POTENTIAL RESOURCE ISSUE:

Protection of bald eagles and their habitat.

PROJECT NEXUS:

Project operation and maintenance activities and potential Project betterments could affect bald eagles or their habitat.

POTENTIAL LICENSE CONDITION:

- Bald Eagle Management Plan

STUDY OBJECTIVE:

- Document wintering and nesting bald eagles in the vicinity of Project reservoirs and large bypass and peaking reaches (Middle Fork American River (MFAR) and Rubicon River).
- Determine whether Project communication and power lines are consistent with Avian Power Line Interaction Committee (APLIC) Guidelines.
- Document wintering and nesting bald eagles at potential Project betterments.

EXTENT OF STUDY AREA:

The study area for documenting known occurrences is ¼ mile around Project facilities, roads, trails, recreation facilities, and Project-related dispersed concentrated use areas (Project Description Table 5-1 and REC1–Recreation Use and Facilities Assessment Technical Study Plan Table REC1-1).

The study area will be expanded to include ¼ mile around potential Project betterments, including new facilities, roads, and trails; staging and disposal sites; as well as new inundation areas (Project Description Table 6-1).

The survey area for wintering and nesting bald eagles include the following:

- French Meadows Reservoir,
- Hell Hole Reservoir,
- Middle Fork Interbay,
- Ralston Afterbay,
- Rubicon River from Hell Hole Reservoir to MFAR confluence,
- MFAR and from French Meadows Reservoir to the confluence with North Fork American River (NFAR),
- NFAR confluence to the OHWM of Folsom Reservoir, and
- Rubicon River.

STUDY APPROACH:

- Identify and map known occurrences of bald eagles, roosts, and nests within the study area, based on agency consultation and a review of existing information. Preliminary information is presented in the *Middle Fork American River Hydroelectric Project (FERC No. 2079) Draft Existing Resource Information Report, First Series* (PCWA 2006).
- Map the location of Project communication and power lines and determine if they are consistent with APLIC Guidelines (refer to TERR4Special-status Wildlife Technical Study Plan).
- Conduct protocol-level bald eagle wintering and nesting surveys according to the *Protocol for Evaluating Bald Eagle Habitat and Populations in California* (Jackman and Jenkins 2004). A summary of the survey requirements is provided below.

  Bald Eagle Wintering Surveys

  Wintering surveys will consist of two types of surveys—wintering bird surveys and winter roost surveys.

  - o Wintering Bird Surveys

    Single-day surveys will be conducted monthly from December through February (three surveys, at least two weeks apart). Unless weather prohibits safe surveys, the January survey will be conducted during the USFWS two-week nationwide bald eagle winter survey to allow comparisons with statewide population trends. Surveys will be completed from a helicopter or boat, depending on weather conditions and accessibility. Data will be recorded on data sheets developed by Zack et al., 1997, as modified by Jackman, et al., 2001.

  - o Winter Night Roost Surveys

    Winter night roost surveys will be conducted once a month (December through February) in areas where wintering eagles are observed. To find potential night roost areas, bald eagles will be visually observed as they move from foraging habitat to potential night roosts in the late afternoon. The number of eagles entering the probable night roost will be recorded.

    Probable night roost areas will be revisited the following morning for at least two hours beginning one-half hour before sunrise. Eagles observed returning to foraging habitat will be counted. Once a forest stand is identified as a probable night roost, a daytime survey will be conducted to look for evidence of use by bald eagles (feathers, castings) and to GPS or pinpoint the location used for roosting.

  Bald Eagle Nesting Surveys

  The objective of bald eagle nesting surveys is to monitor the breeding status of existing nests and to locate any new nests. The result of each survey will be reported on the CDFG Bald Eagle Nesting Territory Survey Form.

  - o Determine New Nests and Occupancy of Existing Nests

    Conduct a survey in late February through March (as early in the season as possible, but contingent upon weather conditions) to determine whether the survey area (suitable breeding habitat) is occupied by bald eagles and if so, to determine their breeding status. The survey shall include observations of any old nests, as well as identification of any new nests in the area. Presence or apparent absence of adult bald eagles, courtship behavior, and nest construction will be recorded.

- Determine Presence of Eggs/Nestlings

  Conduct a survey during the mid-nesting season, late April through May, to determine the presence of eggs/nestlings in known nests. All nesting sites documented in the initial survey will be evaluated to determine the presence of adults and number of eggs and/or nestlings.

- Determine Nest Success

  Conduct a survey during the late nesting season, early June through early July, to determine nest success.

- Develop a GIS map of bald eagle wintering and nesting sites.
- Overlay GIS information on Project facilities, roads, trails, recreation facilities, Project-related dispersed concentrated use areas, bypass and peaking reach, and potential Project betterments.
- Prepare and submit California Native Species Field Survey Forms for all bald eagles recorded to California Natural Diversity Data Base.
- Identify and map the location of Project communication and powerlines and determine if communication and powerlines are consistent with APLIC Guidelines.

SCHEDULE:

To be developed in early 2007.

REFERENCES:

Jackman, R.E., and J.M. Jenkins. 2004. Protocol for Evaluating Bald Eagle Habitat and Populations in California.

Placer County Water Agency (PCWA). 2006. Middle Fork American River Hydroelectric Project (FERC No. 2079) Draft Existing Resource Information Report, First Series. June 2006.