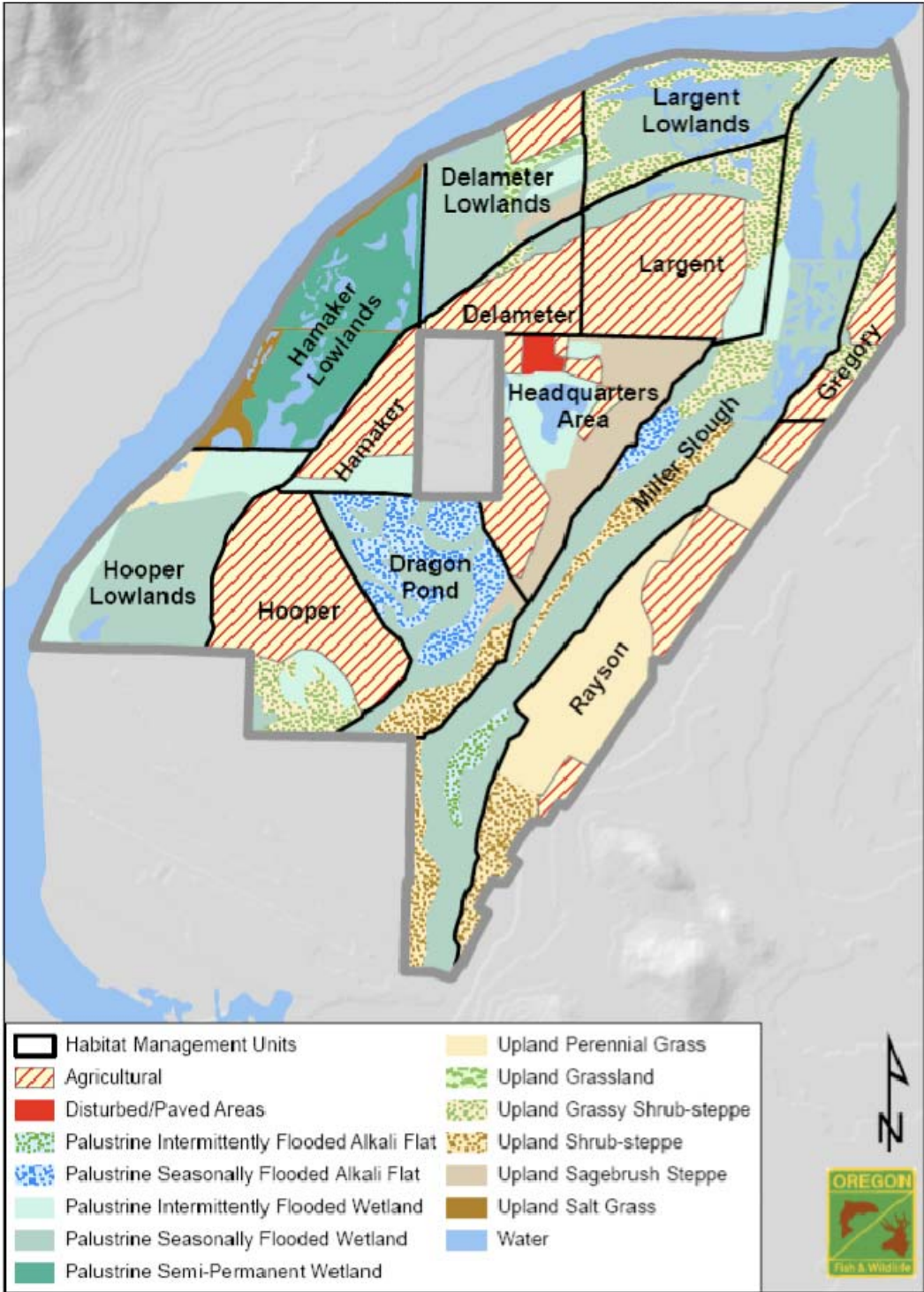


Figure 5: Google Earth (2008) map of Klamath Wildlife Area, Upper Klamath Lake portion, with the USFWS National Wetlands Inventory (2008) layer.

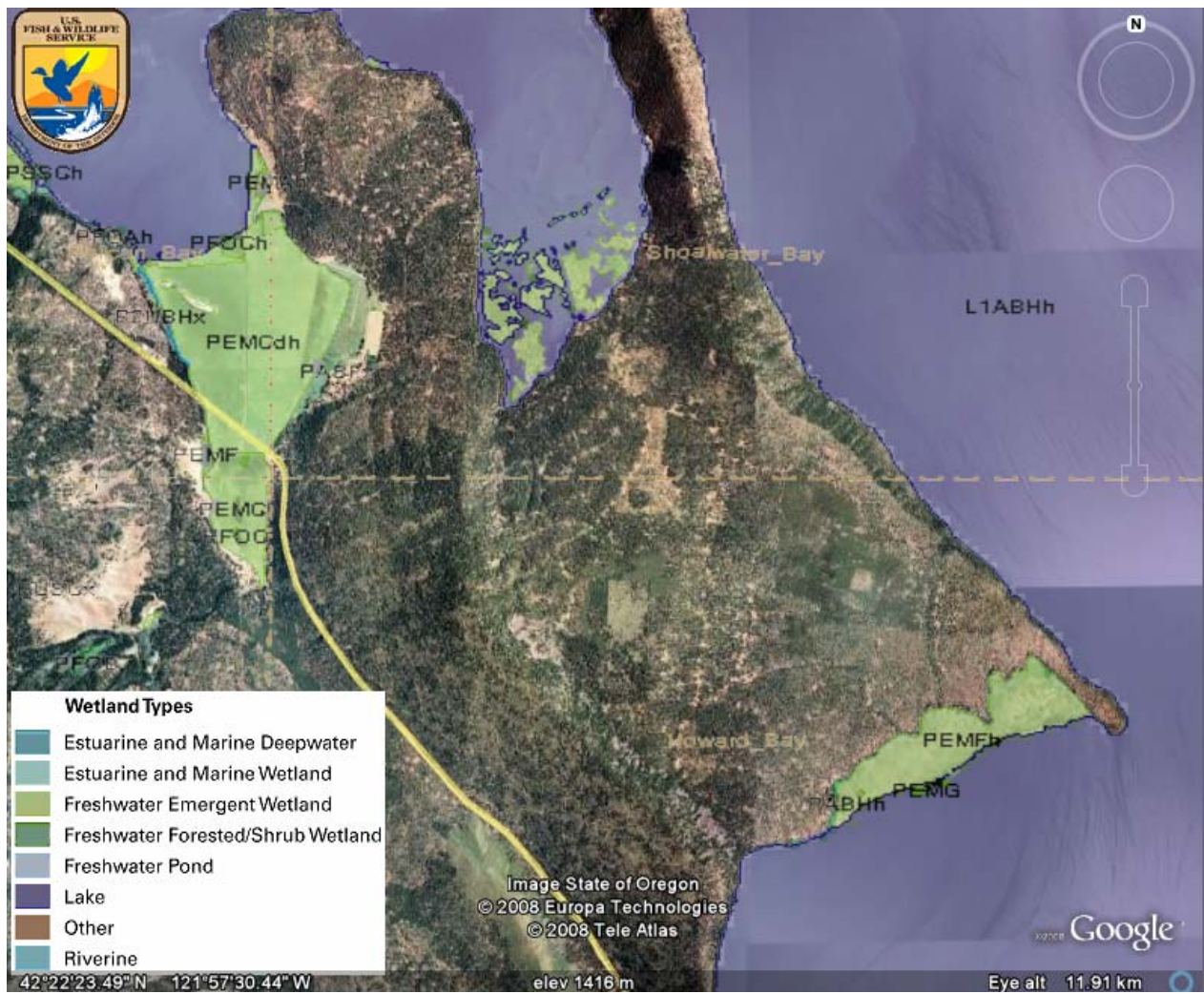


Figure 6: Google Earth (2008) map of Klamath Wildlife Area, Miller Island habitat management units, with the USFWS National Wetlands Inventory (2008) layer.

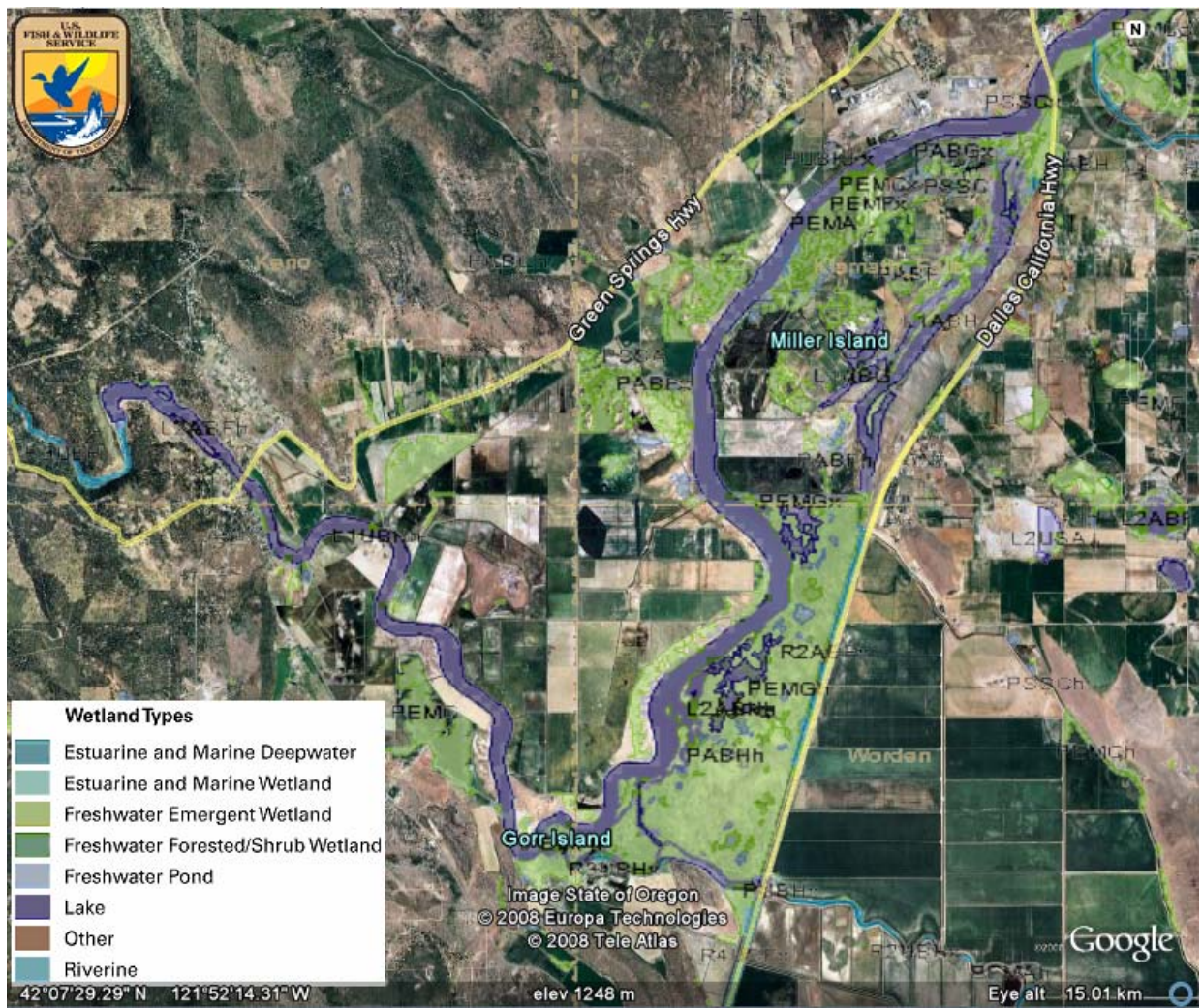


Figure 7: Google Map (2009) road view of Klamath Wildlife Area, Upper Klamath Lake.

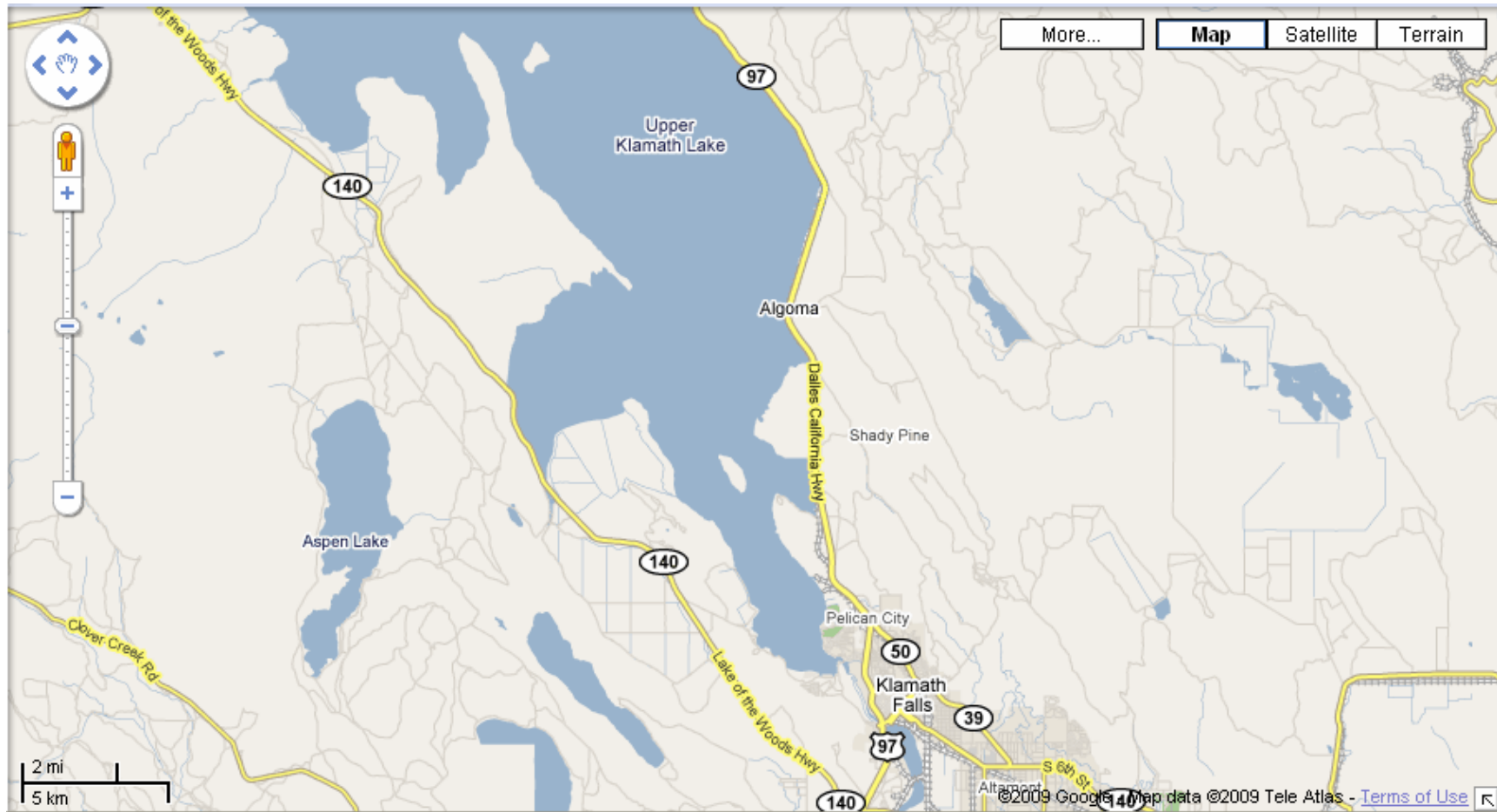


Figure 8: Google Map (2009) road view of Klamath Wildlife Area, Miller Island.

