POTENTIAL RESOURCE ISSUE:

Stream-based recreation opportunities.

PROJECT NEXUS:

Project operations modify the flow regime in bypass and peaking reaches, potentially affecting stream-based recreation opportunities.

POTENTIAL LICENSE CONDITION:

- Recreation Plan
  - Instream flow releases
  - Facility modifications
  - Dissemination of flow information

STUDY OBJECTIVES:

Characterize stream-based recreational opportunities.

Assess the need for and feasibility of providing flows on bypass and peaking reaches to enhance stream-based recreation opportunities.

EXTENT OF STUDY AREA:

The study area includes bypass and peaking reaches associated with the MFP (Table REC4-1).

STUDY APPROACH:

Whitewater Boating Assessment

- Map the location of existing whitewater boating runs in bypass and peaking reaches based on published maps and literature, consultation with local and regional whitewater boating user groups, recreation specialists, and site reconnaissance. Preliminary information is provided in the *Middle Fork American River Hydroelectric Project (FERC No. 2079) Draft Existing Resource Information Report, Second Series* (PCWA 2006).
- Describe and characterize each whitewater boating run, including: access points (put-in and take-out), shuttle routes, length of run, portages, level of difficulty, preliminary boatable flow ranges, support facilities, and any known limiting factors. The descriptions will be developed using information contained in published whitewater guides and by interviewing local and regional whitewater boaters, recreation specialists, and site reconnaissance.
- Estimate whitewater boating use using information provided by the USDA-FS (if available), the Auburn State Recreation Area (Auburn SRA), and commercial whitewater boaters.

- Review and summarize information developed by the Auburn SRA through visitor surveys and other studies currently being conducted for the Auburn SRA Management Plan update.
- Develop a list of comparable regional whitewater resources.
- Identify bypass and peaking reaches where flow studies are appropriate (target reaches) in consultation with the Recreation Technical Working Group (TWG).
- Evaluate the feasibility to opportunistically provide study flows using pre-spill or spill releases in target reaches.
- Conduct flow studies, where appropriate,to refine boatable flow ranges in target reaches.
    - Identify channel and flow-dependent factors that could influence boatable flows for each activity type in the target reaches through consultation with local and regional whitewater boating user groups and review of aerial photograph and the Project video.
    - Develop whitewater boating survey instrument in consultation with whitewater recreation specialists to obtain information on physical logistics and the experiential values of whitewater boating runs in the target reaches under different flows.
    - Conduct flow studies in target reaches using a team of boaters with requisite skill levels.
    - Document and record river conditions in the whitewater boating runs during the flow studies using video and photographs.
- Identify flow travel-time in the target reaches during whitewater flow study.
- Identify potential whitewater boating opportunities for each target reach under impaired and unimpaired flows.

Other Stream-Based Recreation Assessment

- Review and summarize information developed by the Auburn SRA through visitor surveys and other studies currently being conducted for the Auburn SRA Management Plan update.
- Summarize data collected as part of the REC 2 - Recreation Opportunities Technical Study Plan (i.e., General User Survey and Activity-Specific Surveys) to describe stream-based recreation activities and the relationship between flow and user experience (satisfaction).
- Review published literature and consult with local stream-based recreation users to obtain additional information on flows (i.e. depths and velocity) that may limit or affect recreation use or experience.
- Characterize usable flow ranges for stream-based recreation using modeling results from the AQ1 - Instream Flow Technical Study.
- Identify stream-based recreation opportunities under unimpaired and impaired flows.

Flow Information Dissemination

- Consult with stream based recreational users, for example whitewater boaters and anglers, to identify target reaches where flow information may enhance stream based recreation opportunities.

- Identify, map, and characterize existing stream gaging stations (location, equipment, and data collection capabilities) in target reaches.
- Characterize what type of flow information is currently available to the public through, for example, existing web sites and flow phones.

SCHEDULE:

To be developed in early 2007.

REFERENCES:

None.

Table REC4-1. Bypass and Peaking Reaches Associated with the Middle Fork Project.

River or Stream	Bypass Reach[1]
Middle Fork American River	French Meadows Dam to Middle Fork Interbay Middle Fork Interbay Dam to Ralston Afterbay
Duncan Creek	Duncan Creek Diversion Dam to the Middle Fork American River Confluence
Rubicon River	Hell Hole Dam to Ralston Afterbay
North Fork Long Canyon Creek	North Fork Long Canyon Diversion Dam to the Confluence of Long Canyon Creek
South Fork Long Canyon Creek	South Fork Long Canyon Diversion Dam to the Confluence of Long Canyon Creek
Long Canyon Creek	Confluence of North and South Forks of Long Canyon Creek to confluence of Rubicon River
	Peaking Reach[2]
Middle Fork American River	Oxbow Powerhouse to the North Fork American River Confluence
North Fork American River	Middle Fork American River Confluence to the Folsom Reservoir High Water Mark

[1] Bypass reaches are those where water is rerouted from the stream or river at a diversion dam and reintroduced below a powerhouse.

[2] Peaking reaches are those reaches where daily and within-day changes in river flow occurs as a result of power releases that are scheduled to follow power demand.