



Osprey Monitoring

Lake Roosevelt National Recreation Area

Importance

Osprey (*Pandion haliaetus*) is a common breeding resident in Lake Roosevelt National Recreation Area and is at risk from environmental contamination. North American osprey populations began declining in the early 1950s due to pollutants such as Dieldrin, DDE (a product of degraded DDT), and PCB, which cause egg shell thinning. Although restrictions enacted in the 1980s have allowed populations to rebound, the presence of contaminants still remains a concern in many areas, including Lake Roosevelt. Contaminants, such as heavy metals, dioxins, and furans, are released into the Upper Columbia River by mining operations, pulp and paper production, sewage treatment plants, and other industrial activities. Since fish constitute 99% of osprey diets, pollutants accumulate rapidly in osprey tissue and cause decreased egg viability.

Increased recreational activity is an additional stressor on osprey populations. While reservoirs and man-made nesting structures such as telephone poles and artificial platforms benefit osprey, high levels of human activity in the vicinity of active nests may be adversely affecting successful reproduction. Recreational activity at Lake Roosevelt National Recreation Area has been steadily increasing over time, attracting over 1,300,000 visitors in 2010. Most visitors are summertime watercraft users, and because ospreys typically nest on or near the lakeshore and forage exclusively over open water, an inherent conflict

Results

Nests were visited twice in 2012, first in the spring to identify nest initiation and incubation, and then in late summer to determine the number of fledglings. Lake Roosevelt National Recreation Area staff assisted the UCBN field crew with nest site monitoring efforts. Nine nest sites were occupied by osprey during the 2012 breeding season and eight of these nests produced at least one fledgling. The average number of osprey young per successful nest was one. The successful nests were concentrated in the lower third of the reservoir.

Management Applications

- Provide information to park managers and the public about osprey distribution and nest success in the park.
- Update park managers knowledge about osprey health, and identify areas for increased protection.
- Support park resource planning and reporting efforts.

Objectives

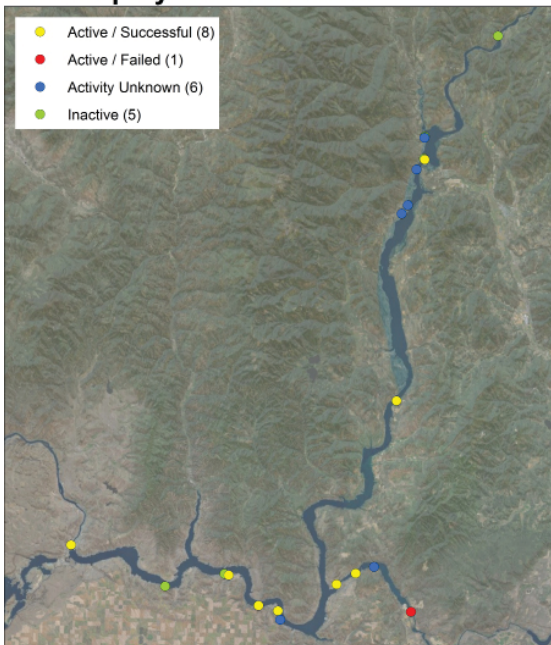
- Determine status and trend of osprey nest occupancy.
- Determine status and trend of productivity (expressed as the number of young per nest) for osprey.



Osprey incubating.



2012 Osprey Nest Locations



Locations of osprey nests surveyed at Lake Roosevelt National Recreation Area in 2012.