



**PUBLIC UTILITY DISTRICT NO. 1 of CHELAN COUNTY**  
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November 6, 2007

Honorable Kimberly D. Bose, Secretary  
FEDERAL ENERGY REGULATORY COMMISSION  
888 First Street, NE  
Washington, DC 20426

Re: **Lake Chelan Hydroelectric Project No. 637-022**  
**Article 401 – Final USDA Forest Service Site-Specific Erosion Control Plan dated**  
**November 6, 2007**

Dear Secretary Bose:

The Federal Energy Regulatory Commission (Commission) issued the “Order on Offer of Settlement and Issuing New License”<sup>1</sup> (License) and “Order on Rehearing”<sup>2</sup> for the Lake Chelan Hydroelectric Project (Project) on November 6, 2006, and April 19, 2007, respectively. License Article 401 and Appendix A, Article 1(a)(2) requested the Public Utility District No. 1 of Chelan County, Washington (Chelan PUD or Licensee), to file the following plan for Commission approval.

- Article 401(a): Requirement to File Plans for Commission Approval and Requirement to Consult (*paraphrased*)

Various conditions of this license required by Ordering Paragraph D and found in Appendix A, Article 1(a)(2), require the licensee to prepare the Site-Specific Erosion Control Plans at least one year before ground-disturbing activity occurs for approval by some or all of the signatories of the Lake Chelan Settlement Agreement.

In accordance with the above License requirements, Chelan PUD hereby files the Final USDA Forest Service Site-Specific Erosion Control Plan dated November 6, 2007, for habitat and ground-disturbing activities on National Forest Service Lands necessary to implement the erosion control implementation plan.

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<sup>1</sup> 117 FERC ¶ 62,129

<sup>2</sup> 119 FERC ¶ 61,055

The plan describes the erosion control work anticipated to be conducted on sites 11, 55, 58 and 59. Appendix C provides a record of consultation with the USDA Forest Service during the development of the plan.

Chelan PUD and the USDA Forest Service would like to begin implementation of the erosion control work in March 2008. Chelan PUD respectfully requests expedited review and approval of this plan by December 31, 2007.

Please do not hesitate to contact me or Janel Duffy (509-661-4400) of my office regarding any questions or comments regarding this plan.

Sincerely,



Michelle Smith  
Licensing and Compliance Manager  
michelle.smith@chelanpud.org  
(509) 661-4180

Enclosures: Original, one hard copy, 8 CDs

cc: Division of Hydropower Administration and Compliance  
Federal Energy Regulatory Commission  
Mail Code DHAC, PJ-12  
888 First Street NE  
Washington, DC 20426

Erich Gaedeke, FERC-PRO

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# **USDA FOREST SERVICE SITE-SPECIFIC EROSION CONTROL PLAN**

*USDA-FS EROSION SITES 11, 55, 58 AND 59*

<h2><b>Final</b></h2>
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**LAKE CHELAN HYDROELECTRIC PROJECT  
FERC Project No. 637**

**November 6, 2007**



**Public Utility District No. 1 of Chelan County  
Wenatchee, Washington**

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## ***EXECUTIVE SUMMARY***

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The Federal Energy Regulatory Commission (FERC) Order on Offer of Settlement and Issuing New License (License) and Order on Rehearing for the Lake Chelan Hydroelectric Project No. 637 (Project) were issued November 6, 2006, and April 19, 2007, respectively, to the Public Utility District No. 1 of Chelan County (Chelan PUD). Article 401(a) and Appendix A, Article 1(a)(2), of the new Project License requires Chelan PUD to submit to FERC site-specific erosion control plans for habitat and ground-disturbing activities on National Forest Service Lands necessary to implement the erosion control implementation plan. This plan describes the USDA Forest Service site-specific erosion control work anticipated to be conducted between 2007 and 2010, including sites 11, 55, 58 and 59, as required by the new License, as specified in the License Articles, and the Lake Chelan Comprehensive Settlement Agreement, October 8, 2003 (Settlement Agreement). This plan provides a map of proposed activities, a description of the land management area designation for the location of the proposed activity and the applicable standards and guidelines, a description of the designs by location, designs and mitigation measures considered, data collected from surveys, biological evaluations or consultation as required, noxious weed control measures, and an environmental analysis or other appropriate National Environmental Policy Act (NEPA) analysis of the proposed action that meets USDA Forest Service requirements for implementing NEPA.

## ***SECTION 1: INTRODUCTION***

The Federal Energy Regulatory Commission (FERC) Order on Offer of Settlement and Issuing New License (License) and Order on Rehearing for the Lake Chelan Hydroelectric Project No. 637 (Project) were issued November 6, 2006, and April 19, 2007, respectively, to the Public Utility District No. 1 of Chelan County (Chelan PUD). The Project License requires the treatment and monitoring of non-easement erosion sites located on USDA Forest Service Lands on the shores of Lake Chelan, as described in the Lake Chelan Comprehensive Settlement Agreement (Settlement Agreement), October 8, 2003, and its attachments, which is Appendix A to the Project License.

Project License Article 401(a) Condition Appendix A, Articles 1(a)1, 1(a)2, and 1(a)3 require Chelan PUD to complete and submit an Erosion Control Implementation Plan, Site-Specific Erosion Control Plans, and an Erosion Monitoring and Maintenance Plan, respectively. The Erosion Control Implementation Plan and the Monitoring and Maintenance Plan have been combined into one plan that describes the 35 sites that will be treated, the treatment schedule, and the near-term and long-term monitoring that will be conducted. This plan is the first of many Project License Article 401(a) Condition Appendix A, Article 1(a)(2), Site-Specific Erosion Control Plans for the USDA Forest Service sites (site-specific plans). These plans, which must be filed at least one year before ground-disturbing activity occurs, will be developed every few years, as work on the 35 sites progresses. The components of the site-specific plan relate to implementing erosion control and monitoring measures that are specified in Appendix A to the License, and in Section 2.2.1 of Chapter 1 of the Lake Chelan Comprehensive Plan, which is Attachment B of the Settlement Agreement, as stated below.

### ***2.2.1 Site-Specific Implementation Plans***

Site-specific plans will be prepared by Chelan PUD and approved by USDA Forest Service for habitat and ground disturbing activities on National Forest System Lands required by the New License, including activities contained within resource management plans required by the New License that will be prepared subsequent to issuance of the New License. Site-specific plans for activities will be prepared two years in advance of required implementation dates.

Site-specific plans shall include:

1. A map depicting the location of the proposed activity.
2. A description of the USDA Forest Service land management area designation within the Forest Plan for the location of the proposed activity and the applicable standards and guidelines.
3. A description of locations, designs and mitigation measures considered, including implementation and effectiveness monitoring.
4. Data collected from surveys, biological evaluations or consultation as required by regulations applicable to ground or habitat disturbing activities on National Forest System lands in existence at the time the plan is prepared.
5. Noxious weed control measures included as part of mitigation.

6. An environmental analysis or other appropriate National Environmental Policy Act (NEPA) analysis of the proposed action that meets the USDA Forest Service requirements for implementing NEPA.

General concepts of large woody debris (LWD) are discussed in Chapter 3 of the Comprehensive Plan, which describes beneficial uses, LWD characteristics, and general standards and placement concepts.

This site-specific plan has been developed to provide the necessary information to conduct erosion control work at four sites located in the lower portion of the upper lake (see Figure 1). These sites and the estimated times for conducting work during drawdown are as follows:

1. Mitchell Creek Site 59 – Winter 2007 to Spring 2008
2. Deer Point Site 58 – Winter 2007 to Spring 2008
3. Corral Creek Site 11 – Winter 2008 to Spring 2009
4. Prince Creek Site 55 – Winter 2008 to Spring 2009

We anticipate completing treatment at Sites 59 and 58 during the next available drawdown period (Winter 2007 to Spring 2008). However, the contract for construction will include a contingency clause to complete work during drawdown in years 2008-2009 if work cannot be accomplished during drawdown in years 2007-2008 caused by unusually high water or severe weather that compromises lake travel and operations.

The second erosion contract will cover work at Sites 11 and 55 during the drawdown of years 2008-2009, with a contingency for construction, if needed, in years 2009-2010.

The organization of this plan is in sections that relate to specific clauses in Section 2.2.1 of Chapter 1 of the Lake Chelan Comprehensive Plan. Each section begins with the relevant requirements of the License, followed by a description of the methods that will be used to monitor and report compliance with the License.

## ***SECTION 2: SITE LAND MANAGEMENT AREA DESIGNATION***

All four of the erosion sites proposed in this plan are classified as Developed Recreation (RE-1). Forest-wide standards and guidelines for soil improvement apply to RE-1 sites, which will allow the soil improvement actions proposed in this plan. In addition to generic direction of the Land and Resource Management Plan for the Wenatchee National Forest (USFS, 1990), all of the Lake Chelan watershed assessments including the Middle Chelan Watershed Assessment (USFS, 1999), North Shore of Lake Chelan Watershed Assessment (USFS, 1998), and Upper Chelan Watershed Assessment (USFS, 2003) call for varying forms of treatment or remedial actions for shoreline erosion.

## ***SECTION 3: LOCATION, DESIGN, MONITORING***

### ***3.1 Location of Sites***

All of the sites in this plan are located northwest of Wapato Point, in the Lucerne Basin of Lake Chelan. Mitchell Creek Campground (Site 59) is the nearest, easily accessible, boat-in campground to the City of Chelan on the north shore of lake (see Figure 1). Deer Point Campground (Site 58) is approximately 6.5 miles farther up lake than Mitchell Creek Campground, also on the north shore. These sites are two of the lower Lucerne Basin's more popular mid-size campgrounds.

Corral Creek Campground (Site 11) is located approximately nine miles uplake from Twenty-five Mile Creek State Park (see Figure 1). It is the nearest boat-in campground to the City of Chelan, located on the south shore of Lake Chelan. Prince Creek Campground (Site 55) is located approximately 18 miles uplake from Twenty-five Mile Creek State Park on the north shore of Lake Chelan (see Figure 1). It is a large mid-lake campground and the start of the Lakeshore Hiking Trail.

### ***3.2 Design – Baseline Data and Treatments***

Each site will be repaired with a variety of treatments. As work progresses in the implementation process and knowledge is gained, it is anticipated that new types or combinations of treatment will be developed.

Treatment designs will start with the basic site sketches and original survey soil information, the site observations and the slope profiles contained in the Inventory of Shoreline Erosion Lake Chelan and Bypass Reach Study Report, Final (CPUD, 2000). These original sketches were further modified with proposed treatment areas identified on the sketches in the Erosion Control Treatments and Concepts for Lake Chelan, Okanogan and Wenatchee National Forests, Final (CPUD, 2001). This body of information is the base from which each set of the site-specific Forest Service erosion control plans will be developed over the implementation period.

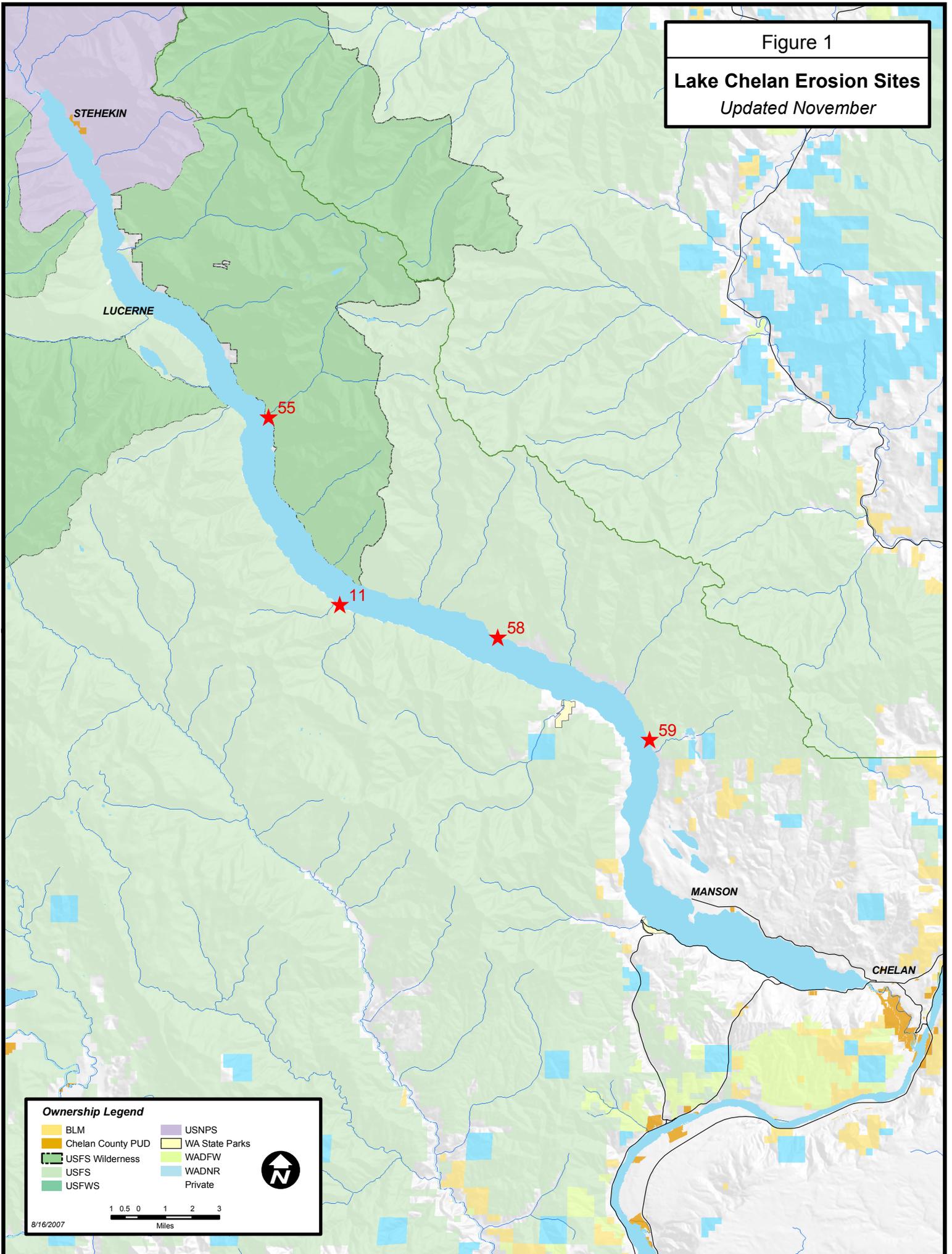
The anticipated treatment for the sites covered in this plan (sites 59, 58, 11 and 59) are presented below.

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Figure 1

**Lake Chelan Erosion Sites**

*Updated November*



**Ownership Legend**

- |                   |                |
|-------------------|----------------|
| BLM               | USNPS          |
| Chelan County PUD | WA State Parks |
| USFS Wilderness   | WADFW          |
| USFS              | WADNR          |
| USFWS             | Private        |



1 0.5 0 1 2 3  
Miles

8/16/2007

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### 3.2.1 Erosion Control Treatments for Site 59 – Mitchell Creek Campground

At the Mitchell Creek Campground, approximately 190 lineal feet will be treated with single rock or double rock treatment, and 305 lineal feet will be treated with three-quarter to full treatment. The specifics of the treatment anticipated by treatment zone are presented in Table 1.

Special factors at this site include an easy site profile, gentle beach slope, fair amounts of LWD naturally present, and five sets of steps for recreation access. Portions of the site have a nice gravelly beach; most of the site has high natural vegetation.

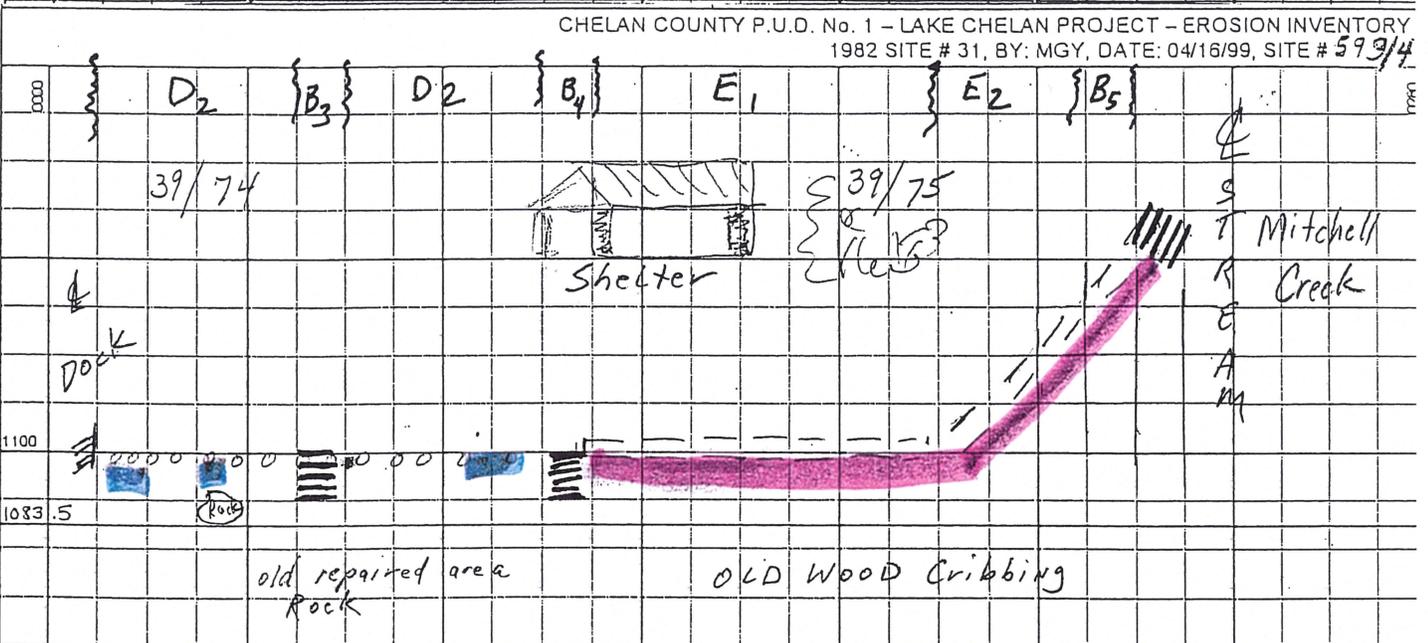
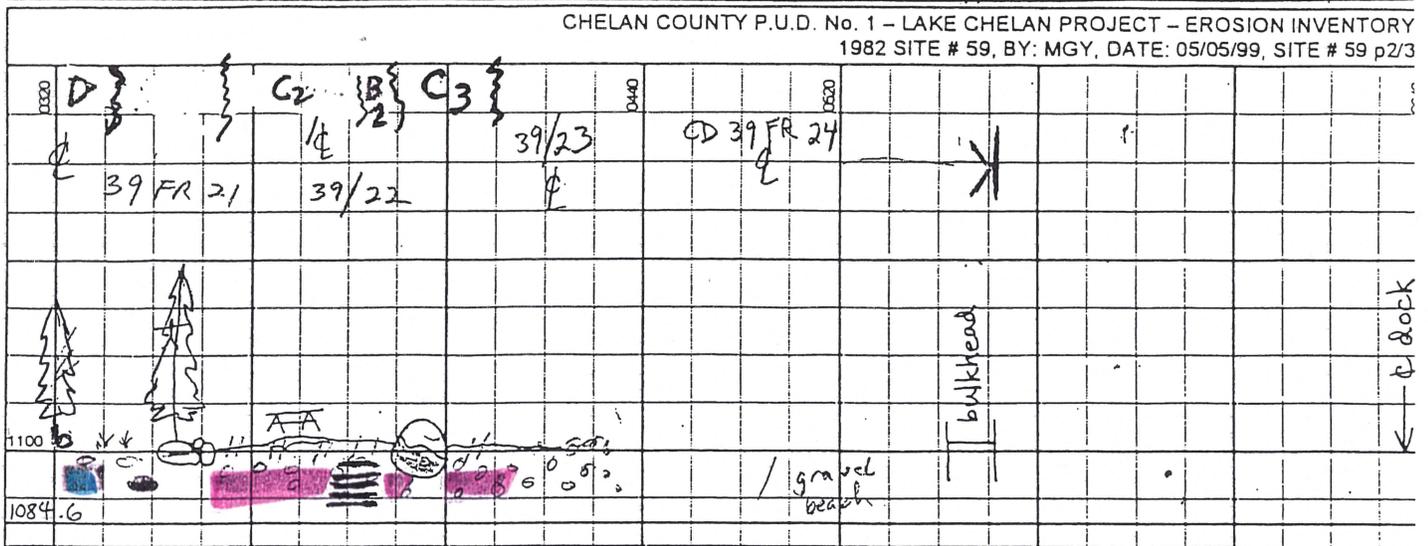
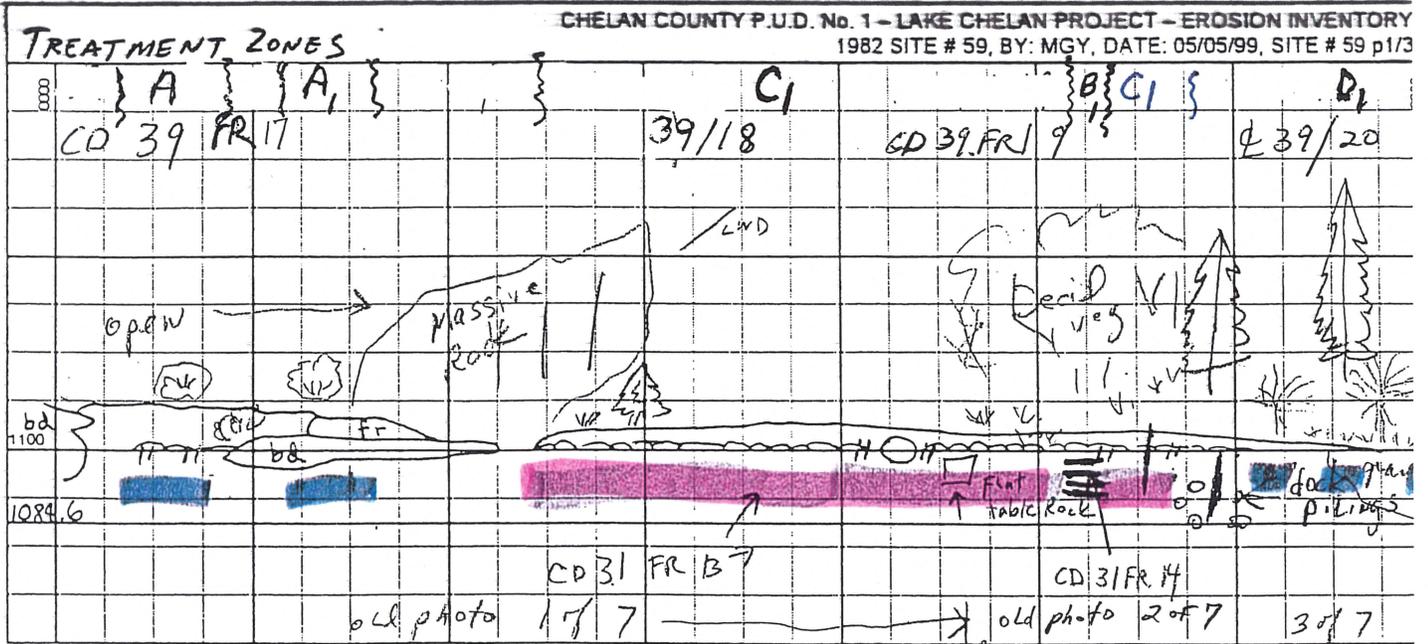
**Table 1: Treatment Zones for Site 59– Mitchell Creek Campground**

<b>Treatment Zone</b>	<b>Length (feet)</b>	<b>Treatment Description</b>
A	20	Single large rock, with horizontal LWD. No planting treatments.
A1	20	Single large rock, w/ horizontal LWD, No planting treatments
C1	135	Enhanced Placed Rock, w/ scattered Horizontal LWD
B1	3-5	Rock step
D1	30	Single / double rock placement, w/ scattered Horizontal LWD
C2/3	40	Enhanced Placed Rock, with steps in middle
B2	3-4	Rock steps
D2	30	Scattered single/double rock in weak spots
B3	3-4	Rock steps
B4	3-4	Rock steps
E1	70	3/4 enhanced placed rock with top log and gravel fill, re-armor failing old wood crib wall
E2	40	3/4 enhanced placed rock with top log and gravel fill, re-armor missing old wood crib wall
B5	3-4	Rock steps
F, F1	40	Single placed rock with horizontal LWD and vegetation treatments
G	50	Double placed rock with horizontal LWD and vegetation treatments

Location of treatment zones are further described in graphs and photos below, and the construction drawings provided in Appendix A.

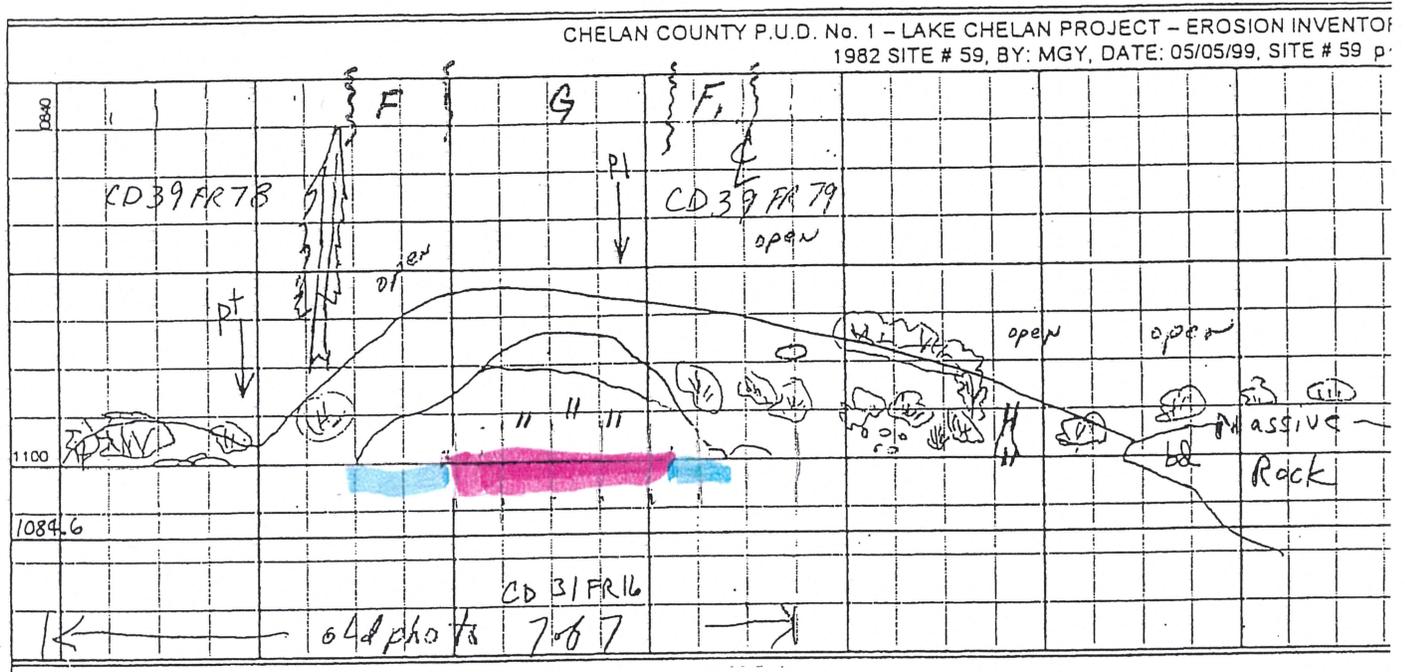
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# Erosion Control Work for Site 59- Mitchell Ck. Campground



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# Erosion Control Work for Site 59- Mitchell Ck. Campground

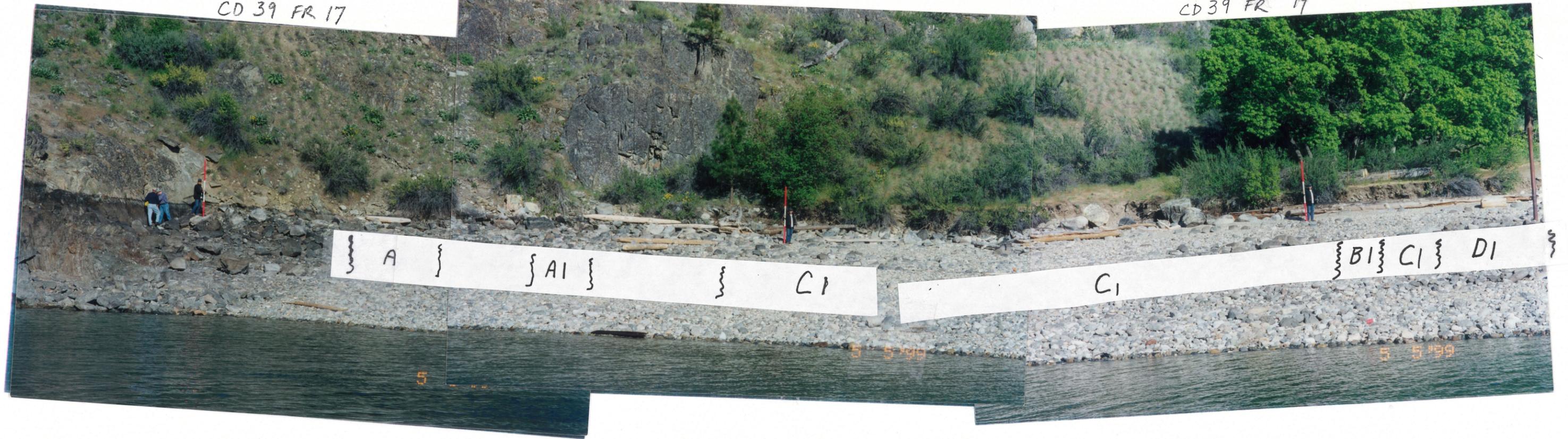


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CD 39 FR 17

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CD 39 FR 19



CD 31 FR 14



CD 31 FR 13

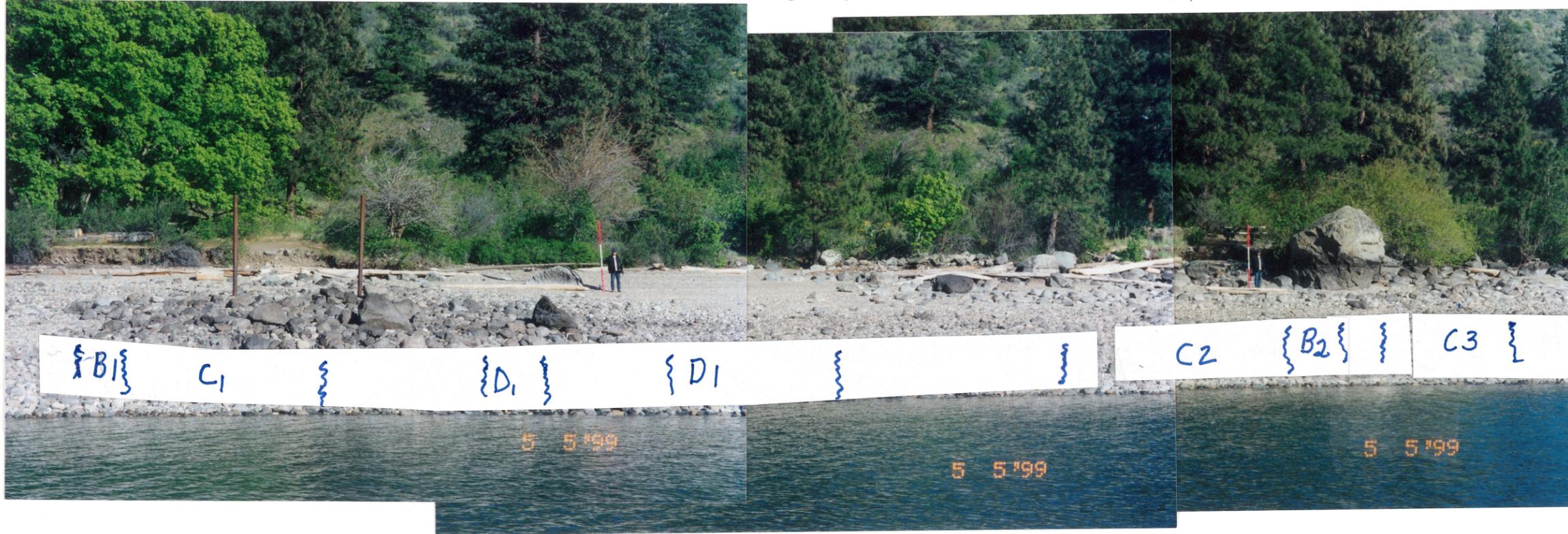


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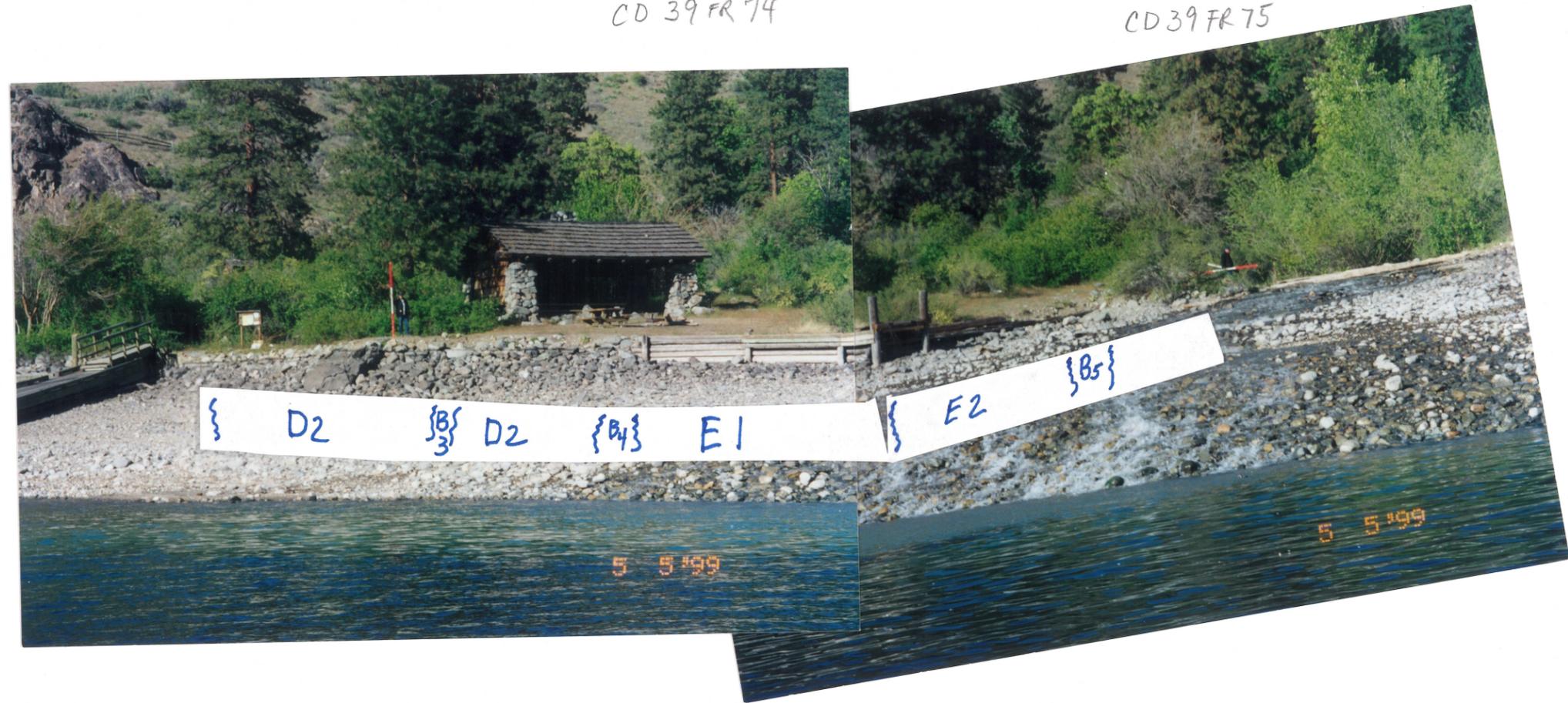
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Site 59 – Mitchell Creek Campground



Close up view of treatment area G and grading into F1.

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**3.2.2 Erosion Control Treatments for Site 58– Deer Point Campground (sites A and B)**

At the Deer Point Campground, approximately 170 lineal feet will be fully treated shoreline, and 140 lineal feet will be treated with single rock placement and LWD. The specifics of the treatment anticipated by treatment zone are presented in Table 2.

Special factors at this site include an easy site profile, gentle beach slope, fair amounts of LWD naturally present, and four sets of steps for recreation access. Portions of the site have a nice gravelly beach; most of the site has high natural vegetation.

**Table 2: Treatment Zones for Site 58– Deer Point Campground**

<b>Treatment Zone</b>	<b>Length (feet)</b>	<b>Treatment Description</b>
A1	75	Enhanced placed rock, w/ horizontal LWD, No planting treatment
B1	3-4	Rock steps
C	30	Single rock placement, w/ horizontal LWD
B2	3-4	Rock steps
D	50	Single rock placement, w/ scattered horizontal LWD
E	40	Rock steps
D	50	Scattered single rock placement, w/ horizontal LW
B3	3-4	Rock steps
F	20	Scatter of additional toe protection at the base of existing wood crib wall
B4	3-4	Rock steps with rocked side high flow stream anchor
A2	80	Enhanced placed rock w/ vegetation treatment

Location of treatment zones are further described in graphs and photos below, and the construction drawings provided in Appendix A.

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**Site 58 – Deer Point Campground**



**Start of treatment area A1**



**Exposed tree root close-up of area A1**

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**Site 58 – Deer Point Campground**



**Location of B1 steps to recreation site**



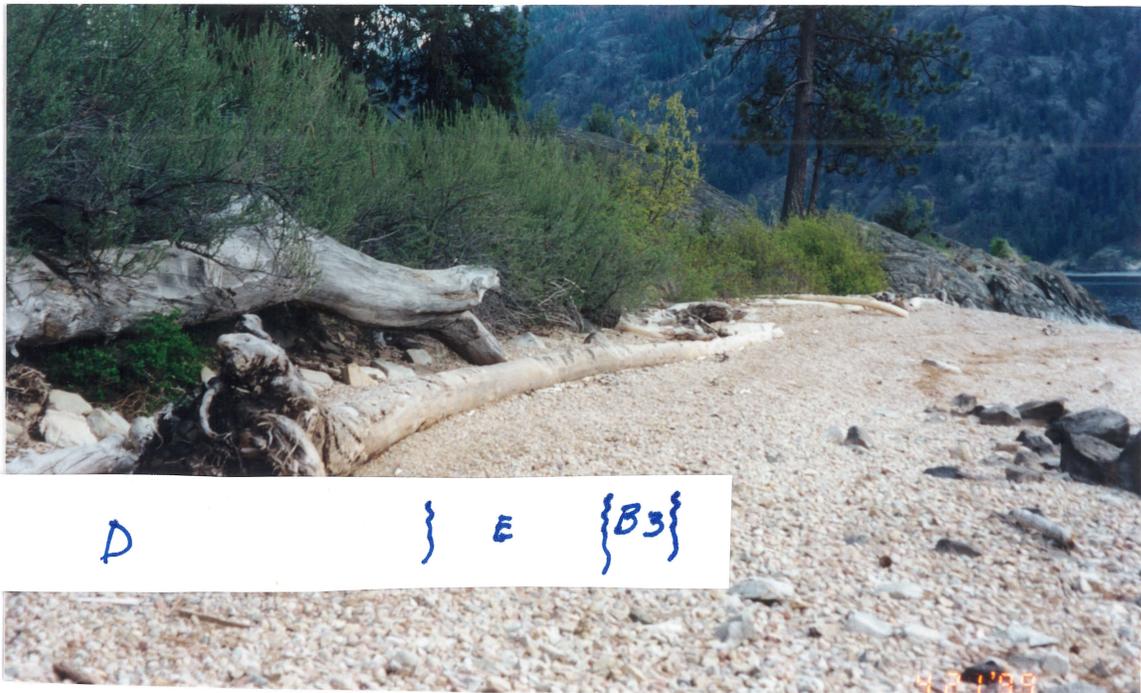
**Uplake view  
treatment  
B2  
D  
E**

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Site 58 – Deer Point Campground



Shoreline view of treatments C single rock, B2 steps, and D single rock w LWD



Down lake view of treatment areas D, E, and B3

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**Site 58 – Deer Point Campground**



**Shoreline view of treatment area F scattered single rock**



**Location of treatment B4 rock steps and A2**

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**Site 58 – Deer Point Campground**



**Shoreline view of treatment area A2 (midpoint photo)**



A2



**Shoreline view end of treatment area A2**

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**3.2.3 Erosion Control Work for Site 55– Prince Creek Campground**

At the Prince Creek Campground, a total of 610 lineal feet will be treated of which 200 lineal feet will receive full treatment, 240 lineal feet will be treated with double rock placement, and 170 lineal feet will be treated with single rock placement..

The special factors at this site include a steep site profile in some locations that, depending on lake level, may require that the work be conducted from a barge. For this site additional rock materials will be brought in from a local source.

**Table 3: Treatment Zones for Site 55 – Prince Creek Campground**

<b>Treatment Zone</b>	<b>Length (feet)</b>	<b>Treatment Description</b>
A	20	Scattered single rock w/ vegetation
B	90	Enhanced placed rock to re-armor failing wood crib wall
C1	90	Enhanced placed rock, with recreation access trail along top, Special recreation accommodation
C2	20	Enhanced placed rock
D1	20	Scattered single rock placement with vegetation
D2	20	Scattered single rock placement with vegetation
D3	40	Scattered single rock placement with vegetation and horizontal LWD
E1	120	Double rock placement with vegetation and horizontal LWD
E2	20	Scattered double rock placement w/ vegetation and w/ LWD
E3	30	Scattered double rock placement w/ vegetation and w/ LWD
E4	70	Scattered double rock placement w/ vegetation and w/ LWD
D4	30	Single rock w/ horizontal LWD
D5	20	Scattered single rock w/ horizontal LWD
D6	20	Scattered single rock w/ horizontal LWD

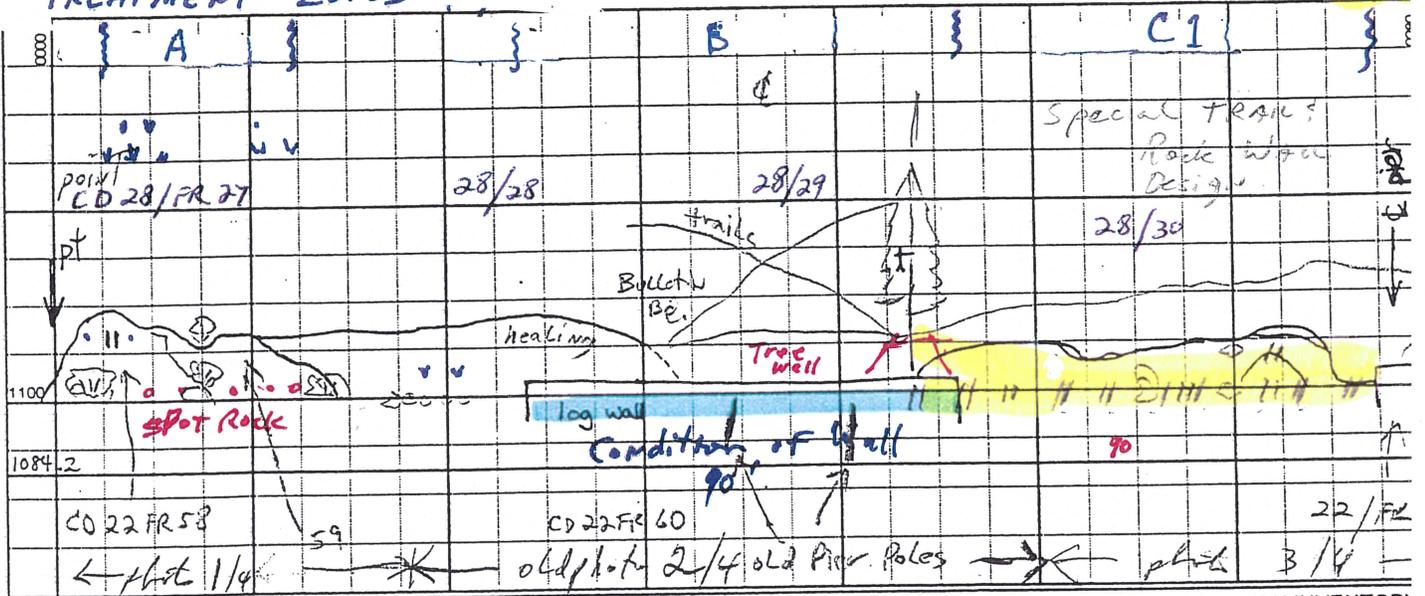
Location of treatment zones are further described in graphs and photos below, and the construction drawings provided in Appendix A.

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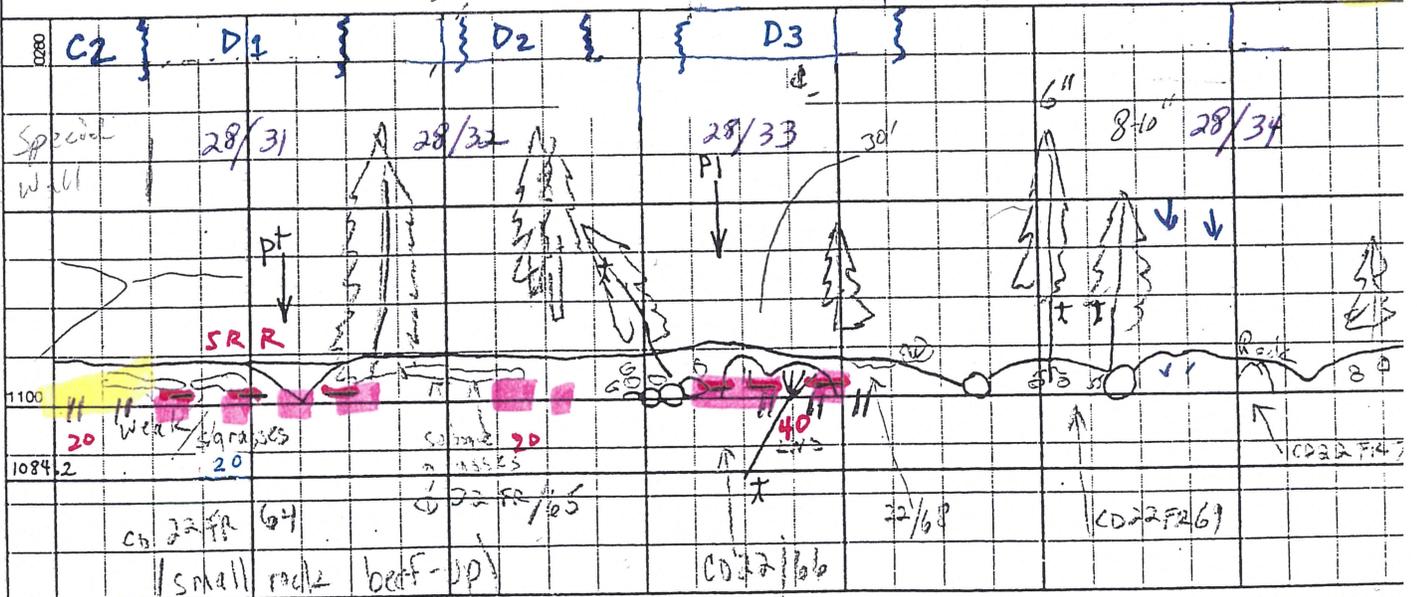
# Erosion Control Work for Site 55- Prince Ck. Campground

CHELAN COUNTY P.U.D. No. 1 - LAKE CHELAN PROJECT - EROSION INVENTORY  
 1982 SITE # 55, BY: MGY, DATE: 04/30/99, SITE # 55 p1/5

## TREATMENT ZONES



CHELAN COUNTY P.U.D. No. 1 - LAKE CHELAN PROJECT - EROSION INVENTORY  
 1982 SITE # 55, BY: MGY, DATE: 04/30/99, SITE # 55 p2/5

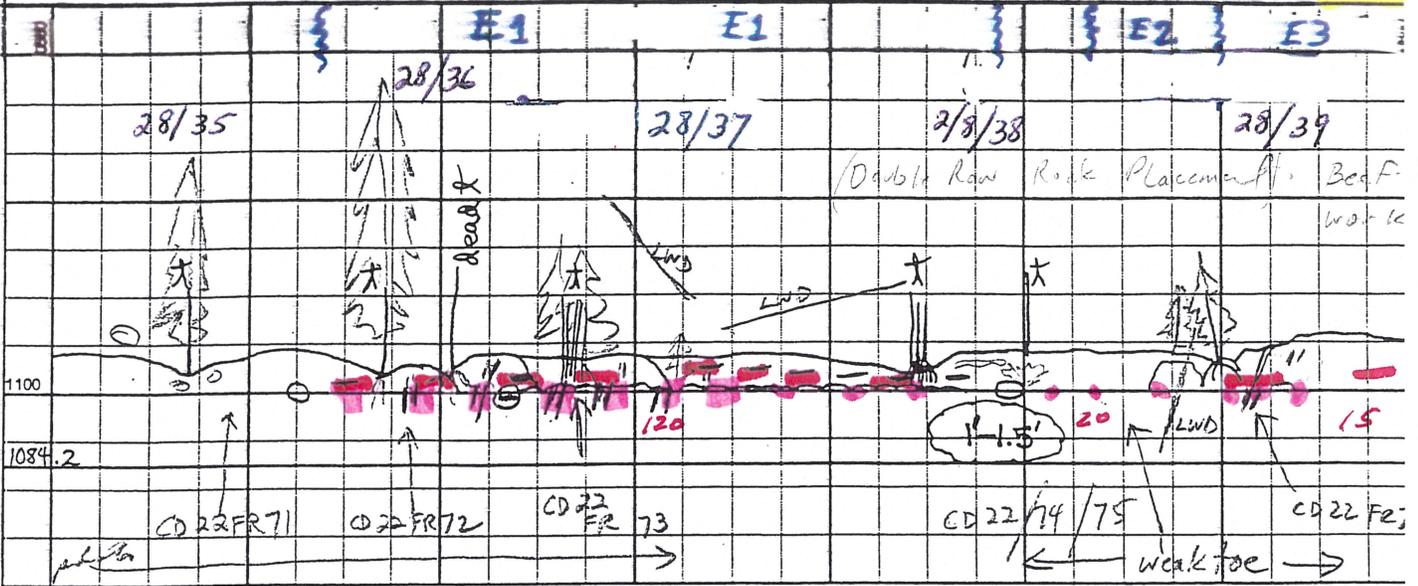


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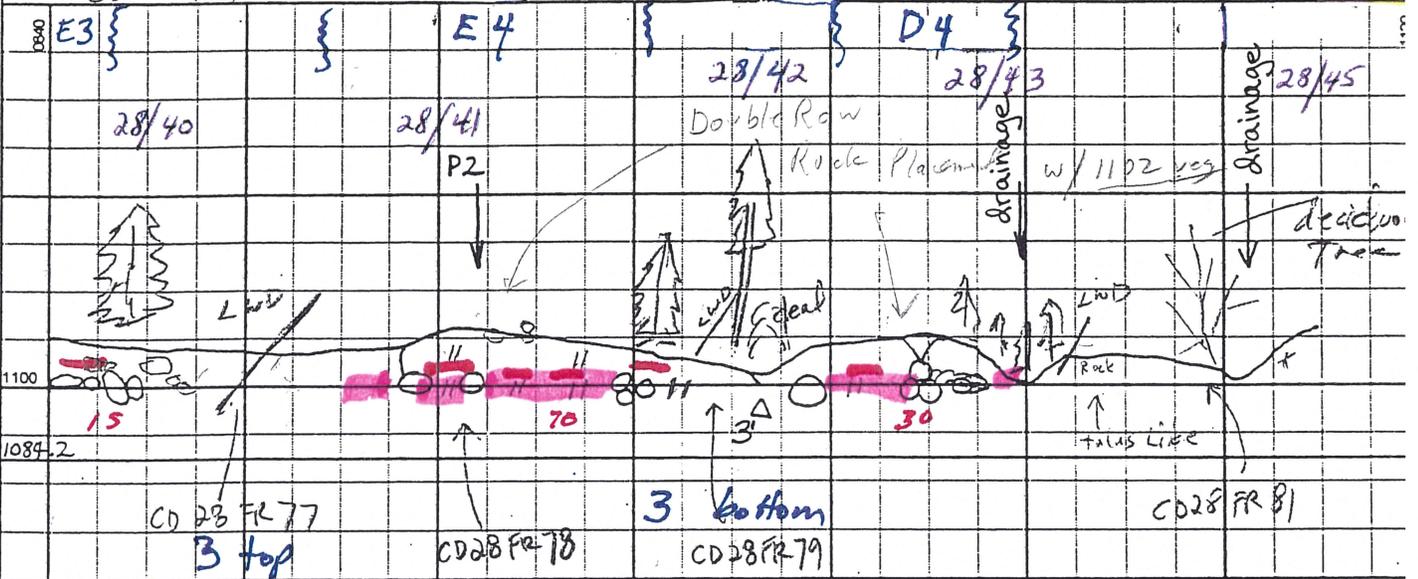
# Erosion Control Work for Site 55- Prince Ck. Campground

CHELAN COUNTY P.U.D. No. 1 - LAKE CHELAN PROJECT - EROSION INVENTORY  
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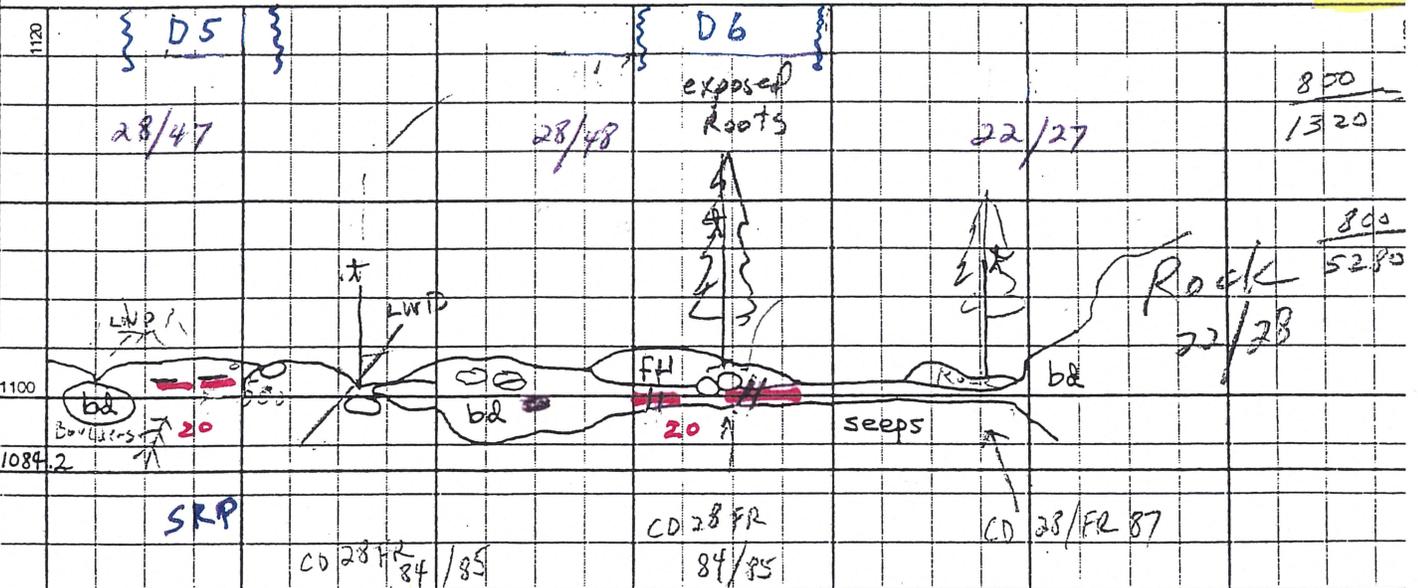
## TREATMENT ZONES



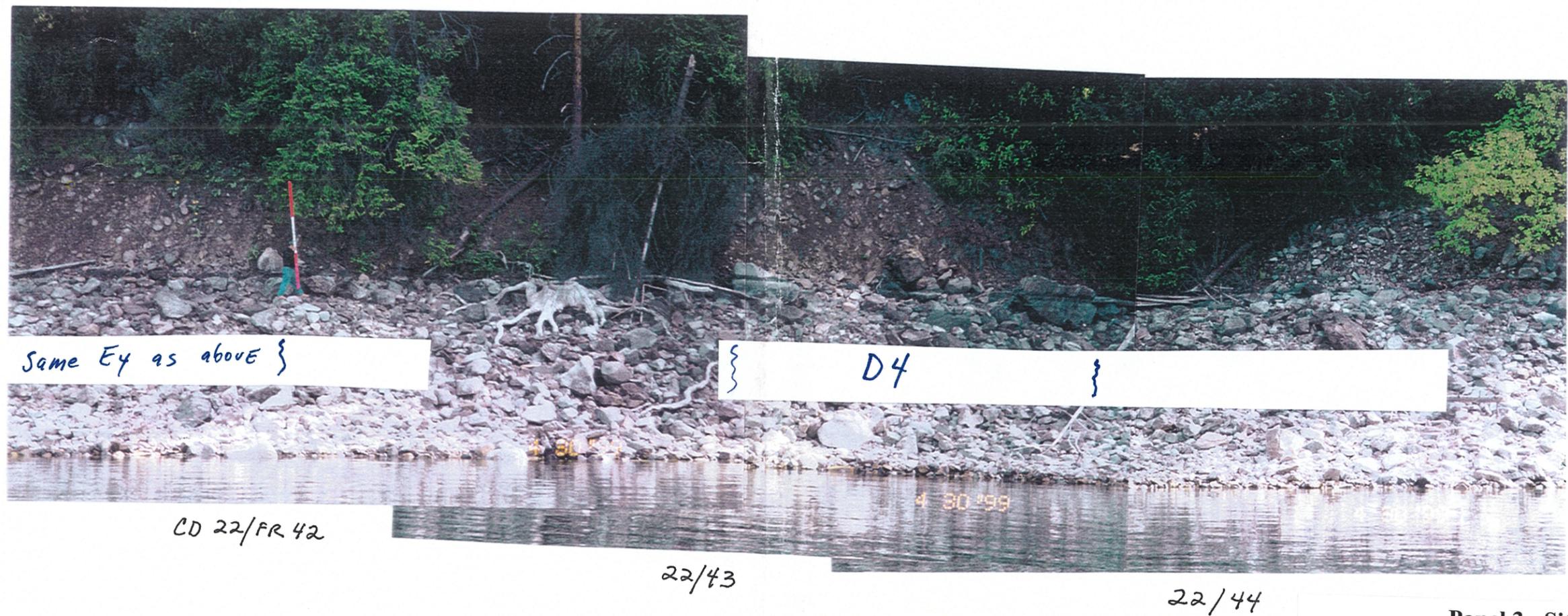
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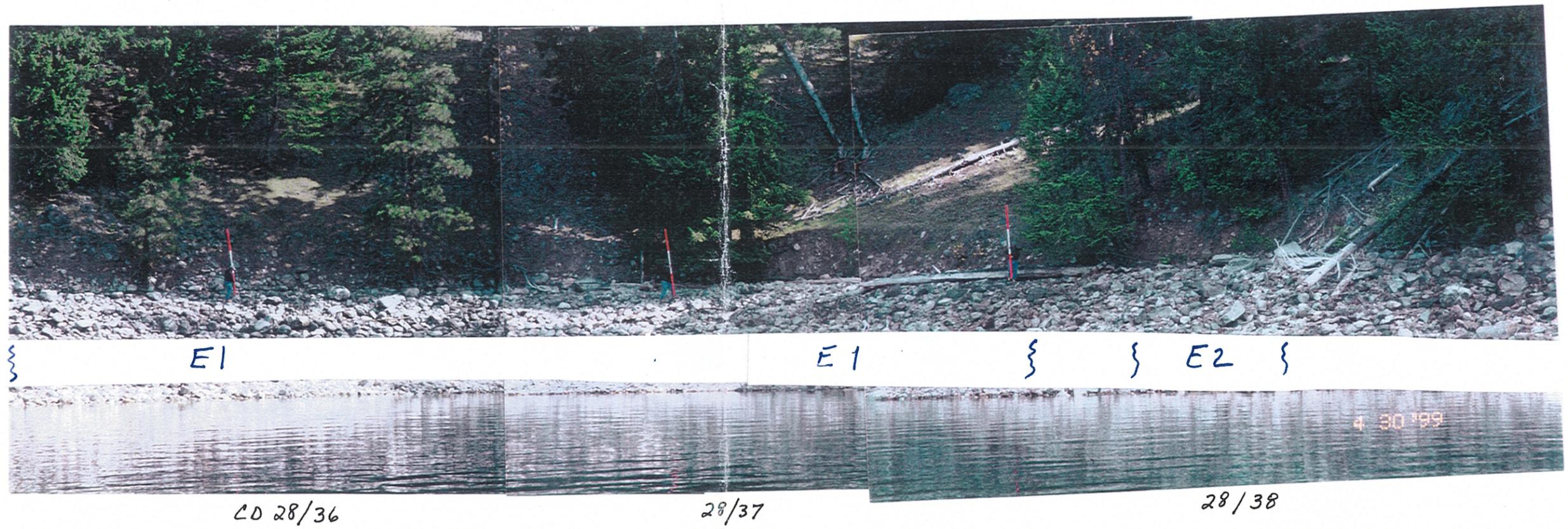
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 1982 SITE # 55, BY: MGY, DATE: 04/30/99, SITE # 55 p5/5



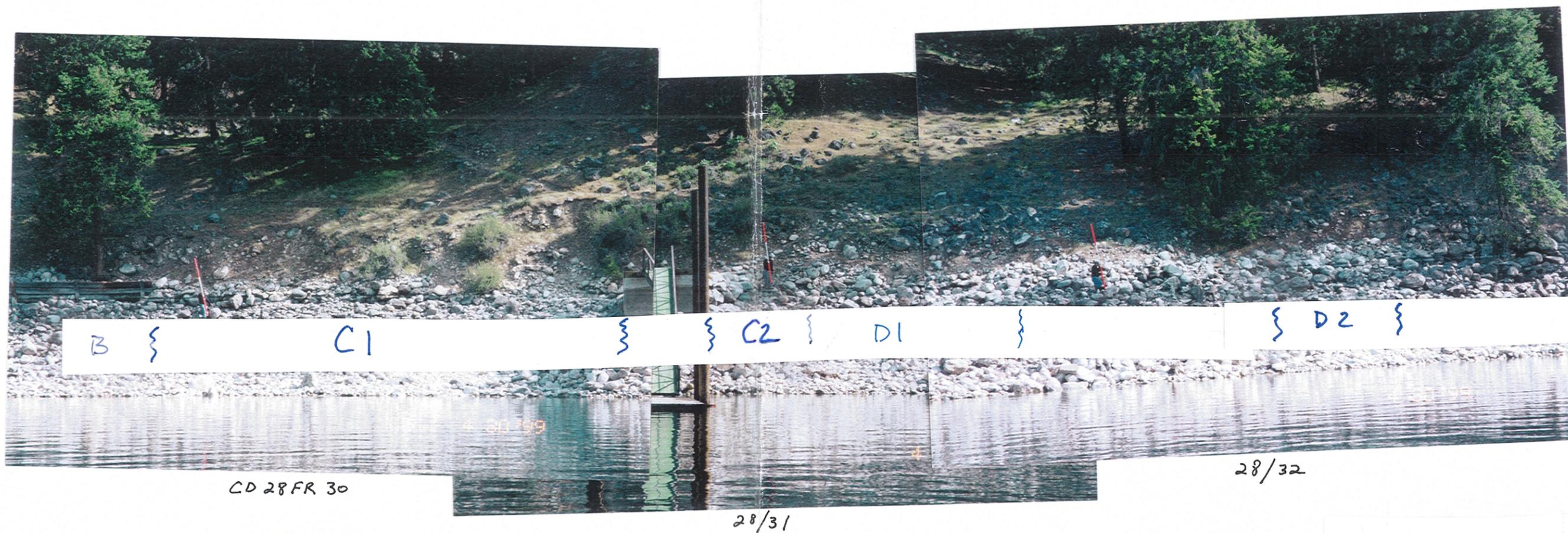
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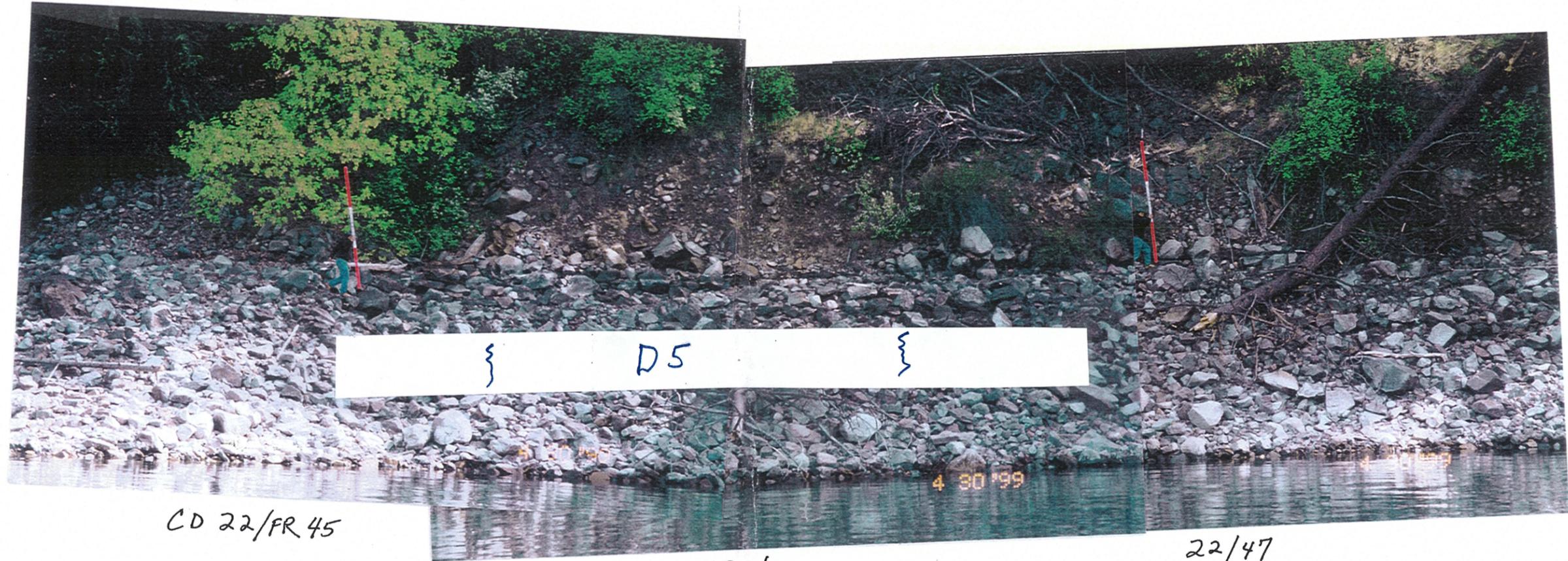


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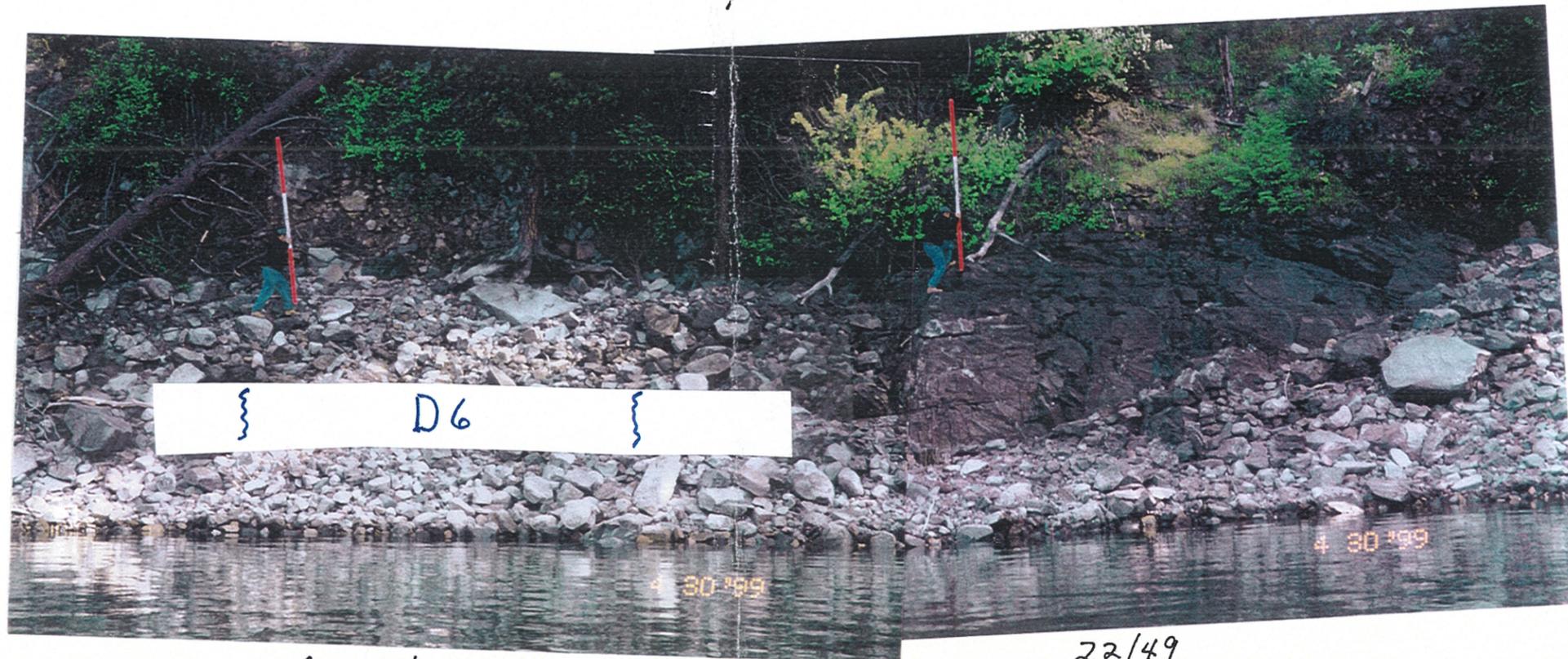
Site 55 - Prince Creek Campground



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### 3.2.4 Erosion Control Work for Site 11– Corral Creek Campground

The Corral Creek Campground is a small site with a total of 230 lineal feet to be treated. Therefore, it will be treated with Site 55. The specifics of the treatment anticipated by treatment zone are presented in Table 4. Like Site 55, the primary special factor includes a steep profile that, depending on lake level, may require using a barge to perform the work.

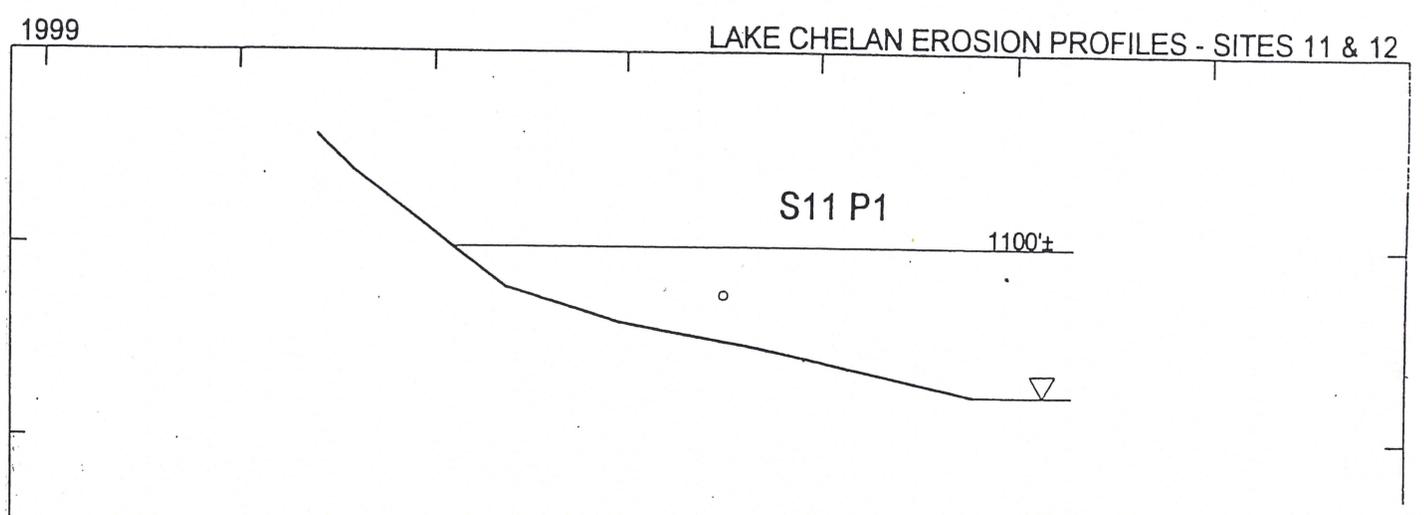
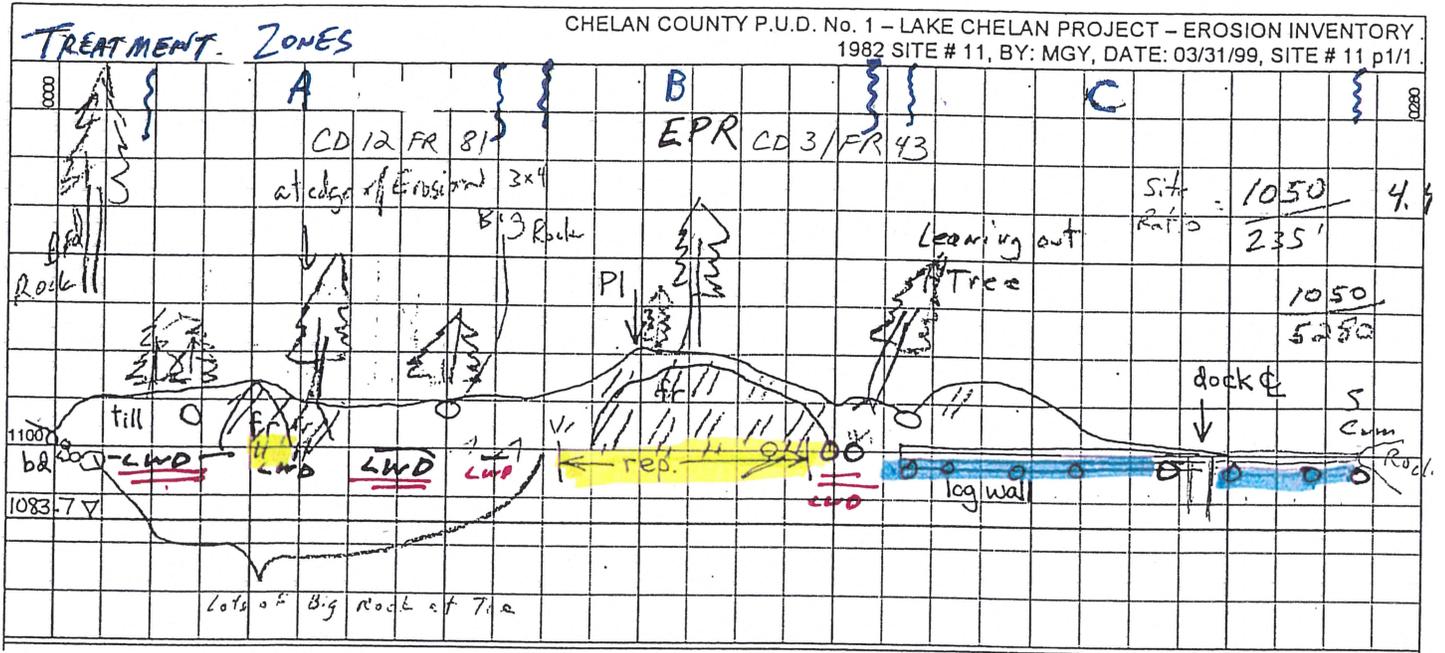
**Table 4: Treatment Zones for Site 11 – Corral Creek Campground**

<b>Treatment Zone</b>	<b>Length (feet)</b>	<b>Treatment Description</b>
A	70	Single / double rock placement, with horizontal Large Woody Debris (LWD), and planting treatments
B	70	Enhanced Placed Rock, with vegetation treatments
C	90	Enhanced Placed Rock over old wood crib wall, with vegetation treatments, rock to 1103, fill behind created sill

Location of treatment zones are further described in graphs and photos below, and the construction drawings provided in Appendix A.

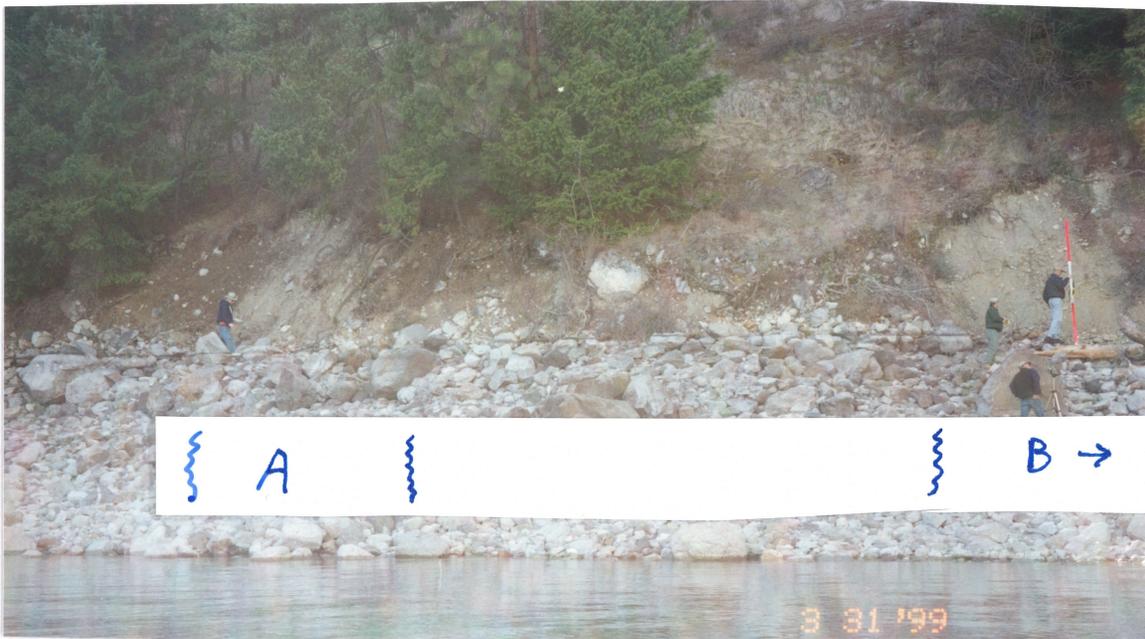
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# Erosion Control Work for Site 11- Corral Ck. Campground



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## Site 11 – Corral Creek Campground



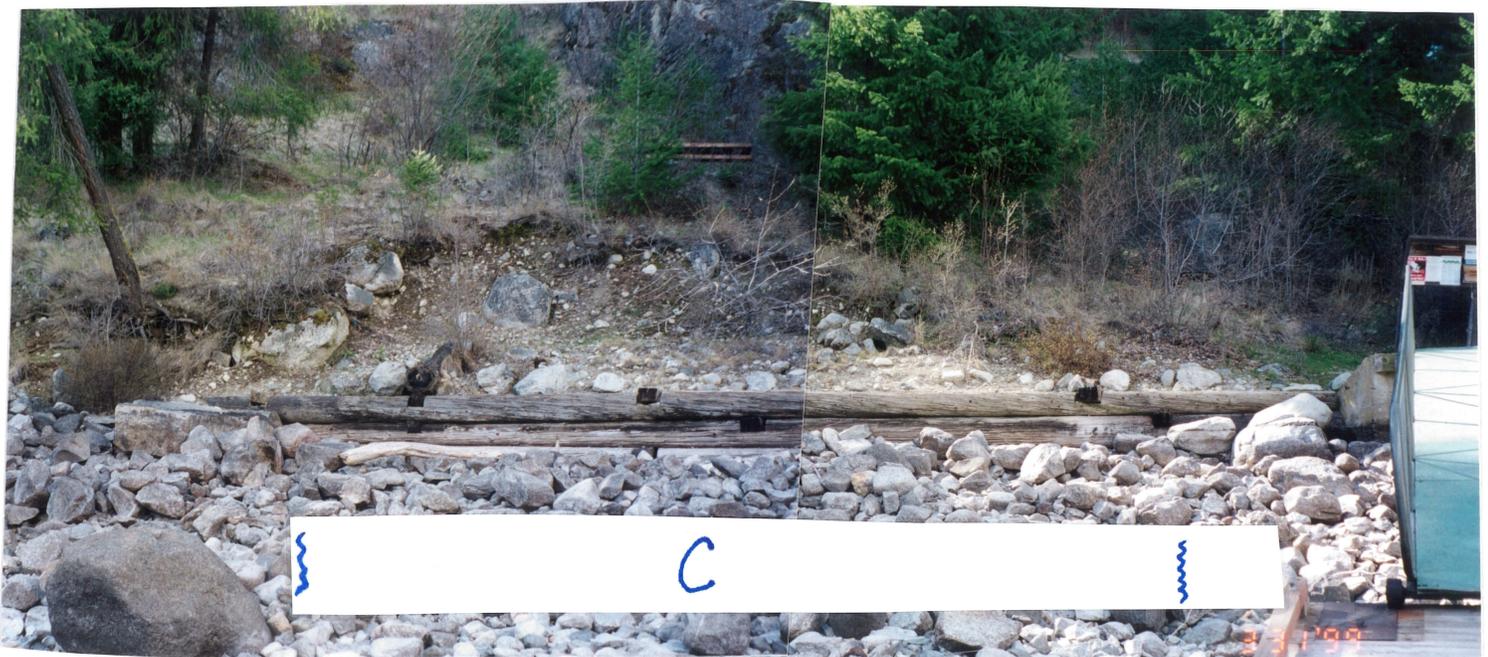
Shoreline view of treatment area A



Shoreline view of treatment area B

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**Site 11 – Corral Creek Campground**



**Shoreline view of treatment area C Left of dock**



**Shoreline view of treatment area C right of dock**

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### **3.3 Mitigation Measures Included**

Sites 11, 55, 58 and 59 were all defined as Group 1 sites in the Settlement Agreement, indicating they are all located in high-use recreation areas (campgrounds). Sites 55, 58 and 59 have access needs that were also incorporated into the designs.

Noxious weed control will be addressed by bringing limited foreign soils into the sites. The biologists will not have any seed materials imbedded within them. Large rock will be coming from a weed-free certified pit. Specific north shore and south shore seed supplies will be gathered for future plantings. Sites 59 and 58 will only have native cuttings taken locally for vegetation. Noxious weed control will be a part of the design to control and limit terrestrial disturbance.

### **3.4 Implementation & Effectiveness Monitoring**

The effectiveness monitoring schedule is based on when each site will be treated. The timelines for site treatment are outlined in Chapter 1 of the Lake Chelan Comprehensive Management Plan. The monitoring will be focused on evaluating four distinct focus areas:

1. Slope stabilization with an objective of reaching a 90 percent success rate in the treated areas.
2. Presence of native vegetation with an objective of reaching ratio of native to non-native vegetation similar to that found nearby on undisturbed slopes on 90 percent of treated area. This will take into account the percentage of rock, and bare spots as this is a very dry hostile natural environment.
3. Presence of noxious weeds with an objective of not introducing any new noxious weeds through the course of treatment. Implementation methodologies are designed to exclude the introduction of noxious weeds. Treated areas will be monitored on an ongoing basis to determine if the methodologies employed are sufficient to meet the project objectives.
4. Stability of LWD with an objective of minimizing movement. Large loose objects could become hazardous to the site users.

All four focus areas will be monitored one, three and five years following treatment at the sites. For efficiency, some site monitoring may be conducted when additional vegetation is planted following the initial stabilization. LWD inspections and slope stability inspections will be conducted during drawdown times to allow inspection of anchoring devices. Noxious weed and vegetation inspections will occur after leaf-out, typically in the May to June time period. These inspections will be coordinated with other erosion control implementation steps to provide travel and time efficiencies when possible.

## **SECTION 4: NEPA**

After review and consultation, the Forest Service accepted the Final Environmental Assessment (FEA) for Hydropower for Lake Chelan Hydroelectric Project, FERC Project No. 637, FERC, October 2003, for erosion control treatments. The FEA is the master document for the permits required for this work. Site-specific permits will tier to the FEA. Information detailed in the FEA includes previous survey work, measurements and maps of proposed site-specific treatment areas at 10-foot increments and specific treatments. This information has not materially changed since the issuance of the FEA. To ensure that site-specific permitting requirements are met, Project Files, including biological evaluation data, cultural resources, and consultation, will be created or updated, and included in each site-specific plan to provide additional site-specific information in a timely manner over the life of the License. Project Files for this plan are as follows.

### **4.1 Permitting**

The programmatic Biological Evaluation and site-specific consistency forms, completed by Mallory Lenz, Forest Service District Wildlife Biologist, and sent to U.S. Fish and Wildlife Service, August 1, 2007, are provided as Appendix B. The Forest Service received concurrence with the conclusions of the Biological Evaluation on Site 59, Mitchell Creek Campground, and Site 58, Deer Point Campground, on August 14, 2007 (Appendix B).

Consultation with the U.S. Army Corps of Engineers will occur through the permitting process. Tribal entities will be consulted Nation-to-Nation and within the Lake Chelan Cultural Forum, as stated below. The U.S. Fish and Wildlife Service will review annual site-specific program consistency analysis forms (PCF), which are tiered to a larger programmatic analysis of the entire project over the 25 years of erosion control treatment. A Joint Aquatic Resources Permit Application Form (JARPA) was mailed to the Washington Department of Fish and Wildlife, Washington Department of Ecology, U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers on August 10, 2007. The JARPA is the formal request for Nationwide Permit 13 Bank Stabilization from the U.S. Army Corps of Engineers, and addresses the Washington Department of Ecology 401 Water Quality Certification Permit and the Washington Department of Fish and Wildlife's Hydraulic Project Application (HPA) under the 2005 HPA Memorandum of Understanding. A copy of the JARPA application is included in Appendix B.

### **4.2 Cultural Resources**

Completion of the cultural documentation required for this work under the *Forest Service Programmatic Agreement with the Washington State Historic and Preservation Officer, Appendix B*, is the responsibility of the Forest Service archaeologist. Reports are confidential and will be kept on file at the Forest Service. Nation-to-Nation letters to the Confederated Tribes of the Colville Reservation and the Confederated Tribes and Bands of the Yakama Indian Nation were sent July 20, 2007, and are included as Appendix C.

***APPENDIX A: CONSTRUCTION DRAWINGS OF PROPOSED  
TREATMENTS***

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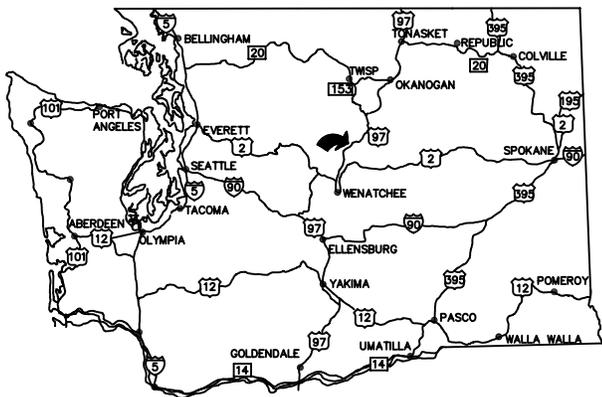
UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

REGION 6

OKANOGAN-WENATCHEE NATIONAL FORESTS  
CHELAN RANGER DISTRICT

CONSTRUCTION DRAWINGS FOR

**Lake Chelan**  
**Erosion Control Treatments**



KEY MAP OF WASHINGTON SHOWING LOCATION OF PROJECT

**INDEX TO SHEETS**

<u>NO.</u>	<u>DESCRIPTION</u>
1	TITLE
2	T1 – ENHANCED PLACED ROCK
3	T2 – ENHANCED PLACED ROCK WITH POCKET
4	T3 – DRRP
5	T4 – ROCK STEP INCLUSION
6	LWD-P-1 – DRRP WITH PERPENDICULAR LWD
7	LWD-P-2 – ENHANCED PLACED ROCK W/PERPENDICULAR LWD
8	LWD-H-1 – ENHANCED PLACED ROCK W/HORIZONTAL LWD

DRRP = DOUBLE ROW ROCK PLACEMENT  
LWD = LARGE WOODY DEBRIS  
DRAWINGS NOT TO SCALE

Approved By	
District Ranger _____	Date _____
Forest Engineer _____	Date _____

Recommended By	
Zone Engineer _____	Date _____
Development Engineer _____	Date _____

Reviewed By	
Reviewed by Hydrologist _____	Date _____
Reviewed by Fish Biologist _____	Date _____

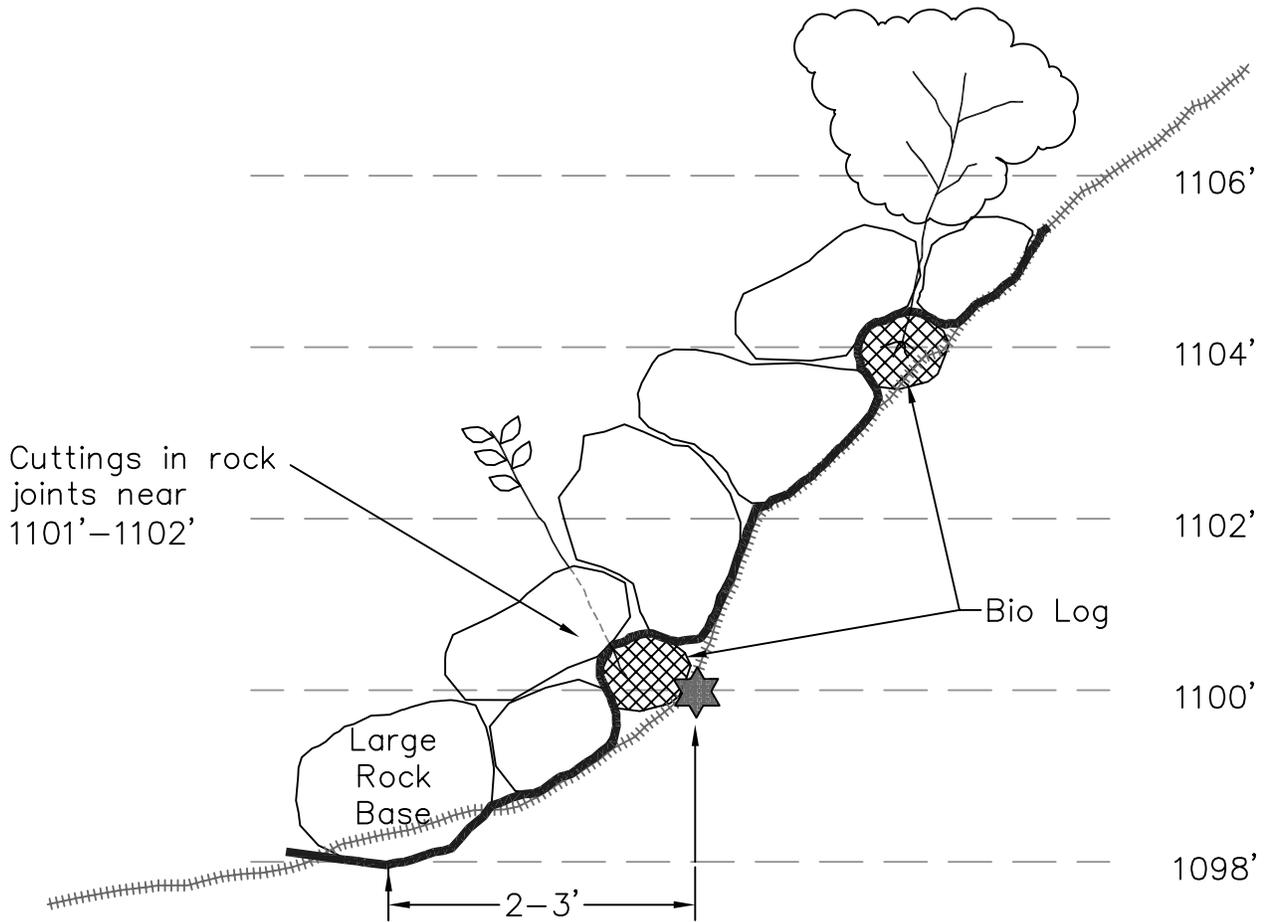


Designed By _____	Date _____
-------------------	------------

Sheet Title	Sheet
<b>TITLE SHEET</b>	<b>1</b>

# ENHANCED PLACED ROCK

T<sub>1</sub>



## LEGEND



1100' Waterline/Soil – Excavate for base rock 2-3' waterward



Fabric Cloth



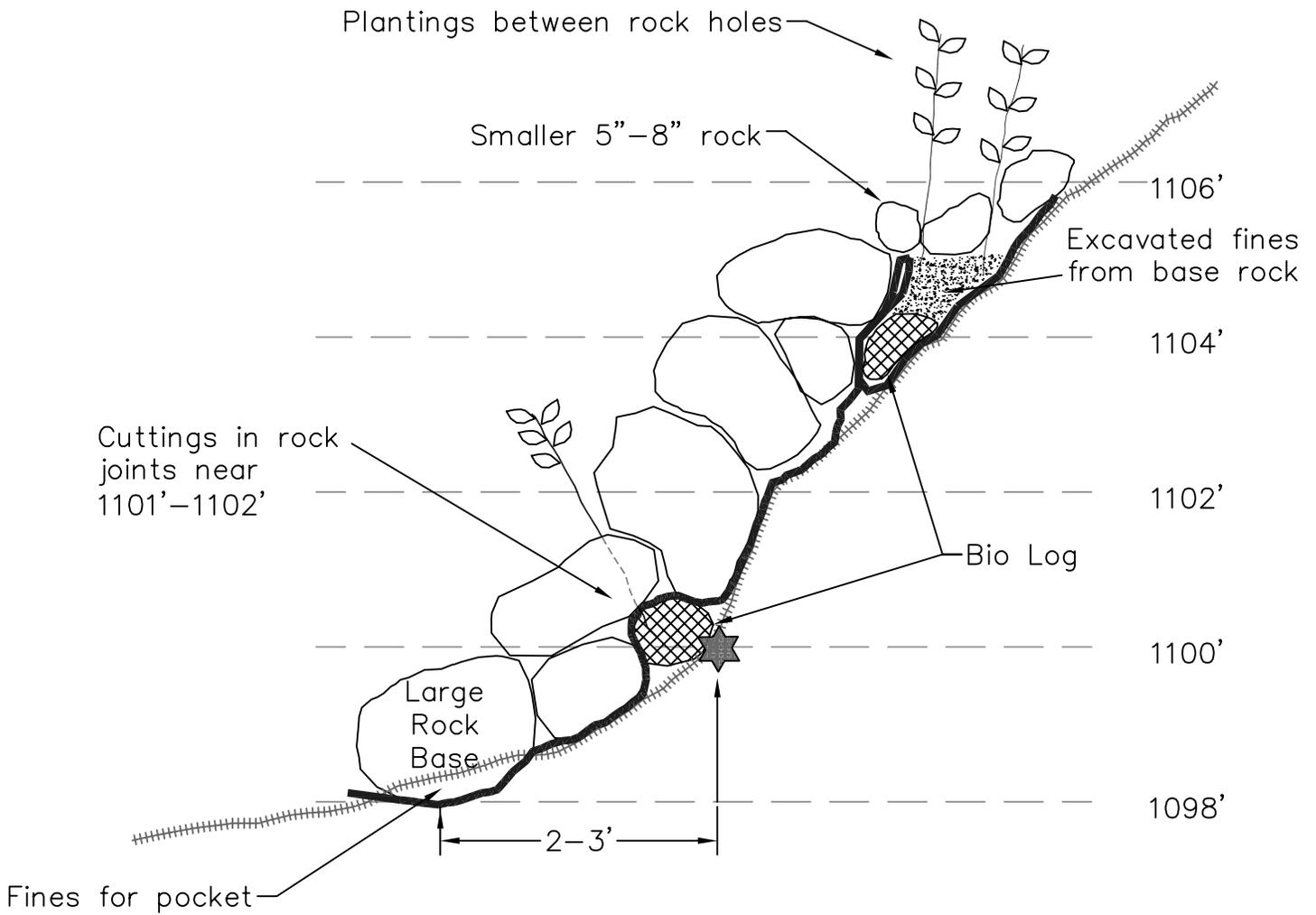
Approximate Natural Profile

Sheet

2

# ENHANCED PLACED ROCK WITH POCKET

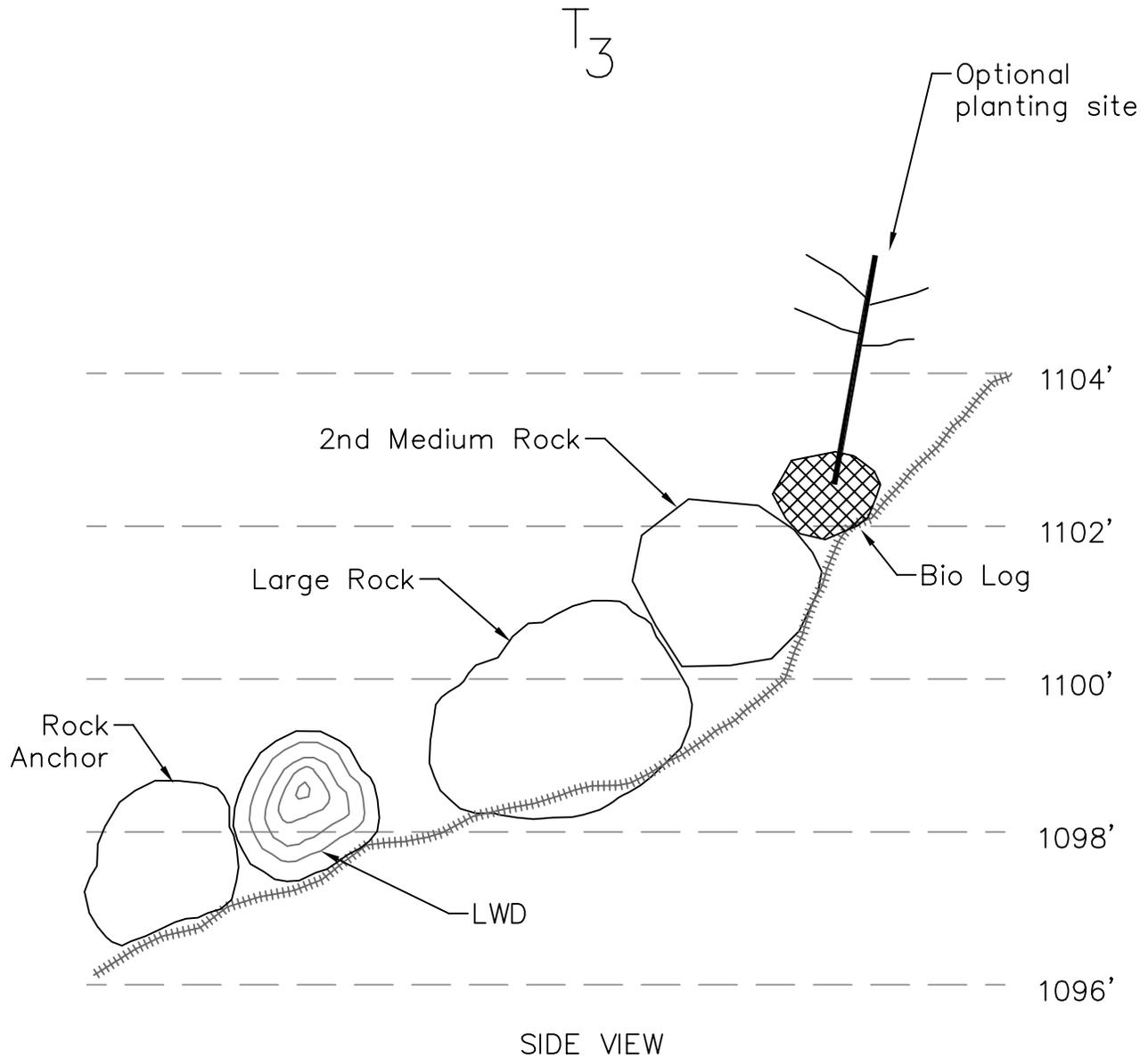
T<sub>2</sub>



LEGEND

- 
1100' Waterline/Soil – Excavate for base rock 2–3' waterward
- 
Fabric Cloth
- 
Approximate Natural Profile

# DOUBLE ROW ROCK PLACEMENT WITH HORIZONTAL LARGE WOODY DEBRIS



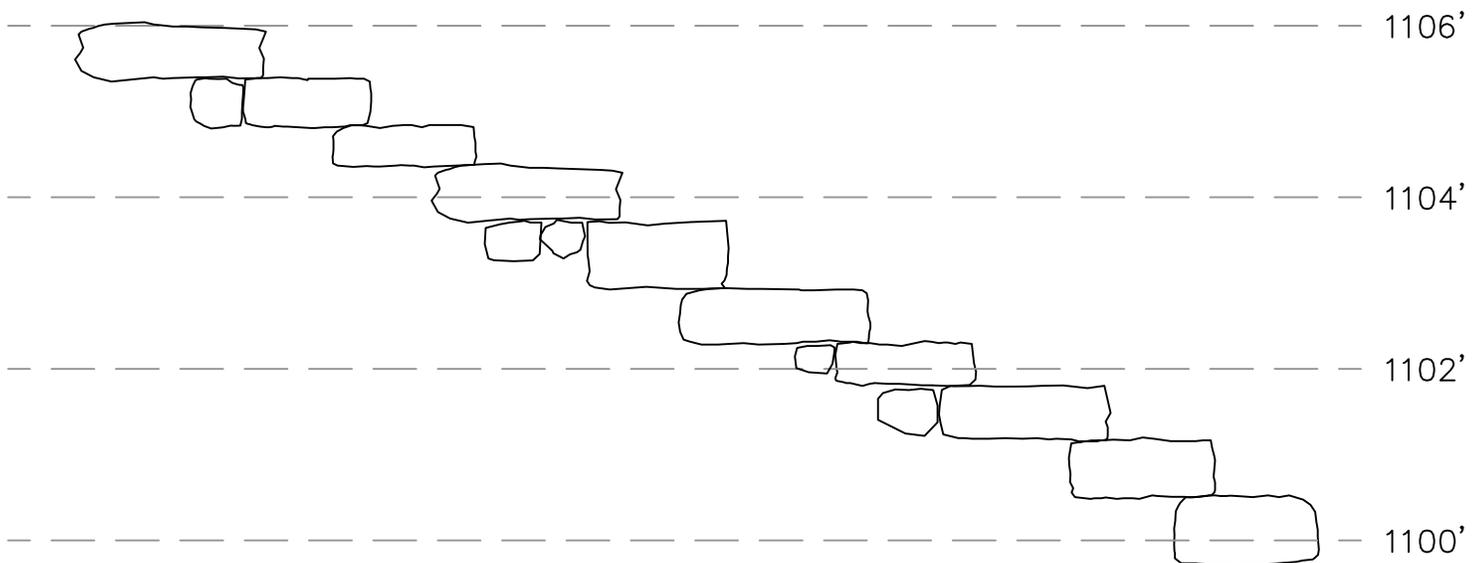
Approximate Natural Profile

No fabric cloth  
 LWD - Large Woody Debris - Logs 14"-24", sounds 20'-30' long  
 Large Rock = 600-800 lb. rock  
 Medium Rock = 200-400 lb. rock  
 Rock Anchor =  
 Plants will be local native species

# ROCK STEP INCLUSION

T<sub>4</sub>

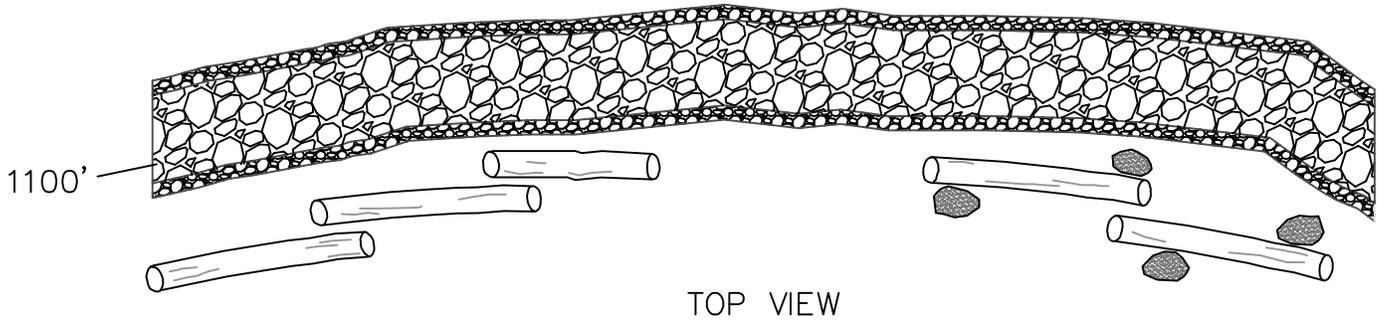
- 1) START FARTHER OUT
- 2) USE LARGE SELECT 2-FACED ROCK
- 3) STEP PATH CAN VARY 2-3½ FT. WIDE
- 4) STEP SHOULD GO TO 1106 FT. ELEVATION OR AS NEEDED (1104')
- 5) RISER SHOULD BE BETWEEN 6-10"



6' = 72", APPROX. 8-10 STEP ROCKS  
NEEDED PER SET

# ENHANCED PLACED ROCK WITH HORIZONTAL LARGE WOODY DEBRIS

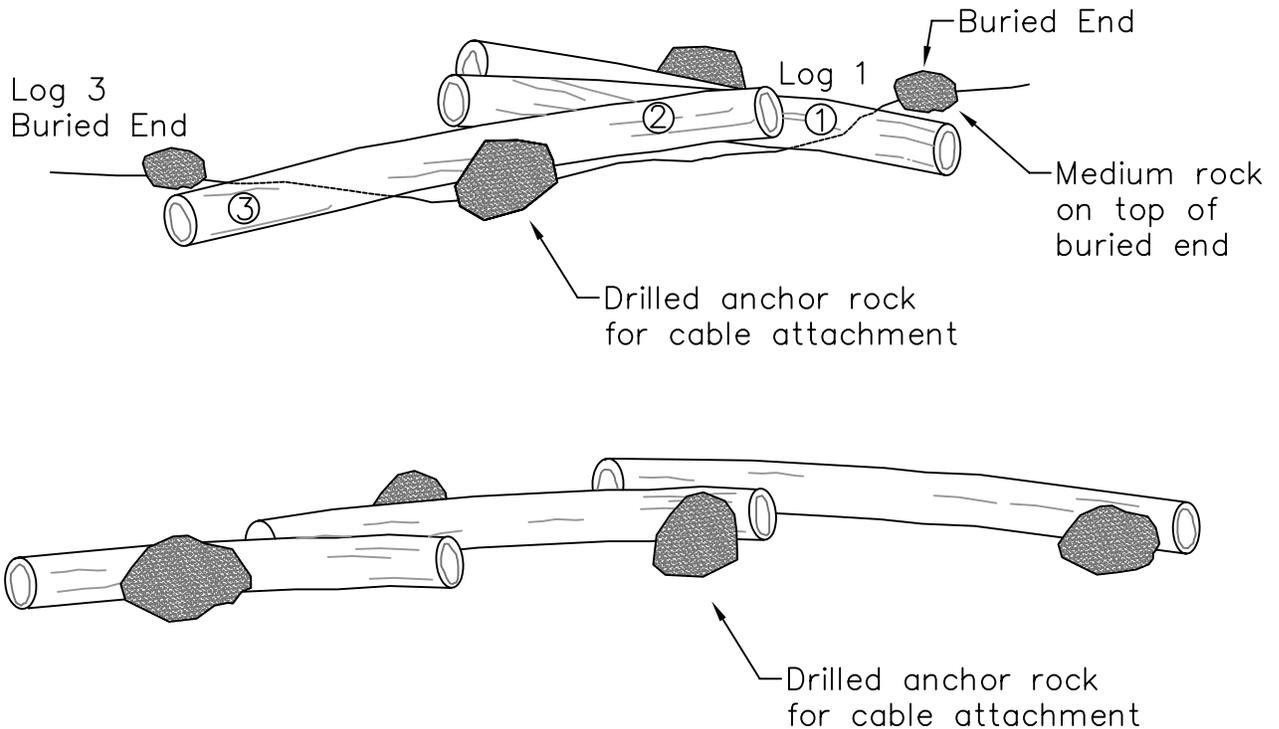
LWD-H-1



## HORIZONTAL LARGE WOODY DEBRIS

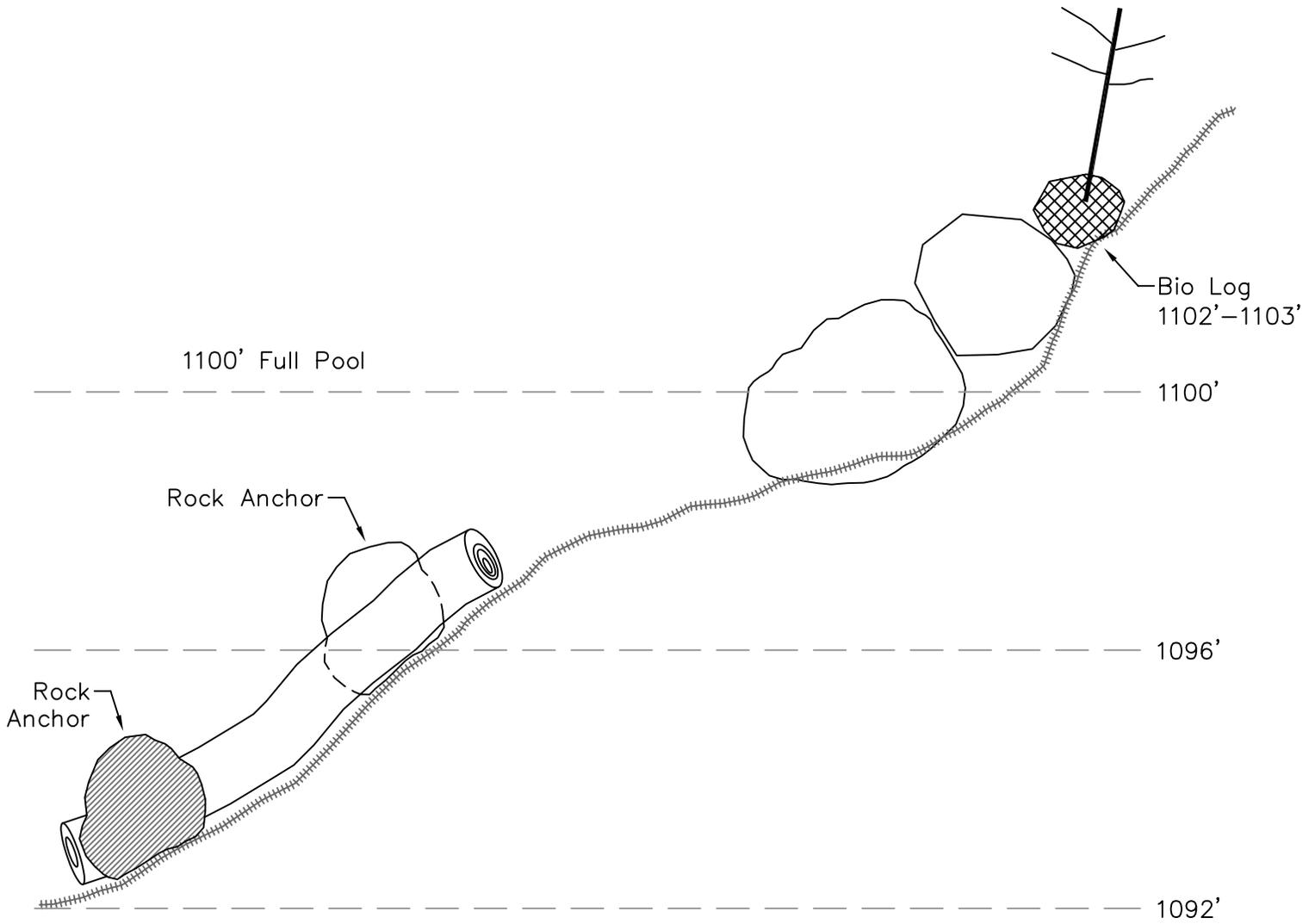
FRONT VIEW

4 Rock/3 Logs



DOUBLE ROW ROCK PLACEMENT  
WITH PERPENDICULAR  
LARGE WOODY DEBRIS

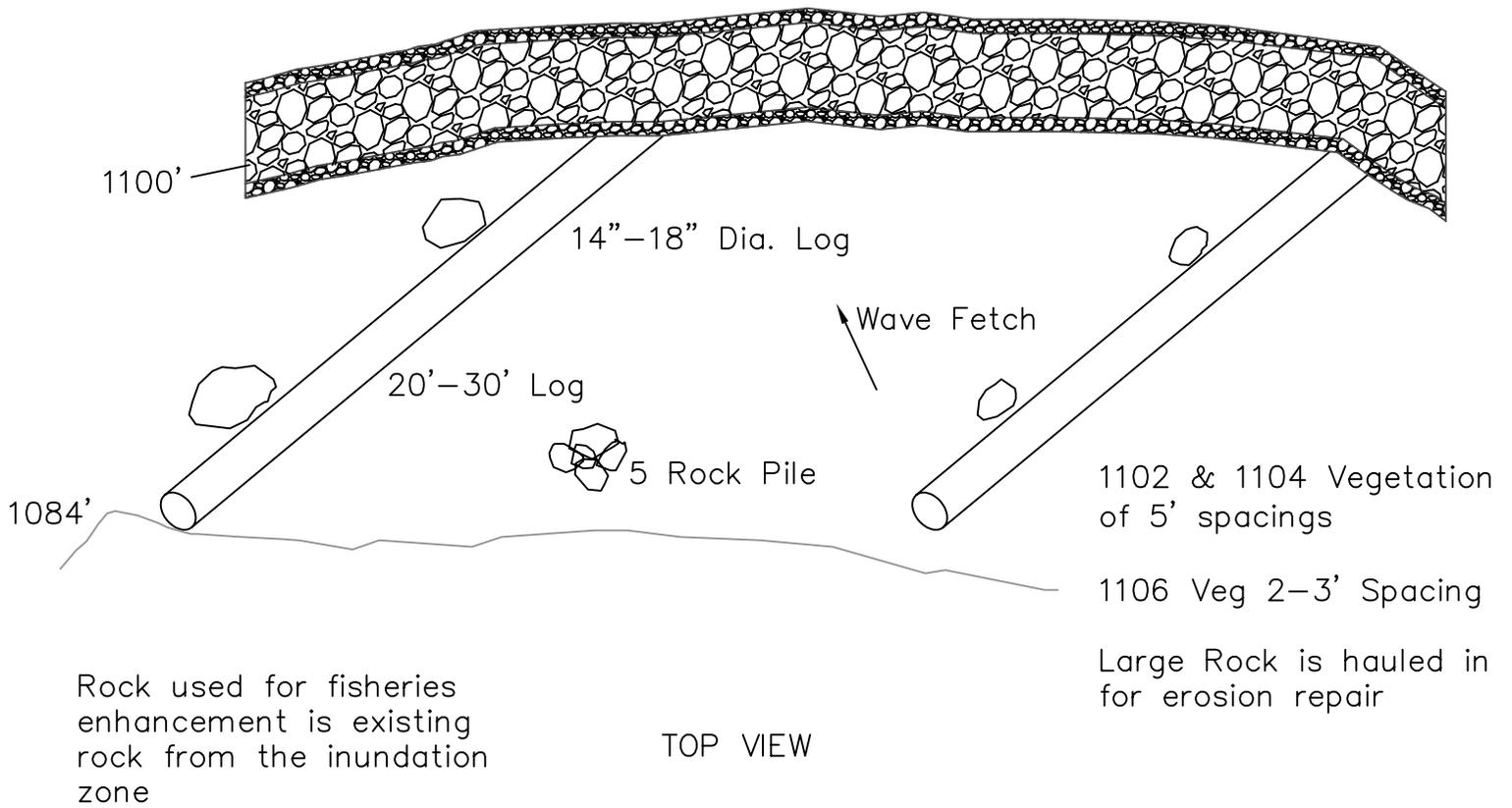
LWD-P-1



SIDE VIEW

# ENHANCED PLACED ROCK WITH PERPENDICULAR LARGE WOODY DEBRIS

## LWD-P-2



***APPENDIX B: PERMITTING***

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Biological Evaluation  
For the  
**Lake Chelan Shoreline Erosion Repair Project**  
On the  
Chelan Ranger District  
8/1/2007

This Biological Evaluation (BE) describes the Lake Chelan Shoreline Erosion Control Project in general programmatic terms. Site specific details for each project area will be presented through Programmatic Consistency Forms that will tier to this analysis and offer current site specific information regarding habitat and occupancy of the sites at the time the work is implemented. This BE documents the broad scope of potential project effects on federally listed, proposed, and candidate species, Northwest Forest Plan Survey and Manage species, Designated Critical Habitat, and complies with Forest Service direction regarding listed and sensitive species (FSM 2670). The BE is intended to ensure that the proposed management activities are not likely to jeopardize the continued existence of the aforementioned species, nor adversely modify Critical Habitat. It is also intended to display the scope of the entire project and relationship of its individual components in time and space, and allow for future programmatic evaluation of consistency as site specific projects are developed.

Project Description: This project involves the Lake Chelan shoreline erosion control work that will be undertaken over the next 10 to 25 years as a result of the dam re-licensing agreement with the Chelan County PUD. A 1999 inventory conducted by the Chelan PUD and Forest Service identified 112 sites comprising 40,780 linear feet of National Forest shoreline undergoing erosion. 35-36 of those sites were identified as high priority sites that would require treatment and monitoring by the PUD through the re-licensing settlement agreement (See highlighted sites on attached map). Total length of the shoreline proposed for treatment is approximately 9,325', though active measures will only be applied to approximately 7635' of this length. Approximately 40% of this length (and over half of the sites) is located in and around existing high use recreation sites. Sites range in size from as small as 20' at Elephant Rock to as large as 2490' in the Twin Harbor vicinity.

Anticipated erosion control measures include hand placed rock walls, mortared placed rock walls (very limited application at FS docks), rock steps, "Enhanced placed rock" (large rock riprap, fitted into place rather than dumped, with vegetation and Large Woody Debris incorporated to provide additional protection for the slope toe and to provide habitat), log crib walls, beach fill (limited application at recreation sites), vegetation planting, and Large Woody Debris (LWD) Placement (see enclosed generalized treatment sketches). Bioengineering techniques and fish enhancement measures will be incorporated to the extent feasible, with details of such work developed with each site specific plan. LWD placement would be done only at locations that do not create hazards for boaters and swimmers. Other treatments may be identified in site-specific plans or as work progresses. These techniques may all be modified to some degree to include such features as joint plantings, rock piles for fish habitat, LWD structures, and upslope revegetation. Work would be accomplished with conventional and "Spyder" excavators and rock drills working from barges or off loaded and working within the draw down zone.

Actual ground disturbance at each site will vary with the treatment type but active excavation with the most aggressive treatments would involve anchoring rocks or logs into about 2-3 horizontal feet of shoreline (approximately 3' slope distance of potential ground disturbance) with another 6-8 feet of minor surface disturbance as materials are laid over the slope. The actual area of disturbance (surface disturbance or excavation) will depend on the slope of the lakeshore at the site, with potentially larger areas of disturbance at the sites with a low profile. Sites with steeper shorelines will have less of the surface disturbed, but may require more excavation to stabilize the treatment. Over the entire project area, given the length of shoreline directly impacted (approximately 7,635') and an average of 10' slope distance, the project represents less than 2 acres of total ground disturbance.

In most cases, work would need to occur during the period when the draw down zone is accessible, typically December through mid-April. Generally, pre-positioning of rock would occur in December. Placement of rock and anchoring of woody debris would occur from mid-January through mid-April. Work at each site is expected to take up to one week for rock pre-positioning, up to 2 weeks for rock and log placement, and up to one week to secure large woody debris to rock anchors (3 to 4 work periods total at each site). Work is, however, likely to be frequently

interrupted by rough lake conditions, potentially lengthening the period of work at each site. All work would occur during daylight hours. Contractors will likely camp at the site during the work week, with 4-6 people present at one time. Due to the limited local availability of project critical equipment (e.g. barges), it is likely that work will be performed one site at a time, though it may be possible (though unlikely) to acquire and stage enough equipment to work at as many as 3-4 sites at a time.

As mitigation to potential disturbance of unsurveyed suitable spotted owl habitat, only one group of sites in the area between Bear Creek and Elephant Rock will be rehabilitated at any one time.

### General Site Information

- Elevation range: 1092'-1106'.
- Acres treated: approximately 87,120 square feet (2 acres) total excavation over 35-36 sites. At any one site, ground disturbance would occur in spots along the edge of an average of about 1 acre (average linear distance of 218' per site). Surface rock would also be laid over portions of the project area within each site (little to no ground disturbance).
- Miles of road: 0 Motorized trail: 0 Non-motorized trail: 0
- Project will result in noise equal to ambient, or x above ambient conditions.
- Number of structures created: 0 (Not including rock steps, rock walls, and rock/log shoreline protection features).
- Number of hazard trees felled: 0 (No hazard trees have been identified at any of the sites. Any hazard trees that are identified will be incorporated into large wood structures for shoreline stabilization – all will remain on site).
- Implementation dates and duration of project activity: December through April of each year projects are undertaken.

### Project Location

- District: Chelan
- Watershed: Lake Chelan
- Legal: Various along lake shore (see map)

### Land Allocation

- *NW Forest Plan Land Allocation(s) and %: 100% Riparian Reserve (all sites), surrounded by Matrix (1 site), administratively Withdrawn (9 sites), Late Successional Reserve (20 sites), and Congressionally Withdrawn (5 sites).*
- LRMP Land Allocations(s) and %: EW-2 (Riparian Aquatic Habitat Protection Zone – all sites), RE-1 (developed recreation) at 13 campsites, RE-3 (Dispersed Recreation, unroaded, Non-motorized - 24 sites), EW-1 (Key winter range - 1 site), EW-3 (Roadless Key Winter Range – 1 site), Wilderness (5 sites, though sites themselves are outside wilderness in draw down zone), and ST-1 (Scenic Travel – Retention – 4 sites).

### Project Effects:

#### **Effects common to all wildlife, fish, and plant species:**

The project is consistent with the Wenatchee National Forest Land and Resource Management Plan as amended by the Northwest Forest Plan, all pertinent district level watershed analyses, the Aquatic Conservation Strategy (see attachment), and the Shady Pass, Lucerne, and Sawtooth Late-Successional Reserve Assessments as no aquatic or late-successional habitats are adversely impacted, and planned activities are consistent with land allocations. Though some short term disturbance may occur in highly localized areas, the overall objective of the project is to improve both terrestrial and aquatic habitat along the shore of Lake Chelan in areas that presently provide little or no habitat. Existing habitat will not be removed.

#### **Cumulative Effects common to all species:**

Over the course of the project, approximately 1.5 % of the shore of Lake Chelan will be physically impacted by proposed Forest Service rehabilitation activities. Some activities will also take place on National Park lands at the head of the lake at 16 sites with a total of 3535' of shoreline (less than ½ of one percent of the total shoreline of Lake Chelan). At any one time, due to the limited availability of suitable equipment on Lake Chelan, it is unlikely that work will occur at more than two or three sites or over a total length of more than 1000' of shoreline, impacting only about 1.25% of the shoreline habitat of Lake Chelan at any one time (assuming 3 sites maximum of approximately ½ mile each including disturbance buffers). The combination of this small amount of potentially impacted habitat with activities elsewhere along the shores of Lake Chelan (maximum geographic extent for any species), would not create an adverse cumulative effect for any species. No other activities are likely to be occurring in these places at this particular time of year, and therefore there is little potential for a cumulative effect with existing activities. The rehabilitation effort is specifically aimed at mitigating effects of past activities that have impacted these sites (the combination of shoreline clearing for dam operation, actual operation of the dam, and on-going recreational use).

**Gray Wolf:** Currently, no active or historic den or rendezvous sites are located near any of the proposed work. Sites on the North Shore of Lake Chelan, particularly those sites between Safety Harbor Creek and Antilon Creek, are located in either Wenatchee National Forest Plan key winter range allocations, or adjacent to wilderness that offers functional winter range. Potential project effects are limited to disturbance at the edge of winter range foraging areas. Wolves are not known to use these areas, though occasional unconfirmed sightings have been reported, and there appear to be a growing number of sightings in the adjacent Sawtooth Wilderness summer range. Some disturbance to potential winter and early spring foraging opportunities may occur as a result of the project, though impacts will be limited to a maximum of 1-2 small areas of lakeshore at any one time (only 7 of the 35 sites are in designated or functional winter range). Due to the potential disturbance from the use of heavy machinery at designated or functional winter range during the critical wintering period, the project may affect, but is unlikely to adversely affect gray wolves for the project as a whole. Current sightings and any newly discovered dens or rendezvous sites, and specific project locations in relation to sightings will be reviewed in programmatic consistency evaluations prior to implementation of each project in future years.

**Grizzly Bear:** Project sites are located in both the Upper and Lower Chelan Grizzly Bear Management Units (BMUs). Currently, there have been no confirmed grizzly bear sightings near any of the proposed shoreline erosion work, though one confirmed sighting of a cub and sow was reported near Hunt's Bluff in 1991 (per Lee Stream WDFW). In general, the proposed work will occur during the denning and early spring emergence periods. It will also occur in habitats that could be used as spring emergence habitat, as all sites are riparian (lakeshore) and several occur on designated or functional winter range, shrub steppe or grassland habitats, particularly on the North Shore. However, even though sites are technically within riparian areas and spring emergence habitat, the actual sites currently provide no habitat, and project activities may improve conditions. Because the work is localized in scope at any one time, relatively short in duration at any one site, does not impact any potential or known denning sites, involves disturbance to relatively little key foraging habitat, and occurs outside of, or at the edge of, core habitat rather than within it, the project may affect, but is not likely to adversely affect the grizzly bear. Current sightings, and specific project locations in relation to core, winter range, and/or spring emergence habitat will be reviewed in programmatic consistency evaluations prior to implementation of each project in future years.

**Spotted Owl:** Due to the effects of the largely stand replacement fires of 1968, 1970, 1994, 1998, 2001, 2002, 2004, and 2006, there is relatively little suitable spotted owl habitat remaining in the lower Chelan Basin or along the shores of Lake Chelan. A notable exception is the south shore of the lake from Bear Creek (includes portions of the Lucerne LSR) uplake to the Forest boundary. Approximately 350 feet of shore line at 9 different sites in this vicinity will be impacted by noise from heavy machinery operations adjacent to late-successional habitat. Within ¼ mile of these sites, there are approximately 163 acres of dry late-successional habitat that would be disturbed by machinery noise during the nesting season. In any one location, however, the maximum amount of habitat disturbed would be 41 acres at the back of the Lucerne Bar, an area already impacted by noise from busses, boats, floatplanes, and operation of 2 campgrounds and a small resort. Sites in the Elephant Rock vicinity would have the next largest area of disturbance at approximately 34 acres. Remaining sites range from 20 to 32 acres of habitat potentially disturbed by project activities. No spotted owl sites are known in any of these areas, but none of the areas have been surveyed. The area is unsurveyable due to a total lack of trails or travelable terrain, and the safety hazards involved with surveying from a boat at night. Barred owls have been located at several nearby locations from the only roads in the vicinity of this area. Although the area in this vicinity is steep and rocky, there are sufficient large trees, canopy closure, canopy layering and downed woody debris to provide habitat for potential nesting, particularly in the vicinity of the confluence of the two branches of Lightning Creek. No habitat degradation or removal will occur

as a result of the project, and the project will impact no known nest sites. Disturbance impacts to unsurveyed suitable habitat may occur in the area of the projects located between Bear Creek and Elephant Rock, but mitigation measures to work in only 1 group of locations at a time, and the small amount of habitat in each of these areas (34 acres maximum if the Lucerne area is discounted due to existing noise) would make the possibility of nest abandonment extremely unlikely.

Several suspected and confirmed owl sites were present on the North Shore between Hunt's Creek and Stehekin but the combined effects of the Rex Creek (2001) and Flick Creek (2006) fires have likely impacted habitat suitability in these areas (most of this area is located in the Lake Chelan National Recreation Area managed by the National Park Service). Only one site at Hunt's Bluff is within the National Forest portion of the project, and it is a site not known to have been active since 1999 (not located in 2000 or 2001 surveys, burned in August of 2001). The fire was low severity at the site but the surrounding area that supported suitable habitat burned again in the Flick Creek Fire of 2006, some of which was also low severity. Though both fires were of generally low severity in this area, the fires reduced canopy closure, canopy layering, and downed woody debris, greatly reducing habitat suitability in the area and nesting is unlikely. Additionally, the one owl site in the vicinity of the erosion work is located just beyond the ¼ mile disturbance buffer. Project activities are unlikely to disturb this owl site even if occupied.

The project as a whole may affect, but is unlikely to adversely affect the spotted owl due to the localized nature of disturbance, lack of physical impact to habitat, limited duration of noise impacts, lack of habitat over most of the project area, and mitigation measures to minimize impacts in the only portion of the project with any potential for occupancy. Current sightings or survey results if available, and specific project locations in relation to currently suitable habitat will be reviewed in programmatic consistency evaluations prior to implementation of each project in future years.

**Designated Critical Habitat for the Spotted Owl:** There is no designated critical habitat for the spotted owl near any of the proposed shoreline erosion work. The project will have no effect on critical components of spotted owl habitat.

**Canada Lynx:** All projects will occur at or very near the lake elevation of 1100'. No lynx habitat is present at these elevations, and no sightings have been reported in any of the proposed project area. The project will have no effect on the Canada Lynx.

**Bald Eagle (threatened spp in transition to sensitive spp):** Bald eagles are known to nest on the Stehekin River, but no other nests are known on Lake Chelan. There is however, some potentially suitable habitat in the lake basin and several Recovery Territories and Potential Recovery Territories have been identified in the Bald Eagle Atlas portion of the Wenatchee National Forest Bald Eagle Species Management Guide. Portions of all but the Stehekin River territory have burned in one or more large fire events in the past 13 years, though large trees and potential nesting opportunities do remain in all these territories.

Work will occur during wintering and early nesting period; however, nesting is not known in the vicinity of any of the erosion sites, and only 7 of the sites are within any of the identified recovery or potential recovery territories described in the Wenatchee National Forest Bald Eagle Species Management Guide (2 in the Safety Harbor Territory, and 5 in the Domke Lake Territory). Only one erosion site is within an identified potential nest stand in a territory, but this stand burned in the 2001 Rex Creek fire which reduced nesting potential. None of the sites are known for winter roosting, though lakeshore winter foraging for waterfowl could occur at any of the sites. Sites on the North Shore also offer winter/spring foraging opportunities for winterkill on designated and functional winter range. All erosion sites are located in the deep, clean Lucerne basin of Lake Chelan where bald eagle fishing opportunities are more limited than the shallower Wapato basin. However, there are some fishing opportunities along shallower portions of the lakeshore and alluvial fans in the uplake areas, and bald eagles do forage for suckers and trout in the spring in these areas.

It is not possible to implement timing restrictions as work needs to occur at low water. Foraging for winter kill, water fowl or fish may be interrupted by project activities during the wintering and early spring nesting periods, but would only occur in limited areas (600-700 feet of shoreline plus disturbance buffer at each site, but likely only one site at a time) for relatively short periods (up to 4 days at a time, 3-4 times per site). Project is intended to improve shoreline aquatic conditions at project completion, and may result in slight improvement in bald eagle fish foraging opportunities in the long run due to reduced erosion in shoreline feeding areas. In the short run, a small portion of bald eagle foraging habitat will be disturbed by noise from heavy equipment used during the critical winter period. No lakeshore perch trees would be impacted as no removals are anticipated. Because no active or potential nesting habitat, no foraging opportunities within potential nesting territories, no known winter roost sites, and no known bald eagle concentration areas would be disturbed, and because there could be some limited disturbance to lakeshore foraging opportunities, the project may affect, but is unlikely to adversely affect the bald eagle. Current sightings,

and specific project locations in relation to potential nesting habitat, winter range, and/or lakeshore feeding habitat will be reviewed in programmatic consistency evaluations prior to implementation of each project in future years.

**Marbled Murrelet:** Lake Chelan is not within the normal range of the species. Marbled murrelets will not be affected by the proposed project.

**Bull Trout:** Bull trout were native to Lake Chelan and appear to have been extirpated in the subbasin sometime in the 1950s. The USFWS determination of Threatened Status for the Columbia River DPS of Bull Trout final rule stated that bull trout are thought to have been extirpated in Lake Chelan. Comprehensive and systematic surveys for bull trout have not been performed for the entire Chelan subbasin; however, the OWNF asserts that numerous competent investigators have employed a variety of accepted methodologies over a period of the past 30 years in pursuit of the answer to the question of extirpation. Regarding the presence or absence of bull trout in Lake Chelan, OWNF Fishery Biologists have reviewed the following available documented evidence:

- Lake Chelan Fisheries Investigations (Brown 1984, DE&S 2001)
- Lake Chelan Creel Surveys (Brown 1984, Chelan PUD 1975-2000)
- Lake Chelan Spawning Ground Surveys (Chelan PUD 1981-2006)
- Chelan Dam Entrainment Studies and Fish Salvage Operations (Chelan PUD 1998-2003)
- OWNF Stream and Lake Surveys (1989-2003)
- Railroad Creek Surveys for the Holden Mine Reclamation Project (1966-1999)
- Stehekin River System Fish Surveys (National Park Service)
- Snorkel Surveys to determine bull trout presence in the Stehekin River, Park Creek, and Flat Creek (USFWS 2001) and Safety Harbor, Prince, Fish, and Railroad Creeks (USFWS 2003)
- Lake Chelan Bioenergetics/Food Web Investigations (Beauchamp and Schoen 2006)

None of the available literature referenced above has reported the presence or detection of bull trout. Beginning in 1998 when bull trout of the Columbia River Distinct Population Segment were listed as Threatened under the Endangered Species Act, Forest Service fishery biologists have been preparing and updating biological assessments for Chelan Ranger District management actions. These BAs have determined **NO EFFECT** on bull trout based on their apparent absence (extirpation) as concluded from the weight of the evidence presented in the above-reference documents. Not all agencies concerned with bull trout agree on the “assumption of extirpation” that the USFS has reached.

In most cases, shoreline erosion repair projects would occur in the “dry” during the period when the draw down zone is accessible to workers and equipment, typically December through mid-April so no detrimental direct effects to any fishes, including bull trout if they were present, are expected. The timing of bull trout spawning in Lake Chelan tributaries would be September and October, if they were present. Spawning would be initiated as photoperiod decreases and water temperatures decrease below 52°F as tributary streams approach base flow. The historic bull trout spawning grounds were in the Stehekin River system at the uppermost end of the lake. Most of the proposed project areas are not suited to bull trout if they were present in the lake; therefore, disturbance from the use of heavy machinery at project areas near alluvial fans along the lakeshore during the spring would have no effect on bull trout. However, accessible adfluvial zones are present at four creeks in the uplake area (Safety Harbor, Prince, Fish, and Railroad Creeks), but proposed worksites are either not present near these streams or are located several hundred feet from the creek mouths. Due to the distance between the potential habitat and the work sites, there would be no effect to spawning or pre-spawning migrants even if they were present. In the long term (>20 years), the project is expected to improve shoreline and littoral habitat (reduced sedimentation, increased cover and prey species) that may be important if bull trout recovery is ever attempted in Lake Chelan.

**Westslope Cutthroat Trout:** Westslope cutthroat trout are a species of concern because they are in decline in Lake Chelan and its tributaries and they are a Regional Forester’s Sensitive Species. In most cases, work would occur in the “dry” during the period when the draw down zone is accessible, typically December through mid-April so no detrimental direct effects to any fishes are expected. The exact timing of cutthroat spawning in Lake Chelan tributaries is variable. Spawning is initiated as photoperiod increases and water temperatures increase to 46°F concurrent with the rising limb of the hydrograph. This combination of environmental factors progresses on a longitudinal gradient with downlake tribs earliest (e.g., First Creek), then mid-Lake tribs (e.g., Safety Harbor Creek),

followed by the Stehekin River at the uppermost end of the lake. Due to the potential disturbance from the use of heavy machinery at project areas near alluvial fans along the lakeshore during the spring spawning period, the project may indirectly affect, but is unlikely to adversely affect Westslope cutthroat trout for the project as a whole. In the long term (>20 years), the project is expected to improve shoreline and littoral habitat (reduced sedimentation, increased cover and terrestrial insects) that may be important to the recovery of the species.

**T&E Plants:** Two Federally listed species have potentially suitable habitat on the shore of Lake Chelan - Showy stickseed (*Hackelia venusta*) and Ute Ladies' Tresses (*Spiranthes diluvialis*). *Hackelia venusta* grows on loose, rocky, sandy slopes between 1000 and 7000 feet elevation but has never been found outside the Wenatchee River District (over 25 miles south of Lake Chelan). *Spiranthes diluvialis* grows in seasonally flooded moist meadows. It has been located along the Columbia River. In 1998 and 1999 the entire shoreline of Lake Chelan was surveyed for rare plants as part of the relicensing of the Lake Chelan Hydroelectric project. Neither of these species was located. Project areas are located in the non-vegetated drawdown zone of Lake Chelan. No known populations are known or likely within these areas. The project will have no effect on known, likely, or suspected populations of Ute Ladies' tresses or showy stickseed. Current sightings and specific project locations in relation to potential habitat will be reviewed in programmatic consistency evaluations prior to implementation of each project in future years.

**Pacific Fisher (Candidate):** Sites support little to no overhead cover or concentrations of downed woody debris and are unsuitable for fisher occupancy. There will be no project impacts to fishers or their habitat.

**Yellow-billed cuckoo (Candidate):** Yellow-billed cuckoos are considered extirpated as breeders in Washington (Smith et al. 1997). No incidental sightings have been reported in the area. Potentially important habitat to recovery of the species is riparian corridor habitat with dense cottonwood/willow stands. This type of habitat is only marginally present near the project areas, usually in limited portions of the alluvial fans along the lakeshore. None of this type of habitat will be impacted by the project. Project activities may help establish limited areas of preferred habitat. The project is not expected to impact habitat that may be important to the recovery of the species.

**Compliance with Northwest Forest Plan:**

Many of the sites proposed for rehabilitation are located within LSRs (20 of 35 sites), but none of the actual area to be disturbed currently includes late-successional habitat. No hazard trees have been identified to date and if such trees are identified as the project progresses, the trees will be incorporated into the stabilization features as large woody debris. Overall, project work is intended to stabilize eroding shoreline, allowing vegetation to establish and potentially reach late-successional stages in the long run. Other than small areas of disturbance associated with noise generated by use of heavy equipment (See spotted owl analysis), there will be no impacts to late-successional habitat or associated species.

**Sensitive (ISSSSP) Plant Species:** Three species on the USFS ISSSSP list occur on or near the shore of Lake Chelan: *Pellea brachyptera*, *Spiranthes porrifolia*, and *Silene seelyi*. None of these species are known to occur on the erosion sites. The one population of *Silene seelyi* is on a gravel bar near Bridal Veil Falls, approximately 120 feet from the lake (July level). This population is on the north shore of the Lake, on NPS land, and not near any of the USFS erosion sites.

Two populations of *Pellea brachyptera* occur within 30 feet of the summer lake level. These sites are near Pioneer Creek and Rattlesnake Creek, both sites are at least ½ mile from an erosion site.

Six populations of *Spiranthes porrifolia* are known along the lake. None of these populations are within ½ mile of an erosion site. This species grows in vernal moist seeps – habitats not likely to be disturbed by the erosion project, which targets dry, mostly un-vegetated slopes.

**Management Indicator Species, Landbirds, Interior Columbia Basin Ecosystem Management Plan Species, FWS and any other Species of Concern:** See attached species checklist.

**Programmatic Consistency for Deer Point and Mitchell Creek Project areas:** See attached Programmatic Consistency Form.

**Pre-Project Documentation of Consistency with the Programmatic Biological Evaluation for the Lake Chelan Shoreline Erosion Control Project on the Chelan Ranger District, Okanogan and Wenatchee National Forests**

*I. PROJECT DESCRIPTION*

Project Title: Mitchell Creek and Deer Point Erosion Control Projects \_\_\_\_\_

Project Description (provide a detailed description, using the space below or attach separately):

Project involves the Lake Chelan shoreline erosion control work that will take place in 2007/2008 as a result of the dam re-licensing agreement with the Chelan County PUD. Work for this phase will involve stabilization of approximately 1200 linear feet of shoreline at and around the Mitchell Creek and Deer Point Campgrounds. Actual ground disturbance would occur in spots over approximately 802 feet of shoreline and would average about 2 feet wide. Stabilization activities would include placement of large rock and anchoring of existing or locally acquired large woody debris. Landscaping fabric and "biologs" will be used in some locations to provide a growing medium and establish vegetation (willow cuttings, local native seedlings, etc.). Rock steps would be installed in several locations where recreationists are currently accessing and eroding the lakeshore. Much of the locally acquired wood for the project would be salvaged from stockpiles of the Big Creek flood debris, presently located at Prince Creek. Conventional and "Spyder" excavators and rock drills will be barged up to the sites for use during placement of large rock and anchoring of woody debris. Heavy equipment will work from the barge, or would be off-loaded and work only from the draw down zone. Work will be conducted in areas that are presently un-vegetated, either due to lake draw down or active erosion.

Work would occur during lake draw down to enable access to worksites below full-pool elevation (1098'). Pre-positioning of rock would occur in December. Placement of rock and anchoring of woody debris would occur from mid-January through mid-April. Work at each site is expected to take 2-4 days for rock pre-positioning, 6-8 days for rock and log placement, and 2-4 days to secure large woody debris to rock anchors (3 to 4 work periods total at each site). Work is, however, likely to be frequently interrupted by rough lake conditions. All work would occur during daylight hours. Contractors will likely camp at the site during work week, with 4-6 people present at one time.

Project Information

- Elevation range: \_1092'-1106'. Acres treated: \_approximately ¼ acre total, about ½ of which would occur at each site.
- Miles of road: \_0 Motorized trail: \_0 Non-motorized trail: \_0
- Project will result in noise \_\_\_\_\_ equal to ambient, or \_x above ambient conditions.
- Number of structures created \_0 and number of hazard trees felled \_0
- Implementation dates (mm/dd/yy) and duration of project activity:

From: December 2007\_ to mid-April 2008. Duration: \_Up to 16 total working days per site.

Project Location (include vicinity map):

District: Chelan

Watershed: Lake Chelan

Legal: T29N R21E S34 Mitchell Creek

T29N R20E S10 Deer Point

*NW Forest Plan Land Allocation(s) and %: 100% Riparian Reserve surrounded by Matrix at Mitchell Creek and by Administratively Withdrawn at Deer Point*

LRMP Land Allocations(s) and %: EW-2 (Riparian Aquatic Protection Zone), RE-1 (developed recreation) at campsites, EW-1 (Key winter range) around Mitchell Creek Campground, and EW-3 (Roadless Key winter range) around Deer Point Campground.

**II. CONSISTENCY: INDICATE PROJECT CONSISTENCY WITH GENERAL FOREST PLAN REQUIREMENTS AND AMENDMENTS BY CIRCLING YES, NO, OR N/A.**

1) Are activities lawful?	<u>Yes</u>	No
	<u>N/A</u>	
2) Are actions consistent with the ONF LRMP or the WNF LRMP, as amended by the NWFP?	<u>Yes</u>	No
a. Are activities consistent with the ACS?	<u>N/A</u>	
b. If suitable habitat is present in the project area, have surveys for proposed, endangered and threatened plants been conducted prior to the implementation of ground-disturbing activities? <b>Work is to take place in non-vegetated drawdown and active erosion areas</b>	<u>Yes</u>	No
	<u>N/A</u>	
	Yes	No
	<u>N/A</u>	
3) Are activities in LSR and/or MLSA consistent with guidance from the ONF LSRA and the WNF LSRA?	Yes	No
a. Will activities result in reductions of late-successional security habitat?	<u>N/A</u>	
b. For silvicultural activities, is the project “beneficial to the creation of late-successional forest conditions?” (ROD C-12)	Yes	No
c. For non-silvicultural activities, is the project “neutral or beneficial to the creation and maintenance of late-successional habitat?” (ROD C-16)	<u>N/A</u>	
	Yes	No
	<u>N/A</u>	
	Yes	No
	<u>N/A</u>	
4) Are activities consistent with:	Yes	No
a. PACFISH?	<u>N/A</u>	
b. INFISH?	Yes	No
c. Eastside Screens?	<u>N/A</u>	
	Yes	No
	<u>N/A</u>	

5) Are activities consistent with findings/direction of the applicable watershed BA and environmental baseline?	<u>Yes</u> No N/A
6) Are activities consistent with all recovery plans and conservation strategies for listed species? a. Conservation Agreement for <i>Delphinium viridescens</i> ? b. Recovery Plan for <i>Sidalcea oregana</i> var. <i>calva</i> ? c. Habitat Management Guidelines for <i>Hackelia venusta</i> on the Wenatchee NF? d. Canada Lynx Conservation Assessment and Strategy, Conservation Agreement? e. Bald Eagle Management Plan – Draft? <b>*See Design Criteria discussion under #8</b> f. North Cascades Ecosystem Grizzly Bear Recovery Plan, including: • Activities will maintain the interim management directive of “no net loss” of core habitat for grizzly bears? • Sanitation direction?	<u>Yes</u> No N/A Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u> <u>Yes</u> * No N/A  <u>Yes</u> No N/A <u>Yes</u> No N/A
7) Will activities within critical habitat for spotted owl <b>degrade</b> <sup>1</sup> habitat? a. Will activities alter, remove, or reduce the constituent elements of critical habitat (either NRF or dispersal habitat) to the point where habitat will be <b>downgraded</b> <sup>2</sup> or lost? b. Will activities preclude future development of constituent elements in critical habitat?	Yes No <u>N/A</u>  Yes <u>No</u> N/A Yes <u>No</u> N/A
8) Have necessary timing restrictions and conservation measures been incorporated into project design? <b>It is not possible to implement timing restrictions as work needs to occur at low water. Work will occur during wintering and early bald eagle nesting period; however, nesting is not known in the vicinity of either site, and neither site is within any of the identified recovery or potential recovery territories described in the Wenatchee National Forest Bald Eagle Species Management Guide. Neither site is known for winter roosting. Both sites are within winter and spring foraging areas as they are located along the shore of Lake Chelan and adjacent to the North Shore key winter range for mule deer and bighorn sheep. Foraging for winter kill, water fowl or fish may be interrupted by project activities during the wintering period, but would only occur in limited areas (600-700 feet of shoreline plus disturbance buffer at each site, but only one site at a time) for relatively short periods (up to 4 days at a time, 3-4 times per site).</b>	Yes <u>No</u> N/A
9) Will activities result in an increase of human capacity at the site, excluding the time necessary to complete the project?	Yes <u>No</u> N/A
10) Has a “Recreation Cumulative Effects Analysis” (Gaines et al. 2003, draft) been completed for the project area?	Yes No <u>N/A</u>
11) Do recreational activities authorized by special use permit, such as group events or outfitted and guided recreation, comply with all Forest Orders and	

Special Orders relating to recreational activity on the OWNFs?	Yes <b>N/A</b>	No
12) Will activity result in public motorized use of existing closed roads that do not have a history of motorized use?	Yes N/A	<b>No</b>
13) Will treatment sites along roads designated as permanently closed through the Forest Travel Plan or current EA's be accessed by either walking (if the closure prohibits motorized use), or as determined by current road use policy in the North Cascades Grizzly Bear Recovery Plan?	Yes N/A	<b>No</b>
14) Will project activities result in a "May Affect, Likely to Adversely Affect" determination through direct, indirect, interrelated/interdependent, or cumulative effects? <b>Project is intended to improve shoreline aquatic conditions at project completion, and may result in slight improvement in bald eagle fish foraging opportunities in the long run. In the short run, a small portion of bald eagle foraging habitat will be disturbed by noise from heavy equipment used during the critical winter period. Because no active or potential nesting habitat, no foraging opportunities within potential nesting territories, no known winter roost sites, and no known bald eagle concentration areas would be disturbed, and there may be a slight improvement in foraging opportunities, no adverse effect is expected.</b>	Yes N/A	<b>No</b>

<sup>1</sup> – A "degrade" of spotted owl habitat reduces habitat quality but retains its function (i.e., habitat classification is unchanged)

<sup>2</sup> – A "downgrade" of spotted owl habitat reduces quality and function (e.g., habitat previously classified as suitable is downgraded to dispersal)

### III. Species Effects Summary

#### A. FISHERIES

##### AQUATIC HABITAT EFFECTS (CHECK ALL THAT APPLY)

Indicators	No Effect	Beneficial	Maintain	Temporary Degrade
Temperature	X			
Sediment/embeddedness		X		X
Large woody debris		X		
Streambank condition		X		
Riparian conservation areas		X		

If any aquatic habitat effects occur, briefly describe (quantitatively, if possible) project activities and effects within:

Riparian reserves	Channel migration zones	Inner gorges	Wetted channels
Though some sediment may be released at the construction sites in the short term, the project will result in a long term decrease in sedimentation to lakeshore habitat. No stream habitat will be impacted.			

List program- and project-specific conservation measures from the Forest Wide-Programmatic BA or the Lake Chelan Erosion Control Programmatic BE that were applied to this project to avoid and minimize effects: **\_\_Winter range timing restrictions can not be implemented as described above; however, implementation of the project at only 1-2 sites at a time when in winter range will minimize the disturbance effect.**

*AQUATIC ENVIRONMENTAL BASELINE AND EFFECTS DETERMINATION*

	Mid-Columbia River Steelhead	U. Columbia River Steelhead	U. Columbia River Spring Chinook	Essential Fish Habitat	Bull trout Columbia River DPS	Bull trout Critical Habitat	Westslope Cutthroat Trout
Species, CH <sup>1</sup> , or EFH potentially affected (check all that apply)	NA	Not Present No Effect	Not Present No Effect	NA	Extirpated No Effect *	No Effect	Present in many tribs to Lake Chelan
Life stages (egg, fry, juvenile, adult) (list all stages that apply)	NA	NA	NA	NA	NA	NA	All Stages
Baseline status – integrated subpopulation/habitat (FA, FAR, FAUR) <sup>2</sup>	NA	NA	NA	NA	NA	NA	FAR
Habitat function (spawning, rearing, holding, migration, overwinter)	NA	NA	NA	NA	NA	NA	FAR
Effects Determination <sup>3</sup>	NA	NA	NA	NA	No Effect	NA	MANLAA

<sup>1</sup> Proposed or designated critical habitat.

<sup>2</sup> FA = functioning appropriately; FAR = functioning at risk, FAUR = functioning at unacceptable risk.

<sup>3</sup> NE (No Effect), MANLAA (May Affect, Not Likely Adversely Affect), MANLAA-BE (May Affect, Not Likely Adversely Affect - Beneficial Effect).

**\*The proposed project areas (Mitchell Creek and Deer Point) are not suited to bull trout if they were present; therefore, disturbance from the use of heavy machinery at project areas near alluvial fans along the lakeshore during the spring would have no effect on bull trout.**

*B. PLANTS*

	Showy Stickseed ( <i>Hackelia venusta</i> )	Ute Ladies' tresses ( <i>Spiranthes diluvialis</i> )	Water howelia ( <i>Howelia aquatilis</i> )	Wenatchee Mountains checker-mallow ( <i>Sidalcea oregana</i> var. <i>calva</i> )	Designated Critical Habitat for <i>Sidalcea oregana</i> var. <i>calva</i>
Miles to nearest known occupied habitat (x.x miles)	>10	>10	>10	>10	>10
Potentially suitable habitat in project area? (Y/N)	N	N	N	N	N
Plant surveys conducted? (Y/N)	N*	N*	N*	N*	N*
Acres of potentially suitable habitat to be disturbed?	0	0	0	0	0
<i>Effects Determination:</i>	NE	NE	NE	NE	NE

**\* both sites were visited to validate lack of suitable habitat**

III. Species Effects Summary, Continued

C. WILDLIFE

	Circle One or Answer
<p><i>What is the distance between activity and nearest,</i></p> <p>a. nest, activity center or unsurveyed suitable habitat for spotted owl?</p> <p>b. nest, activity center or unsurveyed suitable habitat for marbled murrelet?</p> <p>c. wintering area for bald eagle?</p> <p>d. Active nest or nest of unknown status for bald eagle?</p>	<p>&lt;400m <u>&gt;400m</u></p> <p>&lt;400m <u>&gt;400m</u></p> <p><u>&lt;450m</u> &gt;450m</p> <p>&lt;450m</p>
What is the site number (SO-xxx)/CHU number (WA-xx) within 400m of activity?	NA
Project results in habitat degradation only, not a loss of habitat functions	Yes No <u>NA</u>
<p>Will activity occur within ungulate winter range? <b>Both projects occur adjacent to the North Shore winter range. Though the Deer Point project area lies within the designated roadless key winter range and the Mitchell Creek project area lies simply within the key winter range, there are no roads (other than the “roads” provided by the lake and airway) in the vicinity of either project area. Both areas provide remote wintering habitat and a sufficient prey source to be attractive to gray wolves. Wolves not currently known to be present in the project areas (though reported sightings continue), but if they were present, project activities could preclude use of the area for 2-4 days at a time, 3-4 times per winter. Much habitat would remain undisturbed and available. Additionally, any disturbance would occur at the edge of the available habitat, minimizing the area of disturbance and maximizing ease of avoidance. Due to the lack of physical habitat disturbance, lack of known den and rendezvous sites within or near the project area, and the size and location of potential disturbance, the project may affect but is unlikely to adversely affect the gray wolf.</b></p>	<u>Yes</u> No
Has an active den or rendezvous site been located?	Yes <u>No</u>
<p>Will aircraft be used within,</p> <p>a. 1 km of active nest, activity center whose current status is unknown, or any unsurveyed suitable habitat for</p> <ul style="list-style-type: none"> <li>• spotted owl?</li> <li>• marbled murrelet?</li> <li>• bald eagle?</li> </ul> <p>b. ½ mile (500 m) and no line-of-sight, or located within ½ mile (800 m) and in line-of-sight, of a bald eagle wintering area where eagle activity is concentrated?</p>	<p>Yes <u>No</u></p> <p>Yes <u>No</u></p> <p>Yes <u>No</u></p> <p>Yes <u>No</u></p>
<p>Is project in Grizzly Bear Recovery Zone? <b>Both Projects occur within the Lower Chelan Grizzly Bear Management Unit, in areas that could be considered spring emergence habitat, during the spring emergence period. However, these areas are located at some distance from potential denning habitat, and at great distance from any reported sightings. Additionally, the proposed work would not impact any existing foraging habitat, and would be easily avoided by any bears if present. There would be no effect on denning habitat or during the denning period.</b></p>	<u>Yes</u> No
Will project Increase/Decrease/Not Affect core habitat?	I D <u>NA</u>
<p><b>Effects Determination:</b></p> <p>a. Bald eagle</p> <p>b. Canada lynx</p> <p>c. Gray wolf</p> <p>d. Grizzly bear</p> <p>e. Marbled murrelet</p> <p>f. Spotted owl</p> <p>g. Spotted owl – critical habitat</p>	<p>NE <u>MANLAA</u> BE</p> <p><u>NE</u> MANLAA BE</p> <p>NE <u>MANLAA</u> BE</p> <p>NE <u>MANLAA</u> BE</p> <p><u>NE</u> MANLAA BE</p> <p><u>NE</u> MANLAA BE</p> <p><u>NE</u> MANLAA BE</p>

Enter the acres of spotted owl habitat degraded by land allocation and CHU:

Habitat Degraded (acres)		Land Allocations					
		Matrix	LSR	MLSA	AMA	AW	CW
Non-CHU	NRF	0	0	0	0	0	0
	Dispersal	0	0	0	0	0	0
CHU	NRF	0	0	0	0	0	0
	Dispersal	0	0	0	0	0	0

*Identify which CHUs and LSR/MLSAs are affected*

*None* \_\_\_\_\_

Prepared by:   Mallory Lenz   Title: District Biologist Date: 7/10/2007

Prepared by:   Philip Archibald   Title: Zone Fish Biologist Date: 7/10/2007

Prepared by:   Brigitte Ranne   Title: Zone Botanist Date: 7/11/2007

*Reviewed by:* \_\_\_\_\_ *Title:* \_\_\_\_\_ *Date:*  
 \_\_\_\_/\_\_\_\_/\_\_\_\_

### **AQUATIC CONSERVATION STRATEGY (ACS) CONSISTENCY:**

The ACS was developed to restore and maintain the health of watersheds. The following is a summary of ACS objectives and the rationale for determining project consistency.

1. Maintain and restore the distribution, diversity, and complexity of watershed and landscape scale features.

**The Chelan lakeshore differs from the reference condition in that the level of the lake has been raised by the Chelan dam by 21 feet, and fluctuates annually to a greater degree than typical of spring flooding prior to construction of the dam. The project is specifically aimed at stabilizing erosion caused by the higher lake level and lake level fluctuation. Although the project will not fully restore habitat, sediment input to shoreline habitat will be reduced and native vegetation and woody debris will be increased at the highest priority sites along the lakeshore.**

2. Maintain and restore spatial and temporal connectivity within and between watersheds.

**The project occurs entirely within the Lake Chelan watershed along the shoreline, and affects only the Lake Chelan watershed. The project will not create or remove any spatial or temporal barriers within the watershed, though reduced sediment delivery to lacustrine habitat may improve continuity of shoreline feeding habitat, thereby slightly improving connectivity within the watershed.**

3. Maintain and restore the physical integrity of the aquatic system.

**The intent of the Project is to reduce sediment delivery to the watersheds by stabilizing eroding areas along the shoreline. Based on the project design and mitigation measures listed above, the Project will maintain or improve the physical integrity of the aquatic system.**

4. Maintain and restore water quality to support healthy riparian, aquatic, and wetland resources.

**For all of the project elements (rock, log, and vegetation placement as well as the use of barges and heavy equipment) the likelihood of a spill that would affect water quality is low, and a spill plan would be in place as a contract requirement. The project IS a mitigation measure to limit erosion and subsequent sediment delivery to Lake Chelan.**

5. Maintain and restore the sediment regime under which aquatic ecosystems evolved.

**Prior to dam construction, lake level fluctuation did occur during spring runoff, and severe rain-on-snow events, but the fluctuation occurred over a fewer vertical feet of the shoreline, and for shorter periods of time. Construction of the dam resulted in a higher level of fluctuation that occurred over the entire year, causing periods of repeated wave action on portions of shoreline that had not previously been subjected to such action. This is the reason that mitigation actions are required under the license. Stabilization of these high priority sites will move toward the sediment regime under which these aquatic ecosystems evolved, though it can not be entirely restored.**

6. Maintain and restore instream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing.

**The project will not affect instream flows as all actions are proposed along the lakeshore. Proposed actions will, however, increase stable woody debris along the lakeshore, increase riparian vegetation, and reduce sediment delivery. No wetland habitats will be affected.**

7. Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.

**The project does not involve meadows and wetlands.**

8. Maintain and restore the species composition and structural diversity of plant communities in riparian reserves to sustain physical complexity and stability.

**Project activities are specifically designed to reestablish native riparian species in areas that currently do not support riparian vegetation. Additionally, stabilization of the eroding shoreline soils will create some soil pockets over time where native species can establish themselves, thus adding to structural diversity and stability of the riparian plant community.**

9. Maintain and restore habitat to support well-distributed populations of native plant, invertebrate and vertebrate riparian-dependent species.

**Project actions are intended to restore riparian reserves. Addition of stable woody debris and rocks that will gather debris and vegetation at and near the high water level will create sites for establishment of native vegetation and thus habitat for invertebrate and vertebrate riparian dependent species.**





# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Central Washington Field Office  
215 Melody Lane, Suite 119  
Wenatchee, Washington 98801

August 15, 2007

**In Reply Refer To:**

USFWS Reference: 13260-2007-I-0170  
13260-2007-B-0026

Hydrologic Unit Codes: 17-02-00-09

RE: Lake Chelan Erosion Repair Programmatic

Robert J. Sheehan  
District Ranger  
Chelan Ranger District  
428 West Woodin Avenue  
Chelan, Washington 98816

Dear Mr. Sheehan:

This responds to your request for informal programmatic consultation on the proposed Lake Chelan Shoreline Erosion Repair project (Project), located in Chelan County, Washington. Your cover letter, dated August 1, 2007, and Biological Assessment (BA), also dated August 1, 2007, was received in the U.S. Fish and Wildlife Service's (Service) Central Washington Field Office on August 6, 2007.

The U.S. Forest Service (USFS) has requested Service concurrence for the Project with the determination of "may affect, not likely to adversely affect" for northern spotted owl (*Strix occidentalis caurina*), gray wolf (*Canis lupus*), and grizzly bear (*Ursus arctos*) in accordance with section 7(a)(2) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Effects to other listed or proposed species, or their habitat, are not anticipated to occur.

The intent of this programmatic consultation is to expedite the section 7 consultation process for implementation of future erosion repair projects on Lake Chelan as these activities are similar in nature, will occur frequently, and likely result in either minor and/or predictable effects to the above listed species and their habitats. As described in the BA, all projects proposed to be implemented under this programmatic consultation must: (1) be consistent with the types of activities described in the BA and implement their specific conservation measures and (2) be evaluated using a project consistency form (PCF). The PCF will be prepared by a USFS biologist and submitted to the Level 1 Team for their review and approval prior to project implementation. Programmatic projects should not be implemented until either written concurrence has been provided by the Service or if no response is received from the Service after 5 working days of submitting the PCF. A copy of the PCF is attached. Projects that do not meet the conditions of this programmatic consultation must undergo individual consultation.

The Project involves shoreline erosion control work that will be undertaken over the next 10 to 25 years as a result of the Lake Chelan Dam re-licensing agreement with Chelan County Public Utility District (PUD) No. 1. A 1999 inventory conducted by Chelan PUD and the USFS identified 112 sites comprising 40,780 linear feet of National Forest shoreline experiencing measurable erosion. Thirty-five high priority sites were identified as locations that would require treatment and monitoring by Chelan PUD through the re-licensing settlement agreement. The total length of the shoreline proposed for treatment is approximately 9,325', though active measures will only be applied to approximately 7,635' of this length. Approximately 40% of this length (over half of the sites) is located in and around existing high use recreation sites. Sites range in size from as small as 20' at Elephant Rock to as large as 2,490' in the Twin Harbor vicinity.

Anticipated erosion control measures include hand placed rock walls, mortared placed rock walls, rock steps, "enhanced placed rock" (large rock riprap, fitted into place rather than dumped, with vegetation and large woody debris (LWD) incorporated to provide additional protection for the slope toe and to provide habitat), log crib walls, beach fill, vegetation planting, and LWD placement. Bioengineering techniques and fish enhancement measures will be incorporated to the extent feasible, with details of such work developed for each site-specific plan. LWD placement would be done only at locations that do not create hazards for boaters and swimmers. Other treatments may be identified in site-specific plans or as work progresses. These techniques may all be modified to some degree to include such features as joint plantings, rock piles for fish habitat, LWD structures, and upslope revegetation. Work would be accomplished with conventional and "Spyder" excavators and rock drills working from barges or off loaded and working within the draw down zone.

Actual ground disturbance at each site is expected to vary with the treatment type but active excavation with the most aggressive treatments would involve anchoring rocks or logs into 2-3 horizontal feet of shoreline with another 6-8 feet of minor surface disturbance as materials are laid over the slope. The actual area of disturbance will depend on the slope of the lakeshore at the site, with potentially larger areas of disturbance at the sites with a low profile. Sites with steeper shorelines will have less of the surface disturbed, but may require more excavation to stabilize the treatment. Over the entire project area, given the length of shoreline directly impacted (approximately 7,635') and an average of 10' slope distance, the project represents less than 2 acres of total ground disturbance.

In most cases, work would occur during the period when the lake draw down zone is accessible, typically December through mid-April. Generally, pre-positioning of rock would occur in December. Placement of rock and anchoring of woody debris would occur from mid-January through mid-April. Work at each site is expected to take up to one week for rock pre-positioning, up to 2 weeks for rock and log placement, and up to one week to secure large woody debris to rock anchors (3 to 4 work periods total at each site). Work is, however, likely to be interrupted by rough lake conditions, potentially lengthening the period of work at each site. All work would occur during daylight hours. Contractors will likely camp at the site during the work week, with 4-6 people present at one time.

Over the course of the project, approximately 1.5% of the shore of Lake Chelan will be physically impacted by the proposed rehabilitation activities. Some activities will also take place on National Park Service lands at the head of the lake at 16 sites with a total of 3,535' of shoreline (less than ½ of one percent of the total shoreline of Lake Chelan). At any one time, due to the limited availability of suitable equipment on Lake Chelan, it is unlikely that work will occur at more than two or three sites or over a total length of more than 1000' of shoreline, impacting only about 0.19% of the shoreline habitat of Lake Chelan at any one time. In addition, as mitigation for potential disturbance of unsurveyed suitable spotted owl habitat, only one group of sites in the area between Bear Creek and Elephant Rock will be rehabilitated at any one time. No other activities are likely to be occurring in these places at this particular time of year, and therefore there is little potential for a cumulative effect with existing activities.

Currently, no active or historic gray wolf den or rendezvous sites are located near any of the proposed work. Sites on the North Shore of Lake Chelan, particularly those sites between Safety Harbor Creek and Antilon Creek, are located in either Wenatchee National Forest Plan key winter range allocations, or adjacent to wilderness that offers functional winter range. Potential Project effects are limited to disturbance at the edge of winter range foraging areas. Wolves are not known to use these areas, though occasional unconfirmed sightings have been reported, and there appear to be a growing number of sightings in the adjacent Sawtooth Wilderness summer range. Some disturbance to potential winter and early spring foraging opportunities may occur as a result of the Project, though impacts will be limited to a maximum of 1-2 small areas of lakeshore at any one time. Current sightings and any newly discovered dens or rendezvous sites, and specific project locations in relation to sightings will be reviewed in programmatic consistency evaluations prior to implementation of each project in future years.

Project sites are located in both the Upper and Lower Chelan Grizzly Bear Management Units (BMUs). Currently, there have been no confirmed grizzly bear sightings near any of the proposed shoreline erosion work, though one confirmed sighting of a cub and sow was reported near Hunt's Bluff in 1991. In general, the proposed work will occur during the denning and early spring emergence periods. It will also occur in habitats that could be used as spring emergence habitat, as all sites are riparian (lakeshore) and several occur on designated or functional winter range, shrub steppe or grassland habitats, particularly on the north shore of the lake. However, although sites are technically within riparian areas and spring emergence habitat, the actual sites currently provide no habitat value. The proposed work is localized in scope, relatively short in duration at any one site, does not impact any potential or known denning sites, involves disturbance to relatively little key foraging habitat, and occurs outside of, or at the edge of, core area. Current sightings, and specific project locations in relation to core, winter range, and/or spring emergence habitat will be reviewed in programmatic consistency evaluations prior to implementation of each project in future years.

Due to the effects of the large stand-replacement fires of 1968, 1970, 1994, 1998, 2001, 2002, 2004, and 2006, there is relatively little suitable spotted owl habitat remaining in the lower Chelan Basin or along the shores of Lake Chelan. A notable exception is the south shore of the lake from Bear Creek (includes portions of the Lucerne LSR) uplake to the Forest boundary. Approximately 350 feet of shore line at 9 different sites in this vicinity will be impacted by noise from heavy machinery operations adjacent to late-successional habitat. Within ¼ mile of these sites, there are approximately 163 acres of dry late-successional habitat that would be disturbed

by machinery noise during the nesting season. In any one location, however, the maximum amount of habitat disturbed would be 41 acres at the back of the Lucerne Bar, an area already impacted by noise from busses, boats, floatplanes, and operation of 2 campgrounds and a small resort. Sites in the Elephant Rock vicinity would have the next largest area of disturbance at approximately 34 acres. Remaining sites range from 20 to 32 acres of habitat potentially disturbed by project activities. No spotted owl sites are known in any of these areas, but none of the areas have been surveyed. The area is unsurveyable due to a total lack of trails or travelable terrain, and the safety hazards involved with surveying from a boat at night. Barred owls have been located at several nearby locations from the only roads in the vicinity of this area. Although the area in this vicinity is steep and rocky, there are sufficient large trees, canopy closure, canopy layering and downed woody debris to provide habitat for potential nesting, particularly in the vicinity of the confluence of the two branches of Lightning Creek. No habitat degradation or removal will occur as a result of the Project, and the Project will impact no known nest sites. Disturbance impacts to unsurveyed suitable habitat may occur in the area of the restoration sites located between Bear Creek and Elephant Rock, but mitigation measures to work in only 1 group of locations at a time, and the small amount of habitat in each of these areas would make the possibility of nest abandonment extremely unlikely.

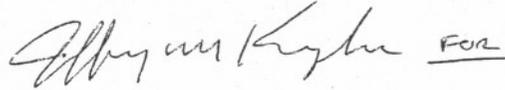
Several suspected and confirmed owl sites were present on the North Shore between Hunt's Creek and Stehekin but the combined effects of the Rex Creek (2001) and Flick Creek (2006) fires have likely impacted habitat suitability in these areas. Only one site at Hunt's Bluff is within the USFS portion of the Project, and it is a site not known to have been active since 1999 (not located in 2000 or 2001 surveys, burned in August of 2001). The fire was low severity at the site but the surrounding area that supported suitable habitat burned again in the Flick Creek Fire of 2006, some of which was also low severity. Though both fires were of generally low severity in this area, the fires reduced canopy closure, canopy layering, and downed woody debris, greatly reducing habitat suitability in the area and nesting is unlikely. Additionally, the one owl site in the vicinity of the erosion work is located beyond the ¼ mile disturbance buffer. There is no designated critical habitat for the spotted owl near any of the proposed shoreline erosion work.

The Project BA describes effects that are either extremely unlikely to occur and/or are very small in scale. The Service agrees that implementation of the Project will result in discountable and insignificant effects to individuals and the habitats of the species above. Therefore, the Service concurs with your determination of "may affect, not likely to adversely affect" for bull trout, bald eagle, northern spotted owl, gray wolf, and grizzly bear based on the information included in the BA. Our concurrence is conditioned on the Project being implemented as described in the BA. Each

This concludes informal consultation pursuant to the regulations implementing the Act, 50 C.F.R. § 402.13. This Project should be reanalyzed if new information reveals effects of the action may affect listed or proposed species or designated or proposed critical habitat in a manner or to an extent not considered in this consultation; if the action is subsequently modified in a manner that causes an effect to a listed or proposed species or designated or proposed critical habitat that was not considered in this consultation; and/or, if a new species is listed or critical habitat is designated that may be affected by this Project.

Thank you for your assistance in the conservation of listed species. If you have any questions or comments regarding this letter, please contact Gregg Kurz at the Central Washington Field Office in Wenatchee at (509)665-3508, extension 22, or via e-mail at [Gregg\\_Kurz@fws.gov](mailto:Gregg_Kurz@fws.gov).

Sincerely,

A handwritten signature in cursive script, appearing to read "Jessica Gonzales", followed by the word "FOR" underlined.

Jessica Gonzales, Division Manager  
Central Washington Field Office

attachment



**Pre-Project Documentation of Consistency with the Programmatic Biological Evaluation for the Lake Chelan Shoreline Erosion Control Project on the Chelan Ranger District, Okanogan and Wenatchee National Forests**

**I. Project Description**

Project Title:

Project Description (provide a detailed description, using the space below or attach separately):

Project Information

- Elevation range: \_\_\_\_\_ . Acres treated: \_\_\_\_\_
- Miles of road: \_\_\_\_\_ Motorized trail: \_\_\_\_\_ Non-motorized trail: \_\_\_\_\_
- Project will result in noise \_\_\_\_\_ equal to ambient, or \_\_\_\_\_ above ambient conditions.
- Number of structures created \_\_\_\_\_ and number of hazard trees felled \_\_\_\_\_
- Implementation dates (mm/dd/yy) and duration of project activity:  
 From: \_\_\_\_\_ Duration: \_\_\_\_\_

Project Location (include vicinity map):

District: \_\_\_\_\_

Watershed: \_\_\_\_\_

Legal: \_\_\_\_\_

NW Forest Plan Land Allocation(s) and %:

LRMP Land Allocations(s) and %:

**II. Consistency:** Indicate project consistency with general Forest Plan Requirements and Amendments by circling Yes, No, or N/A.

1) Are activities lawful?	Yes	No	N/A
2) Are actions consistent with the ONF LRMP or the WNF LRMP, as amended by the NWFP?	Yes	No	N/A
a. Are activities consistent with the ACS?	Yes	No	N/A
b. If suitable habitat is present in the project area, have surveys for proposed, endangered and threatened plants been conducted prior to the implementation of ground-disturbing activities?	Yes	No	N/A
3) Are activities in LSR and/or MLSA consistent with guidance from the ONF LSRA and the WNF LSRA?	Yes	No	N/A
a. Will activities result in reductions of late-successional security habitat?	Yes	No	N/A
b. For silvicultural activities, is the project "beneficial to the creation of late-successional forest conditions?" (ROD C-12)	Yes	No	N/A
c. For non-silvicultural activities, is the project "neutral or beneficial to the creation and maintenance of late-successional habitat?" (ROD C-16)	Yes	No	N/A
4) Are activities consistent with:			
a. PACFISH?	Yes	No	N/A
b. INFISH?	Yes	No	N/A
c. Eastside Screens?	Yes	No	N/A
5) Are activities consistent with findings/direction of the applicable watershed BA and environmental baseline?	Yes	No	N/A
6) Are activities consistent with all recovery plans and conservation strategies for listed species?	Yes	No	N/A
a. Conservation Agreement for <i>Delphinium viridescens</i> ?	Yes	No	N/A
b. Recovery Plan for <i>Sidalcea oregana</i> var. <i>calva</i> ?	Yes	No	N/A
c. Habitat Management Guidelines for <i>Hackelia venusta</i> on the Wenatchee NF?	Yes	No	N/A
d. Canada Lynx Conservation Assessment and Strategy, Conservation Agreement?	Yes	No	N/A
e. Bald Eagle Management Plan – Draft?	Yes	No	N/A
f. North Cascades Ecosystem Grizzly Bear Recovery Plan, including:			
• Activities will maintain the interim management directive of "no net loss" of core habitat for grizzly bears?	Yes	No	N/A
• Sanitation direction?	Yes	No	N/A
7) Will activities within critical habitat for spotted owl <b>degrade</b> <sup>1</sup> habitat?	Yes	No	N/A
a. Will activities alter, remove, or reduce the constituent elements of critical habitat (either NRF or dispersal habitat) to the point where habitat will be <b>downgraded</b> <sup>2</sup> or lost?	Yes	No	N/A
b. Will activities preclude future development of constituent elements in critical habitat?	Yes	No	N/A
8) Have necessary timing restrictions and conservation measures been incorporated into project design?	Yes	No	N/A
9) Will activities result in an increase of human capacity at the site, excluding the time necessary to complete the project?	Yes	No	N/A
10) Has a "Recreation Cumulative Effects Analysis" (Gaines et al. 2003, draft) been completed for the project area?	Yes	No	N/A
11) Do recreational activities authorized by special use permit, such as group events or outfitted and guided recreation, comply with all Forest Orders and Special Orders relating to recreational activity on the OWNFs?	Yes	No	N/A
12) Will activity result in public motorized use of existing closed roads that do not have a history of motorized use?	Yes	No	N/A
13) Will treatment sites along roads designated as permanently closed through the Forest Travel Plan or current EA's be accessed by either walking (if the closure prohibits motorized use), or as determined by current road use policy in the North Cascades Grizzly Bear Recovery Plan?	Yes	No	N/A
14) Will project activities result in a "May Affect, Likely to Adversely Affect" determination through direct, indirect, interrelated/interdependent, or cumulative effects?	Yes	No	N/A

<sup>1</sup> – A "degrade" of spotted owl habitat reduces habitat quality but retains its function (i.e., habitat classification is unchanged)

<sup>2</sup> – A "downgrade" of spotted owl habitat reduces quality and function (e.g., habitat previously classified as suitable is downgraded to dispersal)

### III. Species Effects Summary

#### A. Fisheries

Aquatic Habitat Effects (check all that apply)

Indicators	No Effect	Beneficial	Maintain	Temporary Degrade
Temperature				
Sediment/embeddedness				
Large woody debris				
Streambank condition				
Riparian conservation areas				

If any aquatic habitat effects occur, briefly describe (quantitatively, if possible) project activities and effects within:

Riparian reserves	Channel migration zones	Inner gorges	Wetted channels
Though some sediment may be released at the construction sites in the short term, the project will result in a long term decrease in sedimentation to lakeshore habitat. No stream habitat will be impacted.			

List program- and project-specific conservation measures from the Forest Wide-Programmatic BA or the Lake Chelan Erosion Control Programmatic BE that were applied to this project to avoid and minimize effects:

#### Aquatic Environmental Baseline and Effects Determination

	Mid-Columbia River Steelhead	U. Columbia River Steelhead	U. Columbia River Spring Chinook	Essential Fish Habitat	Bull trout Columbia River DPS	Bull trout Critical Habitat	Westslope Cutthroat Trout
Species, CH <sup>1</sup> , or EFH potentially affected (check all that apply)							
Life stages (egg, fry, juvenile, adult) (list all stages that apply)							
Baseline status – integrated subpopulation/habitat (FA, FAR, FAUR) <sup>2</sup>							
Habitat function (spawning, rearing, holding, migration, overwinter)							
Effects Determination <sup>3</sup>							

<sup>1</sup> Proposed or designated critical habitat.

<sup>2</sup> FA = functioning appropriately; FAR = functioning at risk, FAUR = functioning at unacceptable risk.

<sup>3</sup> NE (No Effect), MANLAA (May Affect, Not Likely Adversely Affect), MANLAA-BE (May Affect, Not Likely Adversely Affect - Beneficial Effect).

**B. Plants**

	Showy Stickseed ( <i>Hackelia venusta</i> )	Ute Ladies' tresses ( <i>Spiranthes diluvialis</i> )	Water howelia ( <i>Howelia aquatilis</i> )	Wenatchee Mountains checker-mallow ( <i>Sidalcea oregana</i> var. <i>calva</i> )	Designated Critical Habitat for <i>Sidalcea oregana</i> var. <i>calva</i>
Miles to nearest known occupied habitat (x.x miles)					
Potentially suitable habitat in project area? (Y/N)					
Plant surveys conducted? (Y/N)					
Acres of potentially suitable habitat to be disturbed?					
Effects Determination:					

**C. Wildlife**

	Circle One or Answer		
What is the distance between activity and nearest,			
a. nest, activity center or unsurveyed suitable habitat for spotted owl?	<400m	>400m	
b. nest, activity center or unsurveyed suitable habitat for marbled murrelet?	<400m	>400m	
c. wintering area for bald eagle?	<450m	>450m	
d. Active nest or nest of unknown status for bald eagle?	<450m		
What is the site number (SO-xxx)/CHU number (WA-xx) within 400m of activity?	NA		
Project results in habitat degradation only, not a loss of habitat functions	Yes	No	NA
Will activity occur within ungulate winter range?	Yes	No	
Has an active den or rendezvous site been located?	Yes	No	
Will aircraft be used within,			
a. 1 km of active nest, activity center whose current status is unknown, or any unsurveyed suitable habitat for			
• spotted owl?	Yes	No	
• marbled murrelet?	Yes	No	
• bald eagle?	Yes	No	
b. ½ mile (500 m) and no line-of-sight, or located within ½ mile (800 m) and in line-of-sight, of a bald eagle wintering area where eagle activity is concentrated?	Yes	No	
Is project in Grizzly Bear Recovery Zone?	Yes	No	
Will project Increase/Decrease/Not Affect core habitat?	I	D	NA
<b>Effects Determination:</b>			
a. Bald eagle	NE	MANLAA	BE
b. Canada lynx	NE	MANLAA	BE
c. Gray wolf	NE	MANLAA	BE
d. Grizzly bear	NE	MANLAA	BE
e. Marbled murrelet	NE	MANLAA	BE
f. Spotted owl	NE	MANLAA	BE
g. Spotted owl – critical habitat	NE	MANLAA	BE

Enter the acres of spotted owl habitat degraded by land allocation and CHU:

Habitat Degraded (acres)		Land Allocations					
		Matrix	LSR	MLSA	AMA	AW	CW
Non-CHU	NRF						
	Dispersal						
CHU	NRF						
	Dispersal						

Identify which CHUs and LSR/MLSAs are affected:

Prepared by: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Prepared by: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Prepared by: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed by: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_





# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Central Washington Field Office  
215 Melody Lane, Suite 119  
Wenatchee, Washington 98801

August 14, 2007

**In Reply Refer To:**

USFWS Reference: 13260-2007-I-0171  
13260-2007-B-0026

Hydrologic Unit Codes: 17-02-00-09

RE: Mitchell Creek and Deer Point Erosion Repair

Robert J. Sheehan  
District Ranger  
Chelan Ranger District  
428 West Woodin Avenue  
Chelan, Washington 98816

Dear Mr. Sheehan:

This responds to your August 1, 2007, request for initiation of informal consultation on the Mitchell Creek and Deer Point Erosion Control Projects (Project), located on the Chelan Ranger District, Okanogan and Wenatchee National Forests, in Chelan County, Washington. In your project consistency analysis form (PCF), you described the anticipated effects to listed species and how this Project is consistent with the program of work described in the Lake Chelan Shoreline Erosion Repair programmatic consultation (Programmatic) (FWS Reference 13260-2007-I-0170 and 13260-2007-B-0026).

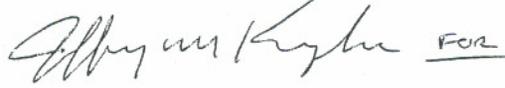
Based on the information provided in the PCF, the U. S. Fish and Wildlife Service (Service) agrees that this Project is consistent with the design criteria and conservation measures described in the Programmatic and therefore may be tiered to our August 14, 2007 concurrence with the Programmatic. The Service concurs with your determination of "may affect, not likely to adversely affect" for the northern spotted owl (*Strix occidentalis caurina*), gray wolf (*Canis lupus*), and grizzly bear (*Ursus arctos*).

This concludes informal consultation pursuant to the implementing regulations of the Endangered Species Act, 50 C.F.R. § 402.13. This Project should be reanalyzed if new information reveals effects of the action that may affect listed or proposed species or designated or proposed critical habitat in a manner or to an extent not considered in this consultation; if the action is subsequently modified in a manner that causes an effect to a listed or proposed species or designated or proposed critical habitat that was not considered in this consultation; and/or, if a new species is listed or critical habitat is designated that may be affected by this Project.

Robert J. Sheehan

Thank you for your assistance in the conservation of listed species. If you have any questions or comments regarding this letter, please contact Gregg Kurz at the Central Washington Field Office in Wenatchee at (509)665-3508, extension 22, or via e-mail at [Gregg\\_Kurz@fws.gov](mailto:Gregg_Kurz@fws.gov).

Sincerely,

A handwritten signature in cursive script, appearing to read "Jessica Gonzales", followed by the word "FOR" written in a simple, blocky font.

Jessica Gonzales, Division Manager  
Central Washington Field Office

**AGENCY USE ONLY**

Agency Reference #:

Date Received:

Circulated by:

(local govt. or agency)

**JOINT AQUATIC RESOURCES PERMIT APPLICATION FORM (JARPA)**



**Forest Service Shoreline Erosion Treatment for Sites 11, 55, 58 and 59 from  
2007-2009**

I am applying for a Fish Habitat Enhancement Project per requirements of RCW 75.20.350. You must submit a copy of this completed JARPA application form, and the (Fish Habitat Enhancement JARPA Addition) to your local Government Planning Department and Washington Department of Fish & Wildlife Area Habitat Biologist on the same day.

Based on the instructions provided, I am sending copies of this application to the following: (check all that apply)

- Local Government for shoreline:  Substantial Development  Conditional Use  Variance  Exemption  Revision  
 Floodplain Management  Critical Areas Ordinance
- Washington Department of Fish and Wildlife for HPA (Submit 3 copies to WDFW Region) **MOU Appendix B Hydraulic Projects not covered by Appendix A, see Attachment 2**
- Washington Department of Ecology for 401 Water Quality Certification Nationwide Permits (to Regional office-Federal Permit Unit) Washington Department of Natural Resources for Aquatic Resources Use Authorization Notification
- Corps of Engineers for:  Section 404 Section 10 permit **OR If qualified a 2 year Nationwide Permit 13, Bank Stabilization See attachment 1 for Forest Service addressing criteria for nationwide bank stabilization permit.**
- Coast Guard for Section 9 Bridge Permit
- US Fish & Wildlife Service or National Marine Fisheries Service for Endangered Species Act (ESA) Consultation **BE attached as Attachment 5**

1. APPLICANT  
 USDA Forest Service, Okanogan & Wenatchee National Forests

MAILING ADDRESS  
 428 West Woodin Avenue, Chelan, WA 98816

WORK PHONE Joe Kastenholz (509) 682-2576 (@ Chelan Rgr. District) (509) 665-3598 or (509) 662-4335 (@ Forest HQ)	E-MAIL ADDRESS <a href="mailto:jkastenholz@fs.fed.us">jkastenholz@fs.fed.us</a>	HOME PHONE (509) 664-1913	FAX # (509) 682-9004 (@ Chelan RD)  or (509) 664-2745 (@ Forest HQ)
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2. AUTHORIZED AGENT  
 N/A

MAILING ADDRESS

WORK PHONE	E-MAIL ADDRESS	HOME PHONE	FAX #
------------	----------------	------------	-------

3. RELATIONSHIP OF APPLICANT TO PROPERTY:  OWNER  PURCHASER  LESSEE  OTHER:  
 National Forest System Lands (above 1,079'); State Owned Aquatic Lands (below 1,079') All activities to occur on NFS lands.

4. NAME, ADDRESS, AND PHONE NUMBER OF PROPERTY OWNER(S), IF OTHER THAN APPLICANT:  
 WA Department of Natural Resources, SE Region, 713 Bowers Road, Ellensburg, WA 98926 (509-925-8510)

5. LOCATION (STREET ADDRESS, INCLUDING CITY, COUNTY AND ZIP CODE, WHERE PROPOSED ACTIVITY EXISTS OR WILL OCCUR)  
 At Mitchell Creek, Deer Point, Prince Creek, and Corral Creek Campgrounds on Lake Chelan (see Map Attachment # 6)  
 LOCAL GOVERNMENT WITH JURISDICTION (CITY OR COUNTY) Chelan County

WATERBODY Lake Chelan					TRIBUTARY OF Chelan River	WRIA # 47
¼ SECTION NE	SECTION 24	TOWNSHIP T29N	RANGE R20E	GOVERNMENT LOT ---	SHORELINE DESIGNATION National Forest System Lands	
LATITUDE & LONGITUDE IF KNOWN: ---					ZONING DESIGNATION National Forest System Lands	
TAX PARCEL NO: National Forest System Lands					DNR STREAM TYPE, IF KNOWN ---	

## Forest Service Shoreline Erosion Treatment

6. DESCRIBE THE CURRENT USE OF THE PROPERTY, AND STRUCTURES EXISTING ON THE PROPERTY. IF ANY PORTION OF THE PROPOSED ACTIVITY IS ALREADY COMPLETED ON THIS PROPERTY, INDICATE MONTH AND YEAR OF COMPLETION.

All four sites are existing Forest Service Campgrounds, some log crib erosion control work was done about 25 years ago at each of the sites, each of the campgrounds has an existing dock. We propose to complete 2 sites each year with Deer Point (site 58) and Mitchell Creek (site 59) in 2007 -2008. Starting with advance rock placement in December of 2007 (to minimize lake bed impacts) followed up by shoreline treatment during the January – March 2008 drawdown period. Followed by Prince Creek (site 55) and Corral Creek (site 11) during the drawn down of 2008-2009.

IS THE PROPERTY AGRICULTURAL LAND?  YES  NO

ARE YOU A USDA PROGRAM PARTICIPANT?  YES  NO N/A

7a. DESCRIBE THE PROPOSED CONSTRUCTION AND/OR FILL WORK FOR THE PROJECT THAT YOU WANT TO BUILD THAT NEEDS AQUATIC PERMITS: COMPLETE PLANS AND SPECIFICATIONS SHOULD BE PROVIDED FOR ALL WORK WATERWARD OF THE ORDINARY HIGH WATER MARK OR LINE, INCLUDING TYPES OF EQUIPMENT TO BE USED. IF APPLYING FOR A SHORELINE PERMIT, DESCRIBE ALL WORK WITHIN AND BEYOND 200 FEET OF THE ORDINARY HIGH WATER MARK. ATTACH A SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED.

See Attachment 4: Treatment Diagrams of various site treatments and Attachment 3 Treatment Zones for the four sites.

7b. DESCRIBE THE PURPOSE OF THE PROPOSED WORK AND WHY YOU WANT OR NEED TO PERFORM IT AT THE SITE. PLEASE EXPLAIN ANY SPECIFIC NEEDS THAT HAVE INFLUENCED THE DESIGN.

Shoreline erosion has developed on Lake Chelan as a result of the Lake Chelan Hydroelectric license being granted in 1926. Much of the lake is naturally armored with rock or surface bedrock that previous glacier could not scrape down. Glacial tills and volcanic ash deposits form the base of Lake Chelan soils. The purpose of the project is to stabilize accelerated shoreline erosion, reduce fine sediments, and encourage re-vegetation at the toe of the slope. During recent re-licensing work we inventoried new and previously identified erosion sites. The original baseline erosion survey was done in 1984, with some prescribed treatments for high priority sites, some of the treatments were successful, some failed. One of the key findings is that “rock size” matters, loose medium to large boulders pushed up with a bulldozer, failed very soon. The sites that will be treated are the 35 highest priority out of the 112 Forest Service sites. These first 4 are the highest priority sites of the 35 due to their recreation component.

7c. DESCRIBE THE POTENTIAL IMPACTS TO CHARACTERISTIC USES OF THE WATER BODY. THESE USES MAY INCLUDE FISH AND AQUATIC LIFE, WATER QUALITY, WATER SUPPLY, RECREATION, and AESTHETICS. IDENTIFY PROPOSED ACTIONS TO AVOID, MINIMIZE, AND MITIGATE DETRIMENTAL IMPACTS, AND PROVIDE PROPER PROTECTION OF FISH AND AQUATIC LIFE. ATTACH A SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED.

The project will enhance water quality, recreation use and aesthetics. Recreation features such as steps are designed into the erosion treatments. Re-vegetation with native shrubs, forbs, and grass will be spot planted. Large woody debris will be used for fish and shoreline enhancement where it can safely be anchored away from areas of high boat use or human flow paths. Pre-staging of rock in December is intended to minimize equipment travel in the drawdown area.

8. WILL THE PROJECT BE CONSTRUCTED IN STAGES? Yes.

XX  YES  NO

PROPOSED STARTING DATE: 12/01/2007, with rock delivery to sites under a lake elevation of approximately 1095-1090 to allow for barge access before full drawdown.

ESTIMATED DURATION OF ACTIVITY: 3-4 months, December, then February March for shoreline rock placement, some spring planting follow up and monitoring will also likely occur.

9. CHECK IF ANY STRUCTURES WILL BE PLACED:

WATERWARD OF THE ORDINARY HIGH WATER MARK OR LINE FOR FRESH OR TIDAL WATERS; AND/OR

Yes, the project will incorporate large woody debris structures, both parallel and perpendicular placed along the shoreline. Please see Attachment 4: Treatment Diagrams.

WATERWARD OF MEAN HIGH WATER LINE IN TIDAL WATERS

# Forest Service Shoreline Erosion Treatment

10. WILL FILL MATERIAL (ROCK, FILL, BULKHEAD, OR OTHER MATERIAL) BE PLACED:

Yes, large rock will be placed in an excavated shallow trench at 1098-1100 feet elevation. This is to anchor the base course portion of the placed rock, geotextile style fabric cloth will be behind this rock and will extend up to approximately 1104 plus or minus depending on the specific site. Vegetation will be planted at two levels when needed at the 1101 and approximately 1103 elevation levels. On sites where the enhanced placed rock treatment is used the 1/1 mitigation ratio will be calculated for impacts. For more details please see Attachment 4: Treatment Diagrams.

WATERWARD OF THE ORDINARY HIGH WATER MARK OR LINE FOR FRESH WATERS? **Yes**

IF YES, VOLUME (CUBIC YARDS): **We**

estimate 1-3 cubic feet/ lineal foot, for excavated sites below 1100 feet. Some of the LWD may have one end buried, which will cause 1- 1.5 cubic yds of material blended back into the lakebed floor or be placed behind the placed rock.

WATERWARD OF THE MEAN HIGHER HIGH WATER FOR TIDAL WATERS?

IF YES, VOLUME (CUBIC YARDS)        AREA        (ACRES)

11. WILL MATERIAL BE PLACED IN WETLANDS?

YES  NO

IF YES: **We do not consider the drawdown zone to be a wetland, we are placing rock and LWD in this area.**

A. IMPACTED AREA IN ACRES: **.**

B. HAS A DELINEATION BEEN COMPLETED? IF YES, PLEASE SUBMIT WITH APPLICATION. **N/A**

YES  NO

C. HAS A WETLAND REPORT BEEN PREPARED? IF YES, PLEASE SUBMIT WITH APPLICATION.

YES  NO

D. TYPE AND COMPOSITION OF FILL MATERIAL (E.G., SAND, ETC.): **Rock and Wood**

E. MATERIAL SOURCE: **Local pit rock, collected LWD native to Lake Chelan**

F. LIST ALL SOIL SERIES (TYPE OF SOIL) LOCATED AT THE PROJECT SITE, & INDICATE IF THEY ARE ON THE COUNTY'S LIST OF HYDRIC SOILS. SOILS INFORMATION CAN BE OBTAINED FROM THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS): **Soils are alluvial and colluvial depositions**

12. WILL PROPOSED ACTIVITY CAUSE FLOODING OR DRAINING OF WETLANDS?

YES  NO

IF YES, IMPACTED AREA IS        ACRES.

13. WILL EXCAVATION OR DREDGING BE REQUIRED IN WATER OR WETLANDS?

X  YES  NO

IF YES:

**Yes, for some locations about 1-4 cubic feet of material per lineal foot of enhanced placed rock treatment areas may be moved to allow for anchoring base course rock. Some LWD pieces may have one end anchored in substrate. Excavated material will be placed behind the geotextile fabric to minimize slope profile, or if suitable fines are present, it would be placed in fabric pocket for planting.**

A. VOLUME: (CUBIC YARDS) / AREA (ACRES)

B. COMPOSITION OF MATERIAL TO BE REMOVED: **Alluvial sands and gravels, some small coble.**

C. DISPOSAL SITE FOR EXCAVATED MATERIAL: **Immediately upslope, behind fabric cloth 1100 -1103 elevation**

D. METHOD OF DREDGING: **M Mid-size excavator with bucket thumb**

# Forest Service Shoreline Erosion Treatment

14. HAS THE STATE ENVIRONMENTAL POLICY ACT (SEPA) BEEN COMPLETED? XX  YES   
 NO  
**National Forest System Lands – NEPA compliance achieved through Final Environmental Assessment for Hydropower License, Lake Chelan Hydroelectric Project, FERC Project No. 637 Issued by FERC**  
 SEPA LEAD AGENCY: SEPA DECISION: DNS, MDNS, EIS, ADOPTION, EXEMPTION DECISION DATE: 10/10/2003  
 SUBMIT A COPY OF YOUR SEPA DECISION LETTER TO WDFW AS REQUIRED FOR A COMPLETE APPLICATION

15. LIST OTHER APPLICATIONS, APPROVALS, OR CERTIFICATIONS FROM OTHER FEDERAL, STATE OR LOCAL AGENCIES FOR ANY STRUCTURES, CONSTRUCTION, DISCHARGES, OR OTHER ACTIVITIES DESCRIBED IN THE APPLICATION (I.E., PRELIMINARY PLAT APPROVAL, HEALTH DISTRICT APPROVAL, BUILDING PERMIT, SEPA REVIEW, FEDERAL ENERGY REGULATORY COMMISSION LICENSE (FERC), FOREST PRACTICES APPLICATION, ETC.) ALSO INDICATE WHETHER WORK HAS BEEN COMPLETED AND INDICATE ALL EXISTING WORK ON DRAWINGS.

TYPE OF APPROVAL	ISSUING AGENCY	IDENTIFICATION NO.	DATE OF APPLICATION	DATE APPROVED	COMPLETED?
Hydraulic Project Approval	WA DFW		8/2007		
Water Quality Certification	WA DOE		8/2007		
Section 404 and Section 10	US Army COE		8/2007		
ESA Consultation	US FWS		8/2007		

16. HAS ANY AGENCY DENIED APPROVAL FOR THE ACTIVITY DESCRIBED HEREIN OR FOR ANY ACTIVITY DIRECTLY RELATED TO THE ACTIVITY DESCRIBED HEREIN?  YES  NO IF YES, EXPLAIN: **Most agencies participated in the Lake Chelan Settlement Process and signed the Settlement agreement, that cover all the erosion sites with treatment concepts and locations of treatment. Project specific approval is now being requested.**

**SECTION B - Use for Shoreline and Corps of Engineers permits only:**

17. TOTAL COST OF PROJECT. THIS MEANS THE FAIR MARKET VALUE OF THE PROJECT, INCLUDING MATERIALS, LABOR, MACHINE RENTALS, ETC.  
 Total project cost estimated at \$400,000 for the two years of work at the four sites. The work will be administered by the Forest Service and is funded from the Lake Chelan Settlement Agreement through the FERC license.

18. LOCAL GOVERNMENT WITH JURISDICTION:  
 Chelan County

19. FOR CORPS, COAST GUARD, AND DNR PERMITS, PROVIDE NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF ADJOINING PROPERTY OWNERS, LESSEES, ETC..  
 PLEASE NOTE: SHORELINE MANAGEMENT COMPLIANCE MAY REQUIRE ADDITIONAL NOTICE — CONSULT YOUR LOCAL GOVERNMENT.

NAME	ADDRESS	PHONE NUMBER
	National Forest System Lands	





***APPENDIX C: CULTURAL RESOURCES***

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File Code: 1950; 2360

Date: July 20, 2007

Mike Marchand, Business Council Chair  
Confederated Tribes of the Colville Reservation  
P.O. Box 150  
Nespelem, WA 99155

Dear Chairman Marchand:

The purpose of this letter is to inform you of a proposed action by the Chelan Ranger District to address shoreline erosion along Lake Chelan. During the Lake Chelan FERC relicensing process many erosion sites were identified with proposed remedial action. We will be implementing the proposed actions at the following Forest Service Group One recreational sites: Mitchell Creek Campground located in T29N, R 21E, Section 34; Deer Point Campground located in T29N, R20 E, Section 10; Prince Creek Campground located in T31N, R19E, Section 32; and Corral Creek Campground located in T29N, R19E, Section 3 (see enclosed map).

I am proposing to treat active erosion with various forms of placed rock armoring, Large Woody Debris (LWD) structures, and vegetative plantings. The only type of excavation work will be at approximately 1098 feet elevation to anchor base rock, and for placing LWD anchors or burying one end of the log. Mechanized equipment will operate in the drawn down zone of 1100 feet to about 1085 feet of elevation. All activities above 1100 feet will be minimized to prevent ground disturbance. A complete description of the work proposed is enclosed.

In compliance with the National Environmental Policy Act (NEPA), the Chelan Ranger District is preparing site-specific project file reports for this action. We are tiering to the Final Environmental Assessment for Hydropower License, Lake Chelan Hydroelectric Project FERC Project No. 637, Federal Energy Regulatory Commission, Washington, D.C. October 2003. That document summarized the project purpose and need and analyzed the potential effects of the project on the natural environment.

Included in these studies and in accordance with the National Historic Preservation Act as amended (NHPA) and its implementing regulation (36 CFR 800), and our 1997 PMOA regarding the management of cultural resources on National Forests in Washington State, a cultural resource literature review and monitoring during treatment of the Mitchell Creek unit is proposed. No additional field inventory is planned because all four recreation sites were recently inventoried for cultural resources associated with FERC relicensing and none of the locations yielded cultural resources. Additionally, all four sites were visited earlier this year with members of my staff and our Forest Archaeologist to better understand the treatment proposed at each site and its potential to affect cultural resources if present. The decision to monitor activities at Mitchell Creek is based on site probability and the type of treatment proposed.

Work at all four locations will be documented in accordance with our 1997 programmatic agreement regarding cultural resource management on National Forests in the State of Washington.

I recognize that the Confederated Tribes of the Colville Reservation may have special interests or knowledge of important resources within the proposed project area. If you have any information or concerns regarding cultural properties specifically, please contact Powys Gadd, Okanogan-Wenatchee National Forest Archaeologist at 509-664-9394. If you would like to meet with me or with other Forest Service project personnel to discuss the project, please contact me at 509-682-2576.

If you wish to respond to this proposal, comments can be sent directly to:

Joe Kastenholz, Resource Assistant  
Chelan Ranger District  
428 West Woodin Avenue  
Chelan, WA 98816

Comments should be received no later than August 20, 2007. Thank you for your interest in the management of the Okanogan-Wenatchee National Forest.

Sincerely,

Robert J. Sheehan

ROBERT J. SHEEHAN  
District Ranger

Enclosure: Map and Treatment Descriptions

cc: Doug Seymour, Cultural Committee Chair,  
cc: Camille Pleasants, THPO  
cc: Deb Louie, Chair, Natural Resource Committee  
cc: Powys Gadd, Okanogan-Wenatchee National Forest Archeologist

File Code: 1950; 2360

Date: July 20, 2007

Lavina Washines, Chair  
Yakama Nation  
P.O. Box 151  
Toppenish, WA 98948

Dear Chairwoman Washines:

The purpose of this letter is to inform you of a proposed action by the Chelan Ranger District to address shoreline erosion along Lake Chelan. During the Lake Chelan FERC relicensing process many erosion sites were identified with proposed remedial action. We will be implementing the proposed actions at the following Forest Service Group One recreational sites: Mitchell Creek Campground located in T29N, R 21E, Section 34; Deer Point Campground located in T29N, R20 E, Section 10; Prince Creek Campground located in T31N, R19E, Section 32; and Corral Creek Campground located in T29N, R19E, Section 3 (see enclosed map).

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In compliance with the National Environmental Policy Act (NEPA), the Chelan Ranger District is preparing site-specific project file reports for this action. We are tiering to the Final Environmental Assessment for Hydropower License, Lake Chelan Hydroelectric Project FERC Project No. 637, Federal Energy Regulatory Commission, Washington, D.C. October 2003. That document summarized the project purpose and need and analyzed the potential effects of the project on the natural environment.

Included in these studies and in accordance with the National Historic Preservation Act as amended (NHPA) and its implementing regulation (36 CFR 800), and our 1997 PMOA regarding the management of cultural resources on National Forests in Washington State, a cultural resource literature review and monitoring during treatment of the Mitchell Creek unit is proposed. No additional field inventory is planned because all four recreation sites were recently inventoried for cultural resources associated with FERC relicensing and none of the locations yielded cultural resources. Additionally, all four sites were visited earlier this year with members of my staff and our Forest Archaeologist to better understand the treatment proposed at each site and its potential to affect cultural resources if present. The decision to monitor activities at Mitchell Creek is based on site probability and the type of treatment proposed.

Work at all four locations will be documented in accordance with our 1997 programmatic agreement regarding cultural resource management on National Forests in the State of Washington.

I recognize that the Yakama Nation may have special interests or knowledge of important resources within the proposed project area. If you have any information or concerns regarding cultural properties specifically, please contact Powys Gadd, Okanogan-Wenatchee National Forest Archaeologist at 509-664-9394. If you would like to meet with me or with other Forest Service project personnel to discuss the project, please contact me at 509-682-2576.

If you wish to respond to this proposal, comments can be sent directly to:

Joe Kastenholz, Resource Assistant  
Chelan Ranger District  
428 West Woodin Avenue  
Chelan, WA 98816

Comments should be received no later than August 20, 2007. Thank you for your interest in the management of the Okanogan-Wenatchee National Forest.

Sincerely,

ROBERT J. SHEEHAN  
District Ranger

Enclosure: Map and Treatment Descriptions

cc: Johnny Smartlowit, Cultural Committee Chair  
cc: Kate Valdez, THPO  
cc: Johnson Meninick, Cultural Program  
cc: Lee Carlson, Tribal/USFS Liaison  
cc: Powys Gadd, Okanogan-Wenatchee National Forest Archeologist

***APPENDIX D: CONSULTATION***

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## **Record of Communications**

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Article 401 of the Project License requires that Chelan PUD “prepare plans for approval by some of all of the signatories of the Lake Chelan Settlement Agreement”. Additionally, “The licensee shall submit to the Commission documentation of its consultation, copies of the comments and recommendations made in connection with the plan, and a description of how the plan accommodates the comments and recommendations. The licensee shall allow a minimum of 30 days for the consulted entities to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee’s reasons, based on project-specific information. The Commission reserves the right to make changes to the plan submitted.”

This plan was developed collaboratively by Chelan PUD and the USDA Forest Service. Chelan PUD has completed the consultation requirements, beginning on 1/10/07 by meeting with the USDA Forest Service and determining the most efficient means of developing the required plans for the erosion control work. Meetings between the two entities were conducted on the following dates:

January 10, 2007  
January 30, 2007  
February 22, 2007  
February 26, 2007  
March 21, 2007  
April 20, 2007  
July 6, 2007  
July 25, 2007  
August 14, 2007  
August 23, 2007  
August 29, 2007  
September 6, 2007  
October 11, 2007  
October 19, 2007

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## **30 Day Comments**

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As required by the License, the draft final plan was sent to the USDA Forest Service for a 30-day review on September 25<sup>th</sup>. A copy of the transmittal e-mail is provided below.

-----Original Message-----

**From:** Bitterman, Deborah **On Behalf Of** Duffy, Janel

**Sent:** Tuesday, September 25, 2007 4:04 PM

**To:** Bob Sheehan (rsheehan@fs.fed.us); Joe Kastenholz (jkastenholz@fs.fed.us)

**Cc:** Smith, Michelle

**Subject:** Chelan PUD: Request for Comment re Final Site-Specific Erosion Plan Pursuant to Article 401(a) for the Lake Chelan Project No. 637

PUBLIC UTILITY DISTRICT NO. 1 of CHELAN COUNTY  
P.O. Box 1231, Wenatchee, WA 98807-1231 • 327 N. Wenatchee Ave., Wenatchee, WA 98801  
(509) 663-8121 • Toll free 1-888-663-8121 • [www.chelanpud.org](http://www.chelanpud.org)

To: Robert J. Sheehan, USDA Forest Service  
Joe Kastenholz, USDA Forest Service

From: Janel Duffy  
Public Utility District No. 1 of Chelan County (Chelan PUD)  
[janel.duffy@chelanpud.org](mailto:janel.duffy@chelanpud.org)  
509.661.4400

Re: Lake Chelan Hydroelectric Project No. 637 (Project)  
Article 401(a) and Appendix A, Article 1(a)(2)  
USDA Forest Service Site-Specific Erosion Control Plan

In accordance with Article 401(a) and Appendix A, Article 1(a)(2), Chelan PUD invites comment letters on the attached final draft USDA Forest Service Site-Specific Erosion Control Plan. To open the document, click on the following link: [http://www.chelanpud.org/documents/9393\\_1.pdf](http://www.chelanpud.org/documents/9393_1.pdf).

Please submit your comment letters on or before 5:00 p.m., October 25, 2007 to me via email at [janel.duffy@chelanpud.org](mailto:janel.duffy@chelanpud.org).

Pursuant to Article 401(a) and Appendix A, Article 1(a)(2), Chelan PUD will file the USDA Forest Service Site-Specific Erosion Control Plan with FERC (Commission) by November 6, 2007. All received comment letters will be appended to the plan with a description of how each comment or recommendation was incorporated in the plan, or, if the licensee does not adopt a recommendation, the filing with the Commission will include the licensee's reasons, based on project-specific information for not adopting such recommendation.

If you have any questions, please do not hesitate to contact me.

**Summary of Response to Comments**

On October 19, 2007, the US Forest Service provided comments regarding both the USDA Forest Service Site-Specific Erosion Control Plan and the USDA Forest Service Erosion Control Implementation and Erosion Monitoring and Maintenance Plan. The letter is attached below.

Each comment has been addressed as follows:

<b>Comment</b>	<b>Licensee's response to comment</b>
On pages 11, 23, 37, and 51: <b>Insert</b> below the table the sentence: "Construction drawings showing the treatments described above are attached in Figures 2-9, pages 62-69".	The sentence has been included on the four appropriate pages.
<b>Modify</b> page i, Table of Contents to include Figure 2-9: Construction drawings of proposed treatments.... 62-69, and insert Construction Drawing on pages 62-69.	The figures have been inserted as Appendix A and the table of contents has been modified to reflect this.



United States  
Department of  
Agriculture

Forest  
Service

Wenatchee  
National  
Forest

215 Melody Lane  
Wenatchee, WA 98801  
TTY (509) 662-4396  
Voice (509) 662-4335

File Code: 2560  
Date: October 19, 2007

Reference: Lake Chelan Hydroelectric Project No. 637

Ms. Janel Duffy  
Public Utility District No 1 of Chelan County  
P.O. Box 1231  
Wenatchee, WA 98807

Dear Ms Duffy:

In accordance with Article 401 and Appendix A, Articles 1(a)(1), 1(a)(2) and 1(a)(3), we would like to provide the following comments to the "USDA Forest Service Site-Specific Erosion Control Plan" and the "USDA Forest Service Erosion Control Implementation and Erosion Monitoring and Maintenance Plan"

Comments to the September 20, 2007 USDA Forest Service Site-Specific Erosion Control Plan", CPUD:

On pages 11, 23, 37, and 51:

**Insert** below the table the sentence: "Construction drawings showing the treatments described above are attached in Figures 2-9, pages 62-69".

**Modify** page i, Table of Contents to include Figures 2-9: Construction drawings of proposed treatments..... 62-69, and insert Construction Drawing on pages 62-69.

Comments to the Final November 3, 2007 "USDA Forest Service Erosion Control Implementation and Erosion Monitoring and Maintenance Plan", CPUD:

Page 7 Modifications 1<sup>st</sup> paragraph:

**Delete** the following portion: Since the signing of the Settlement Agreement, the USDA Forest Service has started the permitting process and will submit an application for two year Nationwide Permits for this type of work. These permits will allow the USDA Forest Service to rapidly obtain necessary permits for the first sites to be work on during the spring 2008 drawdown period. As such, it is possible, at this time, to immediately provide site-specific plans for the sites slated to be treated in 2008 to 2010.

Page 7 1<sup>st</sup> paragraph under "Initial Sites" after treatment locations:

**Include** this modified paragraph:

Since the signing of the Settlement Agreement, the USDA Forest Service has started the permitting process and has submitted an application for a two year Nationwide Permit 13, Bank Stabilization for erosion control work at Mitchell and Deer Point sites. These permits are from the Army Corps of



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Engineers. The USDA Forest Service has also prepared a framework for informal programmatic consultation with the U.S. Fish and Wildlife Service thru a project consistency analysis form (PCF). They have reviewed the first PCF for sites 58 and 59 finding that this "Project is consistent with the design criteria and conservation measures described in the Programmatic and therefore may be tiered to (US F&W Service) our August 14, 2007 concurrence with the Programmatic. We hope to obtain necessary permits and FERC approval for the first sites to be worked on during the winter/spring 2008 drawdown period. We have provided site-specific plans for the sites slated to be treated in 2008 to 2010 under the "USDA Forest Service Site-Specific Erosion Control Plan" for sites 11, 55, 58, and 59.

Page 7: 2<sup>nd</sup> paragraph under "Initial Sites"

**Deleted** the word "aforementioned" out of the first sentence..

Page 8: 1<sup>st</sup> and 2<sup>nd</sup> paragraph under Responsibility:

**Insert** final agreed upon wording "Interlocal Cooperative/Collection Agreement".

Page 13: Long-term trend Monitoring of Erosion, 1<sup>st</sup> paragraph 2<sup>nd</sup> sentence:

**Delete** "if any" from the end of the sentence, it shows bias.

Page 14: Last paragraph, 2<sup>nd</sup> sentence and 3<sup>rd</sup> sentence:

**Change** "50<sup>th</sup>" to "45<sup>th</sup>" Rationale: The analysis would not be timely enough to be useful in the next relicensing process if it occurred in the last year of the license.

If you have any questions or needed any additional information please contact Joe Kastenzholz (509-682-2576) for details on the project.

Thank you for your help and cooperation in preparing these plans.

  
ROBERT J. SHEEHAN  
District Ranger

