

50-2. CASCADE RESERVOIR

Boundaries and ownership:

Boundaries: Located near Donnelly and Cascade, ID; Borders: East - US 55, West -West Mountain Road, North -Tamarack Falls Road, South - Cabarton Road. (**boundaries need to be refined**)

Ownership: U.S. Forest Service, U.S. Bureau of Reclamation, Idaho Dept. of Parks and Recreation, Private

Focal species using the site and timing of use:

Waterbirds (Great Blue Heron, American White Pelican, Sandhill Crane, Sora, Virginia Rail), waterfowl (Mallard, American Wigeon, mergansers), and gulls (California Gull, Ring-billed Gull) occur regularly during summer. Bald Eagles and Osprey also nest in the area. Migrating Common Loons, Tundra and Trumpeter Swans, Caspian Terns, and waterfowl. Reservoir freezes over in winter. Long-billed Curlews can also be found here.

Colonies: Clark's Grebe, Western Grebe – major nesting site

Location of type 1 and 2 habitat within the site:

Functional Group	Type 1 Habitat	Type 2 Habitat
waterbirds	open water & emergent vegetation; nesting grebes at mouth of Duck Creek; small streams and ponds along mudflats until reservoir fills in summer	none
large waders	shorelines	none
secretive marshbirds	water's edge at mouth of Duck Creek	none
waterfowl	open water, edges during breeding season	none
shorebirds	exposed mudflats around the reservoir	rest of shoreline
gulls and terns	all areas	none

Access to the type 1 and 2 habitat and visibility of the birds: When reservoir is full in the summer, observe waterbirds from road. During drawdown in spring, fall, and winter can access by walking along shoreline. Appropriate viewing sites will vary by species groups, and all will require a scope. Visibility of birds may be affected by presence of emergent vegetation, surface water conditions, etc. The west shore has a number of campgrounds and boat launches that provide viewing access, and much of the western shoreline and near-shore open water also is visible from the road. East side has fewer locations that are potential viewing sites, especially from the outlet north to Sugarloaf and along the arms in the northern end. Complete surveys of open water, if that is an objective, will require more than shoreline surveys. Recommend a medium-sized motorboat (17-20+ft long, with a 50 hp motor or bigger), to adequately survey the open water. Aerial surveys are an option, depending on level of detail needed (i.e., might not get identification to species). Some focused site-specific work could be accomplished by canoe.

Most of west side is open to public or access could be gained with permission from Bureau of Reclamation. Boat launches are public. Other areas, if deemed important observation sites, would need permission from private landowners.

Conservation issues:

- Planned drawdown of reservoir for exotic species removal,
- Recreational use/overuse

- Broadscale nest failure of Western/Clark's Grebes, although reason for failure is unknown (potentially predation or water level fluctuations)
- Water quality

Conservation measures taken, in progress, or proposed: None at this time

Past and current surveys:

- Osprey and Bald Eagle nesting success, territories, and prey are monitored by Boise State University (contact Marc Bechard for more information) during spring and summer since the late 1980's.
- Western Grebe population surveys conducted by boat in June and August 2003 by IDFG (Diane Evans Mack) and Colleen Sweeney. IDFG monitored Western Grebe nesting colonies during summer 2003. Methods included shore-based observation of nests and of open-water concentrations, canoe checks of nesting areas, and walk-through of colonies to map nests and assess outcome after nesting season. Data summary available upon request.

Potential survey methods

Description:

- a. Nest searches for grebes and other waterbirds nesting in the emergent vegetation in small colonies. **Western Grebes are very sensitive to disturbance at nest sites.** A strict protocol will be needed to assure the least amount of disturbance possible. In addition, surveys for other species nesting in emergent vegetation should be undertaken with caution, as some waterfowl nest sites are in the same locations as grebes.
- b. Census for waterfowl and other waterbirds on the open water by walking along shoreline or by boat. Late summer or winter counts may be better than breeding season counts, as waterfowl are more easily detected during this period.
- c. Area searches for migrating shorebirds from observation points near Type 1 habitat.

Selection bias: A long-term monitoring plan for Cascade may need to be based on stratified random sampling, because it probably is not feasible to cover all potential areas, regardless of access issues. Alternatively, monitoring could focus on the 6 WMAs established around the reservoir by the BOR.

During early summer, access to one wetland on west side of reservoir north of Duck Creek is restricted by locked gate controlled by BOR. (Restriction in place to protect nesting waterfowl and other wildlife.)

During late summer, upper reaches of Lake Fork Arm, Boulder Arm, and Gold Fork Arm not accessible by motor boat due to dropping water levels. Similarly, near-shore areas along east shore east and north of Sugarloaf Island also too shallow.

Measurement error and bias: Growth of emergent vegetation over season will make some observations sites ineffective from one visit to next. Late season counts, at least for WEGR, will need to account for possible immigration of migrants or birds from other colonies that could appear to inflate numbers. Seasonal changes in intensity of recreational use could alter movement patterns and concentration areas for species using open water.

Needed pilot studies:

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