

TERR-7 MIGRATORY WATERFOWL

1.0 EXECUTIVE SUMMARY

During 2001 and 2002, the literature review, agency consultation, and habitat mapping were completed, and incidental sightings were recorded. Several species were determined to potentially occur in the Study Area, mostly in limited numbers and mainly during migratory movements in the spring and summer. These include pied-billed grebe (*Podilymbus podiceps*), eared grebe (*Podiceps nigricollis*), western grebe (*Aechmophorus occidentalis*), Clark's grebe (*Aechmophorus clarkii*), American bittern (*Botaurus lentiginosus*), green heron (*Butorides virescens*), black-crowned night heron (*Nycticorax nycticorax*), great blue heron (*Ardea herodias*), great egret (*Ardea alba*), snowy egret (*Egretta thula*), Canada goose (*Branta canadensis*), wood duck (*Aix sponsa*), mallard (*Anas platyrhynchos*), green-winged teal (*Anas crecca*), gadwall (*Anas strepera*), American widgeon (*Anas americana*), northern pintail (*Anas acuta*), cinnamon teal (*Anas cyanoptera*), blue-winged teal (*Anas discors*), northern shoveler (*Anas clypeata*), canvasback (*Aythya valisineria*), ring-necked duck (*Aythya collaris*), lesser scaup (*Aythya affinis*), bufflehead (*Bucephala albeola*), common goldeneye (*Oxyura jamaicensis*), hooded merganser (*Lophodytes cucullatus*), common merganser (*Mergus merganser*), ruddy duck (*Oxyura jamaicensis*), and American coot (*Fulica americana*). There were no documented occurrences of waterfowl from the review of existing information.

Appropriate habitat for waterfowl was determined to be open water. This includes Project reservoirs (Florence Lake, Lake Edison, Huntington Lake, Shaver Lake, Mammoth Pool, and Redinger Lake), forebays (Bear Forebay, Mono Forebay, Portal Forebay, Balsam Meadow Forebay, Big Creek Dam 4 Forebay, Big Creek Dam 5 Forebay, and San Joaquin River Dam 6 Forebay), and large bypass and flow-augmented reaches of Project streams (North Fork Stevenson Creek, Stevenson Creek, Big Creek, Pitman Creek, Rock Creek, Ross Creek, Mono Creek, and Bear Creek).

Incidental sightings of mallard were obtained at Shaver Lake and of mallard, Canada goose, pintail, and common merganser at Mammoth Pool.

2.0 STUDY OBJECTIVES

- Determine the relative abundance and location of appropriate habitat to support migratory waterfowl at and immediately surrounding Project reservoirs, large diversions, forebays, and diverted and augmented streams.

3.0 STUDY IMPLEMENTATION

3.1 STUDY ELEMENTS COMPLETED

- Compiled existing information on migratory waterfowl in conjunction with the literature review for common and special-status wildlife species.

- Identified appropriate habitat for migratory waterfowl during vegetation community mapping. Recorded incidental observations of migratory waterfowl during all other field surveys for the ALP.

3.2 OUTSTANDING STUDY ELEMENTS

- There are no outstanding study components.

4.0 STUDY METHODOLOGY

4.1 REVIEW OF EXISTING INFORMATION

Information on migratory waterfowl was compiled from literature review and agency consultation during 2001 and 2002. This included reviews of: (1) *Wildlife Habitat Relationships System* (CDFG 2002); (2) *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988); and (3) other documents that are referenced as appropriate in this document.

4.2 HABITAT MAPPING

Vegetation communities and wildlife habitats were mapped as part of TERR-1, Vegetation Communities, during the fall and winter of 2001/2002. Refer to TERR-1, Vegetation Communities, for a detailed description of methodology. Refer to TERR-5, Common and Special-status Wildlife Species, for a description of wildlife habitats. Appropriate habitat for waterfowl was determined to be open water through literature review, particularly Mayer and Laudenslayer (1988) and Zeiner et al. (1988-1990). A GIS layer was not created for this report. Refer to the vegetation community/wildlife habitat mapping in TERR-1, Vegetation Communities, for a map of open water habitats.

4.3 INCIDENTAL SIGHTINGS

Incidental sightings of migratory waterfowl were recorded during all other field surveys completed as part of the Big Creek ALP and incorporated into a GIS database. These were in limited locations and are described below. A map is not provided in this report.

5.0 STUDY RESULTS AND ANALYSIS

5.1 REVIEW OF EXISTING INFORMATION

The nearest major flyway to the Study Area is the Pacific Flyway, which originates in Alaska and passes for most of its length through the interior of Alaska. Most of the waterfowl that travel the U.S. section of this route come from Alaska and the Mackenzie Valley and other interior areas (Author Unknown, Date Unknown). Starting in Alaska, Yukon, and Mackenzie, this route runs southward through western Alberta, where it closely parallels the eastern foothills of the Canadian Rockies. Near the U.S. border, the route turns southwestward across northwestern Montana and the panhandle of Idaho, follows along the Snake and Columbia River valleys and then turns southward across

central Oregon to the interior valleys of California. The Study Area is located well outside of the Pacific Flyway.

Several waterfowl species may potentially occur in the Study Area, mostly in limited numbers and mainly during migratory movements in the spring and summer, based on literature review and information from the USDA-FS and Audubon Society (Sorini-Wilson, pers. com.; Audubon Society 2002). These species are described below and in more detail in Table TERR-7-1. There may be some limited breeding of some species in the Study Area. Waterfowl are not expected to winter in the Study Area, except at the lower elevations around Redinger Lake. More suitable winter quarters for birds in California are found from the Sacramento Valley south to the Salton Sea and in the tidal marshes near San Francisco Bay. Some species may also winter in the foothills.

Waterfowl species that may potentially occur in the Study Area include, but are not limited to, the following species:

- Common loon (*Gavia immer*)
- Pied-billed grebe (*Podilymbus podiceps*)
- Eared grebe (*Podiceps nigricollis*)
- Western grebe (*Aechmophorus occidentalis*)
- Clark's grebe (*Aechmophorus clarkii*)
- American bittern (*Botaurus lentiginosus*)
- Green heron (*Butorides virescens*)
- Black-crowned night heron (*Nycticorax nycticorax*)
- Great blue heron (*Ardea herodias*)
- Great egret (*Ardea alba*)
- Snowy egret (*Egretta thula*)
- Canada goose (*Branta canadensis*)
- Wood duck (*Aix sponsa*)
- Mallard (*Anas platyrhynchos*)
- Green-winged teal (*Anas crecca*)
- Gadwall (*Anas strepera*)

- American widgeon (*Anas americana*)
- Northern pintail (*Anas acuta*)
- Cinnamon teal (*Anas cyanoptera*)
- Blue-winged teal (*Anas discors*)
- Northern shoveler (*Anas clypeata*)
- Canvasback (*Aythya valisineria*)
- Barrow's goldeneye (*Bucephala islandica*)
- Ring-necked duck (*Aythya collaris*)
- Lesser scaup (*Aythya affinis*)
- Bufflehead (*Bucephala albeola*)
- Common goldeneye (*Oxyura jamaicensis*)
- Hooded merganser (*Lophodytes cucullatus*)
- Common merganser (*Mergus merganser*)
- Ruddy duck (*Oxyura jamaicensis*)
- American coot (*Fulica americana*)

Occurrences of common waterfowl are not routinely documented and incorporated into public databases by regulatory agencies, such as the USDA-FS and USFWS. Therefore, no map of documented occurrences is provided in this report.

SCE Lands Division has collected data on waterfowl use of Shaver Lake on an incidental sighting basis during the past five years (S. Byrd, pers. com.). Mallards are the most abundant waterfowl in the area with the lake and surrounding meadows supporting a number of nesting pairs. During the summer months, there are approximately 100 mallards on the lake and surrounding meadows and ponds. Most of the birds are paired up and there are approximately 20-25 broods reared every year. The only other waterfowl species that has occasionally been observed with a brood is the common merganser. This species is more commonly seen during the winter months when they are typically found foraging in the coves or sheltered areas on Shaver Lake between storms. Shaver Lake supports 15-20 mergansers during a typical winter day.

Several other waterfowl species use the Shaver area during migration. These species include the common loon, which is seen during the months of November and December as they migrate south (5-10 sightings) and from April to mid-May, as they move north for

the summer (15-20 sightings). Four to five rafts of 20-50 eared grebes are seen during April and May for a few days each year. The remaining species are seen occasionally during the winter and spring months. These species include pied-billed grebe, bufflehead, ring-necked duck, Canada goose, and blue-winged teal.

5.2 HABITAT MAPPING

Appropriate habitat for waterfowl was determined to be open water. These areas include Project reservoirs (Florence Lake, Lake Edison, Huntington Lake, Shaver Lake, Mammoth Pool, and Redinger Lake), forebays (Bear Forebay, Mono Forebay, Portal Forebay, Balsam Meadow Forebay, Big Creek Dam 4 Forebay, Big Creek Dam 5 Forebay, and San Joaquin River Dam 6 Forebay), and large bypass and flow-augmented reaches of Project streams (North Fork Stevenson Creek, Stevenson Creek, Big Creek, Pitman Creek, Rock Creek, Ross Creek, Mono Creek, and Bear Creek). A GIS layer was not created. Refer to the vegetation community/wildlife habitat mapping in TERR-1, Vegetation Communities, for a map of open water. Refer to TERR-5, Common and Special-status Wildlife Species, for a description of these wildlife habitats.

5.3 INCIDENTAL SIGHTINGS

In 2001, a mallard was observed in Shaver Lake near the day use area. In 2002, common merganser, Canada geese, pintail, and mallard were observed in Mammoth Pool near the Mammoth Pool Boat Launch.

6.0 LITERATURE CITED

Audubon Society. 2002. Audubon California Important Bird areas. http://www.audubon-ca.org/IBA%20PDF/sierra_nev.pdf.

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Byrd, Steve. Personal Communication. May 12, 2003. Southern California Edison Lands Division.

California Department of Fish and Game (CDFG). 2002. Wildlife Habitat Relationships System. Sacramento, California.

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Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife Volumes I, II, and III. California Department of Fish and Game, Sacramento, California.

TABLE

Table TERR-7-1. Migratory Waterfowl Species Potentially Occurring in the Study Area

Species	Status	Potential Occurrence in the Study Area*	Hunting Regulations
Common loon (<i>Gavia immer</i>)	CSC FSC (nesting only)	Rare	Not game species
Pied-billed grebe (<i>Podilymbus podiceps</i>)	none	Rare	Not game species
Eared grebe (<i>Podiceps nigricollis</i>)	none	Fairly common all year in Sierra Nevada	Not game species
Western grebe (<i>Aechmophorus occidentalis</i>)	none	Rare	Not game species
Clark's grebe (<i>Aechmophorus clarkii</i>)	none	Rare	Not game species
American bittern (<i>Botaurus lentiginosus</i>)	none	Rare	Not game species
Green heron (<i>Butorides virescens</i>)	none	Rare	Not game species
Black-crowned night heron (<i>Nycticorax nycticorax</i>)	none	Rare	Not game species
Great blue heron (<i>Ardea herodias</i>)	none	Fairly common in Sierra Nevada. Winters in foothills	Not game species
Great egret (<i>Ardea alba</i>)	none	Rare	Not game species
Snowy egret (<i>Egretta thula</i>)	none	Rare	Not game species
Canada goose (<i>Branta canadensis</i>)	none	Rare	Bag limit: 3 per day, 6 in possession. Season: Nov. 2- Jan. 26
Wood duck (<i>Aix sponsa</i>)	none	Rare	Bag Limit: 5 per day and 10 in possession Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 26
Mallard (<i>Anas platyrhynchos</i>)	none	Common in foothills, less common in high mountains. In winter, leaves high elevations	Bag limit: 5, only 1 mallard hen, 10 in possession Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 26

Table TERR-7-1. Migratory Waterfowl Species Potentially Occurring in the Study Area (continued)

Species	Status	Potential Occurrence in the Study Area*	Hunting Regulations
Green-winged teal (<i>Anas crecca</i>)	none	Rare	Bag Limit: 5 per day and 10 in possession Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 26
Gadwall (<i>Anas strepera</i>)	none	Rare	Bag Limit: 5 per day and 10 in possession Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 26
Northern pintail (<i>Anas acuta</i>)	none	Rare	Bag limit: 1 (either sex) Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 26
American widgeon (<i>Anas americana</i>)	none	Rare	Bag Limit: 5 per day and 10 in possession Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 26
Cinnamon teal (<i>Anas cyanoptera</i>)	none	Rare in summer	Bag Limit: 5 per day and 10 in possession Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 26
Blue-winged teal (<i>Anas discors</i>)	none	Rare	Bag Limit: 5 per day and 10 in possession Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 27
Northern shoveler (<i>Anas clypeata</i>)	none	Rare	Bag Limit: 5 per day and 10 in possession Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 27
Canvasback (<i>Aythya valisineria</i>)	none	Rare	Closed
Barrow's goldeneye (<i>Bucephala islandica</i>)	CSC nesting	Rare in winter	Bag Limit: 5 per day and 10 in possession Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 27
Ring-necked duck (<i>Aythya collaris</i>)	none	Uncommon May and September in foothills	Bag Limit: 5 per day and 10 in possession Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 27
Lesser scaup (<i>Aythya affinis</i>)	none	Rare	Bag limit: (4 either sex), 8 in possession Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 27

Table TERR-7-1. Migratory Waterfowl Species Potentially Occurring in the Study Area (continued)

Species	Status	Potential Occurrence in the Study Area*	Hunting Regulations
Bufflehead (<i>Bucephala albeola</i>)	none	Rare	Bag Limit: 5 per day and 10 in possession Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 27
Common goldeneye (<i>Oxyura jamaicensis</i>)	none	Rare	Bag Limit: 5 per day and 10 in possession Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 27
Hooded merganser (<i>Lophodytes cucullatus</i>)	none	Rare	Bag Limit: 5 per day and 10 in possession Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 27
Common merganser (<i>Mergus merganser</i>)	none	Common breeder in Sierra Nevada. Winters in foothills	Bag Limit: 5 per day and 10 in possession Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 27
Ruddy duck (<i>Oxyura jamaicensis</i>)	none	Rare	Bag Limit: 5 per day and 10 in possession Season: Oct. 26- Nov. 10 and Nov. 30- Jan. 27
American coot (<i>Fulica americana</i>)	none	Common to abundant below 7,000 ft. Migrates in winter to unfrozen water	Not game species

*Based on Zeiner et al. (1990) determination of potential for occurrence in the Central Sierra.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1990. California's Wildlife Volume, II. California Department of Fish and Game, Sacramento, California.