

TABLE OF CONTENTS

7.3 RECREATION SURVEYS (REC 3).....	REC 3-1
7.3.1 Study Objectives.....	REC 3-1
7.3.2 Study Area.....	REC 3-2
7.3.3 Methods.....	REC 3-3
7.3.4 Key Questions.....	REC 3-6
7.3.5 Results.....	REC 3-7
7.3.6 Schedule.....	REC 3-7
7.3.7 References.....	REC 3-7

LIST OF TABLES

NONE

LIST OF FIGURES

NONE

This page intentionally blank.

7.3 RECREATION SURVEYS (REC 3)

7.3.1 Study Objectives

The Recreation Surveys consist of a group of user count, visitor attitude, and other surveys to supplement similar surveys conducted in 1996 through 1998 in the vicinity of the projects. PacifiCorp and Cowlitz PUD conducted the following specific surveys as part of this study: surveys and recreation use counts (land and water); a visitor attitude and preference survey; an angler creel survey; a study of dispersed recreation use adjacent to the projects; a survey of private RV resort owner/managers in communities adjacent to the project; a mail survey of residents in communities adjacent to the project and along the shoreline; and a late season survey of fall hunters and other visitors using project area campgrounds/day use areas. Combined with previous survey data, these surveys provide information on demand and use levels in the study area.

A second survey, called River-Related Recreation Survey, is discussed in a separate study (REC 4). This survey assesses dispersed recreation use in surrounding river areas above and below the reservoirs and on a tributary called Canyon Creek.

The objective of the Recreation Surveys is to assess existing demand and use levels, visitor attitudes and preferences, and perceptions of crowding. The results from the Recreation Surveys were integrated into the Recreation Demand Analysis (REC 2 Appendix 1). Specifically, these survey results were used to:

- **Identify the types, levels, and distribution of use per location and over time** – User count surveys documented visitor use types, levels, and distribution by site and timeframe. Using these data, developed campground and day use site occupancy and utilization levels have been analyzed and updated for the last few years to assess trends. The results of this analysis were fully reported in the 2000 Technical Study Status Reports (PacifiCorp and Cowlitz PUD 2001). These data were also used to develop the results presented in 2 other studies: (1) the Recreation Capacity and Suitability Analysis, included as REC 5 Appendix 1; and (2) the Recreation Needs Analysis, included as REC 6 Appendix 1.
- **Determine if visitors feel crowded** – For the most part, visitors surveyed in the project area did not feel overly crowded; however, area residents felt more crowded compared to other visitors.
- **Determine the frequency, timing, and length of stay of visitors to the study area** – User counts and visitor and area resident surveys documented the frequency, timing, and length of stay of visitors and area residents in the project area.
- **Determine visitor satisfaction and factors that influence satisfaction** – Visitor and area resident surveys documented visitor satisfaction levels in the project area. Visitors are generally satisfied with their visits to the project area.
- **Identify preferences for facility improvements and new facilities** – Visitor and area resident surveys documented visitor preferences for facility improvements and

new facilities and services in the project area. Visitors were generally satisfied with existing facilities; however, some would like to see additional restrooms and shower facilities, while others would like improved boat launches.

- **Determine visitor willingness to pay for improved facilities** – Visitor and area resident surveys documented willingness to pay for an improved recreation program or related services. Those surveyed were generally split regarding willingness-to-pay issues. The results of this analysis were fully reported in the 2000 Technical Study Status Reports (PacifiCorp and Cowlitz PUD 2001). This survey was conducted prior to the implementation of the day use site fee by PacifiCorp in 1999.
- **Identify demographic characteristics of the visitors** – The demographics of visitors surveyed were fully reported in the 2000 Technical Study Status Reports (PacifiCorp and Cowlitz PUD 2001). Approximately a quarter to a third of all visitors to the project area, depending upon which site or reservoir is surveyed, come from the Portland/Vancouver metropolitan area – The remaining visitors come from Western Washington, primarily from the Kelso/ Longview/Woodland area.
- **Identify factors that contribute to conflicts between users** – Visitor and area resident surveys documented user conflicts in the project area. Relatively few user conflicts were reported. Occasional conflicts between personal watercraft users (jetskiers) and other boaters, and loud campers at night in campgrounds, were the comments noted.
- **Identify what percentage of use at the reservoirs may be attributed to the Monument or other non-project areas** – Visitor surveys documented what percentage of use at the reservoirs may be attributed to the Monument or other non-project areas. The results of this analysis were fully reported in the 2000 Technical Study Status Reports (PacifiCorp and Cowlitz PUD 2001). These data were also presented in the Recreation Needs Analysis, included as REC 6 Appendix 1 to this 2001 Technical Report. Approximately 22 to 23 percent of visitor use at project recreation facilities such as PacifiCorp campgrounds was that of visitors whose primary destination was the Monument or the Gifford Pinchot National Forest.
- **Identify what percentage of use at the 3 selected Kalama River basin agency sites may be attributed to the hydroelectric projects** – Visitor surveys revealed that project-related use at these 3 sites is minimal (10-20 percent).

7.3.2 Study Area

The primary study area for most of the visitor surveys includes the 3 project reservoirs, Swift No. 2 project area, and areas surrounding the reservoirs and the Swift bypass reach. The study area for the Dispersed/Displaced Recreation Visitor Survey also includes recreation sites and use areas along Forest Roads 81 and 90, including Merrill Lake, the Kalama Horse Camp area, and others selected by agencies in 1997-1998. Annual recreation use data for surrounding Gifford Pinchot National Forest (GPNF), Monument, and DNR lands were solicited from these land management agencies as available. The

Private Non-Project Recreation Survey study area includes businesses along the Lewis River Road corridor near the projects. The Area Resident Survey study area includes the communities of Ariel, Cougar, Amboy, and Woodland, plus 7 homeowner associations that surround the 3 project reservoirs.

7.3.3 Methods

7.3.3.1 Study Area

The primary study area for the Recreation Surveys includes the 3 project reservoirs, Swift No. 2 project area, and an approximately 1/2-mile buffer area surrounding each body of water. The creel survey conducted by WDFW will focus on fishing activity at the reservoirs, river, and power canal (the survey at Yale Lake is completed). Dispersed recreation/project-related use will be the focus of a somewhat broader study area encompassing areas along Forest Road 81 near Merrill Lake and Kalama Horse Camp and Upper Lewis River along Forest Road 90. Annual recreation data for surrounding areas that have been compiled by others, including GPNF, Monument, and DNR lands, will be requested and reviewed as available. An interview survey of local private recreation providers will include RV parks and resorts in the area. A mail survey of local area residents will include the communities of Woodland, Ariel, Amboy, and Cougar and several reservoir shoreline developments (homeowner associations).

7.3.3.2 Study Design

The Recreation Surveys consist of 7 investigations (in addition to the River-Related Recreation Survey, which is described in a separate study plan [see REC 4]). Once all data from these surveys have been collected, they will be compiled and analyzed and presented in the Recreation Demand Analysis (see REC 2). These data will ultimately be used in the preparation of the Recreation Needs Analysis. The subtasks in the Recreation Surveys include:

1. Recreation use counts (land and water) at Lake Merwin and Swift Reservoir (completed in 1998 [PacifiCorp and Cowlitz PUD 1999]);
2. Visitor attitude and preference survey conducted at Merwin, Yale (short version only), and Swift reservoirs (completed in 1998 [PacifiCorp and Cowlitz PUD 1999]);
3. Angler creel survey (to be completed by WDFW);
4. Study of dispersed recreation use adjacent to the study area (completed in 1998 [PacifiCorp and Cowlitz PUD 1999]);
5. Survey of private RV resort owner/managers in communities adjacent to the project (1999);
6. Mail survey of residents in communities adjacent to the project (1999); and

7. Late season survey of fall hunters and other visitors affecting project campgrounds/day use areas (1999).

The analytical methods and field techniques for each of these tasks are described in the following section.

7.3.3.3 Analytical Methods, Field Techniques, and Reporting

Recreation Use Counts (Land and Water) at Lake Merwin and Swift Reservoir (1998)

This subtask was initiated in 1998 and the data were presented in the 1998 Recreation Survey Results (PacifiCorp and Cowlitz PUD 1999). Recreation user count observations were made during the peak season (Memorial Day weekend to Labor Day weekend) and the non-peak or shoulder season (May and September). User counts were not conducted at Yale Lake because recent data exist from the previous 1996-97 study (PacifiCorp 1999). The work needed to complete this task is described below.

Researchers will further analyze and summarize the data collected during the 1998 field surveys, looking at trends, implications for project-related impacts, major conclusions, possible areas needing further study, and comparisons with the earlier survey data conducted at Yale Lake (Yale Recreation FTR) (PacifiCorp 1999).

PacifiCorp staff will collect and analyze peak and non-peak season daily campsite paid receipt/occupancy data and twice-weekly vehicle counter data. In addition, PacifiCorp has added 5 vehicle counters at boat launch sites below Merwin and will also monitor these vehicle counters. For areas outside of the Merwin/Yale/Swift area, PacifiCorp will request USFS-generated annual vehicle counts for the 3 roadways leading into the GPNF and Monument and incorporate these data into survey results.

Boater count data collected in 1998 will be further analyzed and graphically depicted by reach or segment of the reservoir for Merwin and Swift. These will be used to assess the mix of boating and potential conflicts and boater densities in coves and areas of concentrated use.

Visitor Attitude and Preference Survey (Recreation Visitor Survey) (1998)

This subtask was initiated in 1998; the data were presented in the 1998 Recreation Survey Results (PacifiCorp and Cowlitz PUD 1999). The survey was conducted during the peak season (Memorial Day weekend to Labor Day weekend) and the non-peak or shoulder season (May and September). A short-form survey was conducted at Yale Lake. The work needed to complete this task is described below.

PacifiCorp will further analyze and summarize the data collected during the 1998 field surveys, looking at trends, implications for project-related impacts, major conclusions, possible areas needing further study, and comparisons with the earlier survey data conducted at Yale Lake (Yale Recreation FTR) (PacifiCorp 1999).

Angler Creel Survey (to be performed by WDFW)

WDFW will conduct an angler creel survey. The data provided will be compiled in the Recreation Demand Analysis (if received by mid-2000). These observations will likely identify the following information: number of anglers in the boat or group; number of hours spent fishing; number of species of fish caught; number and species of legal-sized fish harvested; overall satisfaction of anglers with their catch; number of fish released; and specific suggestions anglers might have to improve the facilities or experience. The aquatic researchers will also count vehicles and vehicles with trailers in the boat launch parking lots. The specific methodologies of the creel survey are discussed in a separate study plan.

Study of Dispersed Recreation Use in Areas Adjacent to the Project Area (1998)

This subtask was initiated in 1998, with results presented in the 1998 Recreation Survey Results (PacifiCorp and Cowlitz PUD 1999). The survey was conducted during the peak season only (Memorial Day weekend to Labor Day weekend). The work needed to complete this task is described below.

PacifiCorp will further analyze and summarize the data collected during the 1998 field surveys, looking at trends, implications for project-related impacts, major conclusions, possible areas needing further study, and comparisons with the earlier survey data conducted at Yale Lake (Yale Recreation FTR) (PacifiCorp 1999).

Survey of Private RV Resort Owner/Managers in Communities Adjacent to the Project (1999)

This subtask was not initiated in 1998; however, the survey form has been prepared and updated for 1999 (see attached survey forms at the end of the Recreation section). This study addresses private outdoor recreation providers in the Lewis River valley between Woodland and Cougar, WA. The focus of this study is to identify the role and niche that these providers play in meeting the needs of visitors in the study area, in particular providing RV-accessible campsites with utility hook-ups. The study sites will include (if open) the private camping areas of Lewis River RV Park/Echo Store, Big Foot Trailer Park, Lone Fir Resort and Trailer Park, Volcano View RV Campground (currently closed), and Eagle's Cliff Store and Campground. The Lewis River Golf Course operator and the personal watercraft rental outfit near Ariel will also be included as private outdoor recreation providers in the immediate area. As applicable, occupancy counts (RV and tent sites, rooms, and cabins) by week will be requested from RV park and resort service providers, as well as information relating to the expansion potential of each of the areas and triggers for future development, if any. Managers or owners of these facilities will be interviewed to determine the nature of their visitors' needs in the area, as well as the effects that the presence of hydroelectric projects have on their businesses. The information for this study will be collected on an open-ended interview basis, with owner/managers of the private campgrounds approached individually by a survey technician. Individual campers will not be surveyed in this study. The results will be summarized.

Mail Survey of Residents in Communities Adjacent to the Project and Along the Reservoir Shoreline (1999)

This subtask was not initiated in 1998; however, the survey form has been prepared and updated for 1999 (see attached survey forms at the end of the Recreation section). Comments from agencies, NGOs and local citizens indicate that the opinions of local residents were not generally heard and should be documented. Crowding appears to be increasingly impacting local residents, heavy traffic, and other issues caused by high use levels. As a result, local residents in the Lewis River valley will comprise the participants of a mail study. Specifically, residents from the local communities (Woodland, Ariel, Amboy, and Cougar) and several reservoir shoreline developments (homeowner associations) will be mailed a survey form. Names will be stratified and randomly selected for participation in the mail survey from the area telephone book and homeowner association membership lists. A representative sample of shoreline residents will be included. Included in the mail survey will be seasonal and annual residents living adjacent to the project reservoirs. If homeowner association lists are not available for use, homeowner association managers will be asked to distribute surveys to their membership directly. Approximately 300-450 completed surveys will be analyzed. This mail survey will explore local residents' use of the recreation areas associated with the hydroelectric projects. Area residents' frequency, timing, and patterns of use will be explored. Their impressions regarding the location, number, quality, and condition of recreation facilities, and the need for alternative or additional facilities or services, if any, will be investigated. Local residents' impressions of day-use fees at project recreation areas will also be part of the survey. The results will be entered into a database and summarized.

Late Season Visitor Survey (1999)

This survey was not initiated in 1998; however, the survey form has been prepared and modified in 1999 (see attached survey forms at the end of the Recreation section). This task addresses late season fall use, principally by hunters, affecting project campgrounds/day-use areas. Hunters who stay at Swift Camp and/or Cresap Bay Campground will be the focus of this task. The format and sampling for this survey will be the same as that of the Recreation Visitor Survey conducted in 1998 (PacifiCorp and Cowlitz PUD 1999). This survey was conducted in October 1999 on 3 weekend days.

7.3.3.4 Response To Comments

Previous RRG comments have been incorporated into this study plan in 1998.

RRG members reviewed and approved all 1999 survey forms during August, September, and October 1999 (see attachment that follows the study plans).

7.3.4 Key Questions

The Recreation Surveys helped to answer several "key" watershed questions that were discussed in the Recreation Supply Analysis (7.1) and Recreation Demand Analysis (7.2) sections of this report (please refer to these other sections for responses):

- What is the current and future demand for recreation in the basin, and how does demand differ among types of recreation?
- Do visitors desire new facilities?
- Do visitors perceive any conflicts or problems related to pool level?
- What are visitor perceptions of user fees charged for use of recreational facilities?
- What types of trails are in demand?
- Do visitors feel that the facilities, maintenance, management, and support systems for trails are adequate?
- What is the demand for more campgrounds in the basin?
- Do project area visitors affect the use of other nearby recreational areas during the peak use period?
- Do visitors feel that the facilities, maintenance, management, and support systems for campgrounds are adequate?
- Do reservoir pool levels and the river flow level below the project affect recreational use in these areas?
- What is the demand for shoreline recreational developments, such as campgrounds and picnic areas?
- Do visitors perceive any conflicts between hunting and other recreational activities?

7.3.5 Results

As indicated, results of the Recreation Surveys have been incorporated into the Recreation Demand Analysis (REC 2). Results of that study are summarized in Section 7.2 of this report.

It should be noted, however, that the Angler Creel Survey was conducted as a separate task by the WDFW, with results reported separately in AQU 7.

7.3.6 Schedule

This study is complete.

7.3.7 References

PacifiCorp. 1999. License Application for the Yale Hydroelectric Project, FERC Project No. 2071. Includes Final Technical Reports as Technical Appendices. Portland, Oregon.

PacifiCorp / Cowlitz PUD
Lewis River Hydroelectric Projects
FERC Project Nos. 935, 2071, 2111, 2213

PacifiCorp and Cowlitz PUD. 1999. 1998 Lewis River Recreation Survey Results. Lewis River Hydroelectric Projects, FERC Nos. 2111, 2213, 2071, and 935. Portland, Oregon and Longview, Washington.

PacifiCorp and Cowlitz PUD. 2001. 2000 Technical Study Status Reports for the Lewis River Hydroelectric Projects. Portland, OR and Longview, WA. March 2001.