

**POTENTIAL RESOURCE ISSUE:**

Protection of special-status bat roosts.

**PROJECT NEXUS:**

Project operations and maintenance activities and potential Project betterments could result in disturbance or removal of special-status bat roosts.

**POTENTIAL LICENSE CONDITION:**

- Special-status bat protection measures

**STUDY OBJECTIVE:**

- Document of special-status bat roosts at Project facilities and recreation facilities.
- Document special-status bat roosts at potential Project betterments.

**EXTENT OF STUDY AREA:**

The study area includes Project facilities and recreation facilities (Project Description Table 5-1).

- The study area will be expanded to include buffer areas (100 feet) 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).

**STUDY APPROACH:**

- Identify and map known occurrences of special-status bat populations based on agency consultation and a review of existing information. This information is presented in the Middle Fork American River Hydroelectric Project (FERC No. 2079) Draft Existing Resource Information Report, First Series (PCWA 2006).
- Survey Project facilities and recreation facilities to identify locations potentially supporting special-status bat roosts.
- Survey potential Project betterments to identify locations potentially supporting special-status bat roosts.
- Conduct roost surveys at locations identified as potentially supporting special-status bats during the summer reproductive season (August through September) when maternal colonies may be present. Each location will be searched for bats or bat sign (i.e., guano, characteristic staining, and culled insect parts). Any structure that cannot be thoroughly investigated to determine species present will be monitored at emergence time using mist netting and acoustic equipment.
  - Mist-netting: Mist-nets will be set up in appropriate locations where active roosts are identified. Captured bats will be identified to species. Other information taken will include sex, age (juvenile or adult), reproductive status, and forearm measurements. Captured bats will be released on-site and echolocation calls recorded at the time of release.

- Acoustic sampling: Sampling of echolocation calls will be conducted using an Anabat II bat detector system (Titley Electronics) to identify bat species. The Anabat system detects bat ultrasonic echolocation calls in the field and uses a z-caim unit to convert the detected signals into time/frequency (kilohertz (kHz)) graphs on a laptop computer. Acoustic units (Anabat bat detector, z-caim, and laptop) will be placed in appropriate settings to collect bat calls. Acoustic units will be operated from sunset until midnight.
- Conduct an additional survey in October at those locations where active roosts are identified to determine seasonal patterns of use. This survey will include using mist nets and acoustic equipment as described above.
- Develop a Geographic Information System (GIS) map of special-status bat roosts and overlay information on Project facilities, recreation facilities, and potential Project betterments.
- Prepare and submit California Native Species Field Survey Forms for all special-status bats recorded to California Natural Diversity Data Base.

**SCHEDULE:**

To be developed in early 2007.

**REFERENCES:**

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