

PNP 28-14-15-4



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Mailing Address: P. O. Box 1107, Everett, Washington 98206

April 3, 1991  
PUD-19489

Mr. Gary Engman  
Washington Dept. of Wildlife  
16018 Mill Creek Boulevard  
Mill Creek, WA 98012

Mr. Larry Cordova  
U.S. Forest Service  
Mt. Baker-Snoqualmie National Forest  
Skykomish Ranger District  
Skykomish, WA 98288

Mr. Todd Thorn  
Washington Dept. of Natural  
Resources  
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Sedro Woolley, WA 98282

Mr. Tom Hoppensteadt  
Tulalip Tribes, Inc.  
6700 Totem Beach Road  
Marysville, WA 98270

Mr. Gwill Ging  
U.S. Fish & Wildlife Service  
2625 Parkmont Lane SW  
Olympia, WA 98502

Gentlemen:

RE: Jackson Project - FERC #2157  
Wildlife Habitat Management Plan  
Annual Report

The District has filed the attached 1990 Annual Progress Report on the Wildlife Habitat Management Program for the Henry M. Jackson Hydroelectric Project with the Federal Energy Regulatory Commission in compliance with Project License Article 53, as amended.

Sincerely,

Richard R. Goodell, Manager  
Jackson Hydroelectric Project

Enclosure - 1990 Annual Progress Report  
bcc: Tannenbaum  
Farwell



2320 California St., Everett, Washington 98201 (206) 258-8211  
Mailing Address: P. O. Box 1107, Everett, Washington 98206

April 2, 1991  
PUD-19487

Ms. Lois D. Cashell, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street NE  
Washington, D.C. 20426

Dear Ms. Cashell:

RE: Henry M. Jackson Project - FERC No. 2157  
Wildlife Habitat Management Program  
Annual Report

The 1990 Annual Report for the Jackson Project Wildlife Habitat Management Program is enclosed. This report fulfills the requirement of the "Order Approving with Modification Revised Wildlife Habitat Management Plan" (issued May 19, 1989, revised June 27, 1990), which stated "The Licensees shall file with the Commission their annual reports on Phase I. . . ."

This second annual report describes activities conducted during 1990, and summarizes activities planned for 1991. The activities, procedures and schedules described in this report are based on the Wildlife Habitat Management Plan submitted to FERC on May 25, 1988.

The draft annual report was submitted to the U.S. Forest Service (USFS), U.S. Fish and Wildlife Service (USFWS), the Washington Department of Wildlife (WDW), the Washington Department of Natural Resources (DNR), and the Tulalip Tribes for comment on February 25, 1991. Written comments were requested by March 15, 1991. A meeting was held with agency representatives on March 14, 1991, to request comments and discussion on progress in 1990 and planned activities for 1991. An attendance list and meeting minutes are attached to the Annual Report. Written comments were received from the Tulalip Tribes and the WDW, and a phone conversation to clarify certain discussion points during the meeting of March 14 was held with the USFWS. Records of all of these comments are attached to the Annual Report.

Ms. Lois Cashell, Secretary -2-  
Federal Energy Regulatory Commission

April 2, 1991

Please call Bernice Tannenbaum (206)347-4319, if you have any questions on the 1991 Annual Report.

Sincerely,

R. E. Johnson, Director  
Construction and Operations

Enclosures

BRT:vr

cc: G. Engman, Washington Department of Wildlife  
G. Ging, U.S. Fish and Wildlife Service  
L. Cordova, U.S. Forest Service  
T. Thorn, Washington Department of Natural Resources  
Regional Manager, DNR

A. Martin, FERC, Portland  
bcc: B. Tannenbaum - 01  
K. Bedrossian - 01  
R. Goodell - 01  
C. Olivers, City of Everett  
D. Lowell, City of Everett  
D. Farwell, City of Everett

*T. Hoppensteadt, Tulalip Tribes*

1990 ANNUAL PROGRESS REPORT  
WILDLIFE HABITAT MANAGEMENT PROGRAM  
for the  
HENRY M. JACKSON HYDROELECTRIC PROJECT  
FEDERAL ENERGY REGULATORY COMMISSION  
Project Number 2157

Submitted by  
PUBLIC UTILITY DISTRICT NO. 1 OF SNOHOMISH COUNTY  
and  
THE CITY OF EVERETT, WASHINGTON

March 1991

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## 1.0 INTRODUCTION

The 1990 Annual Progress Report on the Wildlife Habitat Management Plan for the Henry M. Jackson Hydroelectric Project is submitted in response to the Federal Energy Regulatory Commission (FERC) Order Approving With Modification Revised Wildlife Habitat Management Plan (issued May 19, 1989). This annual report describes activities conducted during 1990 and summarizes activities anticipated for 1991. Activities, procedures and schedules described in this report are based on the Wildlife Habitat Management Plan (WHMP) submitted to FERC on May 25, 1988. Problems or changes needed during the course of the WHMP implementation are discussed and updated schedules are presented. A draft of this report was submitted for comments to the U.S. Forest Service (USFS), U.S. Fish and Wildlife Service (USFWS), the Washington Department of Wildlife (WDW), the Washington Department of Natural Resources (DNR) and the Tulalip Tribes.

The FERC issued an Order Acknowledging Receipt of Progress Report and Revising Filing Dates for Future Progress Reports on Wildlife Habitat Management Program on June 27, 1990. The filing date was changed from December 31 for 1990 through 1995 to March 31 from 1991 through 1996. A progress report will be filed at 5-year intervals beginning in 2001 and continuing through 2061.

## 2.0 SUMMARY

Major tasks accomplished during 1990 include: negotiation of the USFS-District land exchange at Spada Lake; property line locations, layout of logging road system and cutting units for Lake Chaplain Management Units 1 and 3; planning of final harvest of three Lake Chaplain units; initiation of the snag management program; and installation of bird nest structures at Lost Lake.

Tasks scheduled for 1991 include: acquisition of USFS lands at Spada Lake, exchange of lands with the DNR in the Sultan Basin, contract award for timber sale/road construction at Lake Chaplain, timber sale layout for 1992 sales (commercial thinning), incorporation of 165 acres into the snag management program, completion of design phase and initiation of the implementation phase of the revegetation program, installation of floating nest platforms at Lost Lake and Lake Chaplain, monitoring of nest platforms and boxes, initiation of detailed management plan for newly-acquired Spada Lake Tract.

## 3.0 WORK COMPLETED DURING 1990

### 3.1 LAND ACQUISITION

The District and USFS negotiated a land exchange for the Spada Lake Tract (Figure 1). The District's Board of Commissioners approved on January 8, 1991 the exchange of 4,189 acres, valued at

\$6.42 million, with the USFS. Transfer of the Spada Lake Tract to the District was completed on February 28, 1991.

The District and DNR are continuing negotiations for their land exchange in the Spada Lake area, including the Williamson Creek Tract. These lands are shown in Figure 1.

The City and DNR resumed negotiations for the exchange of portions of the Lake Chaplain Tract (Figure 2). The WHMP includes 366 acres of exchange lands that still belong to the DNR.

The District obtained an easement from Weyerhaeuser Co. for access to the Lost Lake Tract, and an easement from DNR for rights to plant vegetation on the power pipeline right of way.

### 3.2 FOREST VEGETATION MANAGEMENT

The City forester identified and surveyed property boundaries around the north and eastern boundaries of the Lake Chaplain Tract, planned the logging road network in Management Units 1 and 3, and reworked final harvest unit boundaries (Figure 3). The road network will reduce the number of acres cleared for this purpose from the number estimated in the WHMP. The modified final harvest units correct problems in the WHMP conceptual units (see Figure 3.5, WHMP) related to soils, topographic and hydrologic conditions encountered on the ground. All of the reconfigured units conform to management prescriptions stated in the WHMP in



terms of location, size, and time of harvest.

The main access road (S-1000, see Figure 3) will pass through land owned by the DNR, and access will be secured by the City through an easement from DNR, expected to be formalized in February 1991. The City in turn will permit the DNR to haul logs over this road from DNR cutting units east of the Lake Chaplain Tract, along the north end of Lake Chaplain, and out Lyon Road. The City has installed a gate on the Lake Chaplain Road at the north end of the lake to prevent unauthorized vehicles from driving south along the lakeshore. DNR use of the City's logging road will be restricted to authorized logging vehicles; no public use will be permitted at any time on City land, and spurs to DNR cutting units will dead-end in the units.

As predicted in the 1989 Annual Report, preharvest activities in 1990 have delayed harvest until 1991. The Licensees planned final harvest on three units in the Lake Chaplain Tract (Figure 4), and the DNR approved the City's Forest Practices application for the sale. The City Council approved the road-building/timber harvest bid package for three units in October 1990. Due to the instability of timber prices and uncertainty over regulations pertaining to timber exports at the end of the year, the contract has not yet been let. At such time as reasonable bids can be obtained, the contract will be let. Additionally, an easement must be secured for use of the access road from DNR prior

to letting the contract.

Two remaining units planned for final harvest in the WHMP in 1990 will probably be included in another contract. One of the units is located on land that still belongs to the DNR, and the other unit will be accessed from a DNR road planned for construction within five years east of the Lake Chaplain Tract.

Precommercial thinning of 46 acres in the Lost Lake Tract was planned in detail, and the boundaries of the unit were marked. The District advertised the thinning contract in February 1991.

### 3.3 SNAG MANAGEMENT

The snag management program was initiated at the Lake Chaplain Tract. An inventory of existing snags was conducted on approximately 165 acres in Management Unit 1 (Figure 5, Table 1).

Snag numbers were adequate (i.e. >3 snags/acre) for all size classes in the old growth stands, but were not adequate in 60-year rotation (second-growth) stands in this unit (Table 2). Specifically, the snag inventories in the smallest size classes (<15 inches dbh) were more than adequate, but snags in the larger size classes (>15 inches dbh) were scarce relative to the targets stated in the WHMP (Table 2.2).

Opportunities to create snags were limited in 1990 due to several problems related to initiating implementation activities.

These included the ongoing negotiations over land exchange in the Lake Chaplain and Williamson Creek Tracts, the need to field-identify and mark property boundaries for the various tracts, and the need to revise and mark final harvest unit boundaries prior to letting the first timber harvest contract. In addition, most of the stands that will be harvested after 2010 did not have an adequate supply of larger (i.e. > 15 inches dbh) trees from which to create snags.

Given these constraints, it was decided to concentrate on creating larger snags in older stands during 1990. Snag creation was implemented in 1990 in permanent mixed forest, riparian buffer zones, and green tree units associated with 1990 cutting units (Figure 6). Thirty snags were created by topping Hemlocks and Douglas firs between 40 and 60 feet above the ground, ranging in size from 14 to 24 inches dbh (Table 3).

Initiation of the snag management program in 1990 has made it apparent that targeting a particular number of snags to be created in a given year is not a practical approach to implementation. The number of snags required was originally estimated as part of the cost analysis for implementation. District biologists believe it would be more representative of the actual implementation process now underway to use acreages incorporated into the snag management program as a yearly target.

Snag creation is intended in the WHMP to be an ongoing process during the life of the project, with the targets stated in Table 2.2. A snag creation plan needs to be prepared annually that recognizes the current known inventory (on management tracts surveyed to date), the deficits in different size/decay categories, and snag creation opportunities on tracts that have been added to the program to date. The ultimate goal is to reach the targets of WHMP Table 2.2 and maintain this inventory. This approach recognizes that the number of snags to be created varies according to stand characteristics, and it does not change the original biological goal (3 snags/acre) of the WHMP. Under this approach, therefore, 165 acres were incorporated into the snag management program in 1990 (Figure 5). See Section 4.3 of this report for more details on this approach.

#### 3.4 DEAD/DOWN WOODY MATERIAL

The three cutting units and road alignment laid out in 1990 were evaluated and areas with deficiencies were noted. Most areas had sufficient dead/down material. Instructions to leave shattered or defective stems in place were written into the timber harvest specifications for final harvest.

#### 3.5 REVEGETATION PROGRAM

The District contracted a horticulturist to design the revegetation program on mitigation lands. He mapped the power pipeline right of way and initiated design on areas north of Lake

Chaplain, west of the Chaplain Creek marsh, the pipeline ROW and the powerhouse site. The contractor found that due to the lack of adequate soil on the pipeline ROW, and the heavy growth of alder there, revegetation of the this tract will need to be conducted over several years, with repeated vegetation management treatments. The District acquired surface rights to the power pipeline ROW from the DNR in order to facilitate revegetation work.

### 3.6 WATERFOWL NESTING ISLANDS

Research was conducted in 1990 for the installation of nesting platforms in time for 1991 breeding season.

### 3.7 WATERFOWL NESTING BOXES

Two wood duck nest boxes were installed at Lost Lake in March 1990 (Figure 7). They were not used by wildlife in 1990.

### 3.8 OSPREY NEST STRUCTURES

One nest platform was installed at Lost Lake in March 1990 (Figure 8). Two ospreys were observed in July and August on several occasions, adding sticks to the platform to form a small nest. There was no other breeding activity in 1990.

### 3.9 MANAGEMENT TOOLS

The District acquired a Geographic Information System (GIS) to assist in managing and monitoring project lands and resources. Future reports on the status of the WHMP will feature

map and tabular products of the GIS. The District prepared policy statements for the management of the Spada Lake, Williamson Creek, and Lost Lake Tracts, and outlined resource management plans for Spada Lake and Lost Lake. The resource management plans will be derived from the WHMP, and will feature more detailed site-specific prescriptions for implementing the WHMP and other future management measures. The resource management plans are intended for internal management use, since they will contain detailed management prescriptions, and must be consistent with the goals of the WHMP. Any departures from the WHMP will be coordinated with the resource agencies.

The City acquired two programs to assist in forest management. Traverse PC is being used to accurately plot boundaries and calculate acreages, and a Timber Cruise program is being used to compute timber volumes and values from field data.

### 3.10 MONITORING

The wood duck nest boxes and osprey platform installed early in 1990 were monitored during the nesting season.

## 4.0 WORK ANTICIPATED DURING 1991

### 4.1 LAND ACQUISITION

Newly-acquired lands obtained from the USFS will be managed according to the WHMP for the Spada Lake Tract, as

described in Section 3.4.5.5 of the WHMP. A supplement to the WHMP will be prepared for the exchange lands that are not already included in the WHMP (i.e. lands above the 1460 foot elevation). Approximately 1500 acres will be included in the supplement. The management goals for these lands are:

- 1) Preserve and enhance old growth, riparian, and wetland habitats;
- 2) Manage second growth forest primarily for deer with due regard for other species;
- 3) Preserve water quality and aesthetics.

Management of the exchange lands must be consistent with the Recreation Plan for Spada Lake and operation of the hydroelectric facilities. The supplemental management plan will be prepared in consultation with the resource agencies.

The District and DNR will pursue their land exchanges in the Spada Basin, including Williamson Creek, as described in the WHMP. It is expected that the exchange will be completed by late June 1991. The City and DNR will continue to negotiate land exchange in the Lake Chaplain Tract during 1991.

#### 4.2 FOREST VEGETATION MANAGEMENT

The City expects to let the contract for 1991 final harvest and road construction (Table 4). Sales planned for 1992 will be located and prepared for contract. The 1992 sales will

comprise commercial thinnings originally planned for 1990 in the WHMP.

#### 4.3 SNAG MANAGEMENT

The Licensees will be incorporating management units into the snag management program as indicated in Figure 5, in conjunction with field survey and probably reconfiguration of harvest unit boundaries. In each of these units an inventory will be conducted, as described in the WHMP, and snag deficits in the different size/decay categories will be calculated. A plan to address the deficiencies by means of snag creation will be prepared annually as the units are incorporated into the program. In older 60-year rotation stands that will be harvested within the next 20 years, the Licensees will be creating snags as cutting unit boundaries and green tree retention areas are established. Additional snags will be created in permanent stands (buffer zones, mixed forest and old growth). In younger 60-year rotation stands that will be harvested after 2010, snags will be created as needed to meet the requirements outlined in the WHMP (Table 2.2, WHMP). In many of these stands it will not be possible to create snags in the larger size classes (>17 inches dbh) because trees of that size do not exist. Smaller trees could be substituted as stated in the WHMP; however, based on the 1990 snag inventory, it is likely that sufficient snag trees already exist in this size category. It is the District biologist's opinion that it would be more beneficial to retain smaller trees as green trees so that larger-sized snags



could be created in the future.

Acreage to be added to the snag management program in 1991 will comprise portions of the Lost Lake Tract, City-owned permanent mixed forest, old growth, and final harvest units as they are laid out and marked in the field.

#### 4.4 REVEGETATION PROGRAM

Final design plans are expected to be complete this spring. Subsequently, the District will initiate implementation of the plans. It is anticipated that some of the plantings will be accomplished during the fall of 1991. Following completion of the USFS/District land exchange, design will begin on the test plots for Spada Lake.

#### 4.5 WATERFOWL NESTING ISLANDS

Two platforms designed to accommodate loons were installed in Lost Lake, and two were installed in Lake Chaplain in March 1991. This departs from the WHMP, which called for three in Lost Lake and one in Lake Chaplain; however, it was agreed at the recent annual agency meeting that Lost Lake is too small to reasonably support more than two platforms, whereas Lake Chaplain offers adequate sites for an additional nest.

#### 4.6 WATERFOWL NESTING BOXES

No additional nesting boxes are planned for 1991; the two

nest boxes at Lost Lake will be monitored.

#### 4.7 OSPREY NEST STRUCTURES

The Lost Lake nest platform will be monitored during 1991. Appropriate sites for two platforms at Spada Lake will be selected.

#### 4.8 MONITORING

The District will design and initiate monitoring programs described in the WHMP for mitigation lands. These include monitoring of dead/down woody materials, vegetation plantings, deer forage, and artificial nest structures.

The City has initiated a water quality monitoring program in Lake Chaplain and its tributaries and Spada Lake.

### 5.0 UPDATED SCHEDULES

An updated schedule of activities for 1991 - 1996 is presented in Table 4.

### 6.0 AGENCY COORDINATION

The District submitted a draft version of this report to representatives of the resource agencies and Tulalip Tribe for their review. A meeting was held on March 14, 1991, to discuss progress and future plans for the WHMP. Minutes of that meeting

are attached, and also copies of letters sent by agency representatives in response to the draft report.

TABLE 1. WILDLIFE HABITAT MANAGEMENT PLANT  
SNAG INVENTORY RESULTS - 1990

Management Unit 1-5 (part) 138.7 ac. small saw timber/mixed forest  
 Management Unit 1-6 (part) 13.0 ac. old growth  
 Management Unit 1-10 (part) 13.0 ac. old growth  
 Area in sample transects: 66 ac.

Species	10-19' in height			20-39' in height			40+ in height			
	11"	15"	17" 25+ dbh	11"	15"	17" 25+ dbh	11"	15"	17" 25+ dbh	
DF (1)	2	1	3	8	3	3	6	1	6	1
HE	2	0	0	12	2	4	15	3	1	1
CE	0	1	0	2	3	2	0	1	1	11
MA	0	0	0	1	1	0	0	0	0	0
AL	1	0	0	3	0	0	2	0	0	0
UN	1	0	0	2	0	0	0	1	1	0

(1)DF=Douglas Fir, HE= Western Hemlock, CE=Western Red Cedar, MA=Bigleaf Maple, AL=Red Cedar, UN=Unknown

TABLE 2. COMPARISON OF 1990 SNAG INVENTORY RESULTS WITH WHMP TARGETS

Minimum Size		WHMP Targets Snags/100 ac.	Inventory Results Snags/100 ac.	
DBH(in)	Height(ft)		Second Growth	Old Growth
11	10	16	46	120
15	20	237	71	80
17	10	48	10	44
25	40	6	12	32

TABLE 3. WILDLIFE HABITAT MANAGEMENT PLAN  
SNAG CREATION - 1990

<u>AREA NO.</u>	<u>TAG NO.</u>	<u>SPECIES</u>	<u>DBH( inches)</u>
1	125	Douglas Fir	26
	126	Douglas Fir	27
	127	Douglas Fir	20
	128	Douglas Fir	20
	129	Douglas Fir	23
	130	Hemlock	19
	2	101	Douglas Fir
102		Douglas Fir	20
103		Hemlock	19
104		Douglas Fir	21
105		Douglas Fir	22
106		Hemlock	18.5
107		Hemlock	23
108		Hemlock	14.5
109		Hemlock	19
110		Hemlock	23
3		111	Douglas Fir
	112	Douglas Fir	17.5
	113	Hemlock	17
	114	Douglas Fir	22
	115	Douglas Fir	24
	116	Hemlock	14
	117	Douglas Fir	16
	118	Douglas Fir	16.5
	119	Hemlock	18
	120	Hemlock	22
	4	121	Douglas Fir
122		Douglas Fir	19
123		Douglas Fir	24
124		Douglas Fir	21

TABLE 4 - WILDLIFE HABITAT MANAGEMENT PLAN  
ACTIVITY SCHEDULE FOR 1991 THROUGH 1996

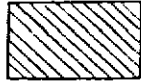
Activity	YEARS											
	1991		1992		1993		1994		1995		1996	
	Stands	Acres	Stands	Acres	Stands	Acres	Stands	Acres	Stands	Acres	Stands	Acres
Final Harvest <sup>(1)</sup>	1-3, 1-9 1-15, 4-5	84					3-1, 5-4 5-8, 5-5	73			2-9 2-11, 4-4, 4-3, 4-2	72
Commercial Thin <sup>(1)</sup>			1-9, 1-15 4-5, 2-13	75								
Precommercial Thin	7-4	46										
Snag Management Program (2)		226		355		320		294		366		To be determined
Install Waterfowl Nest Platforms	7-5, 1-4											
Install Osprey Platforms						9-11						
Revegetation Program												
• Test Plantings			9-10									
• Tree/shrub Plantings			1-17, 4-8 8-4	30								
• Grass Seeding	8-3	up to 40	8-3	up to 40	8-3	up to 40						
• Fertilization	8-3, 8-4											
Debris Removal	9-1 thru 9-10											
Monitoring												
• Wood Duck Nest Boxes	Annual Monitoring											
• Osprey Platforms	Annual Monitoring											

1) Set-up and contract. Contractor will have 12 months to complete harvest.

2) See Figure 5 for locations.

Figure 1. Land exchanges in the Sultan Basin.

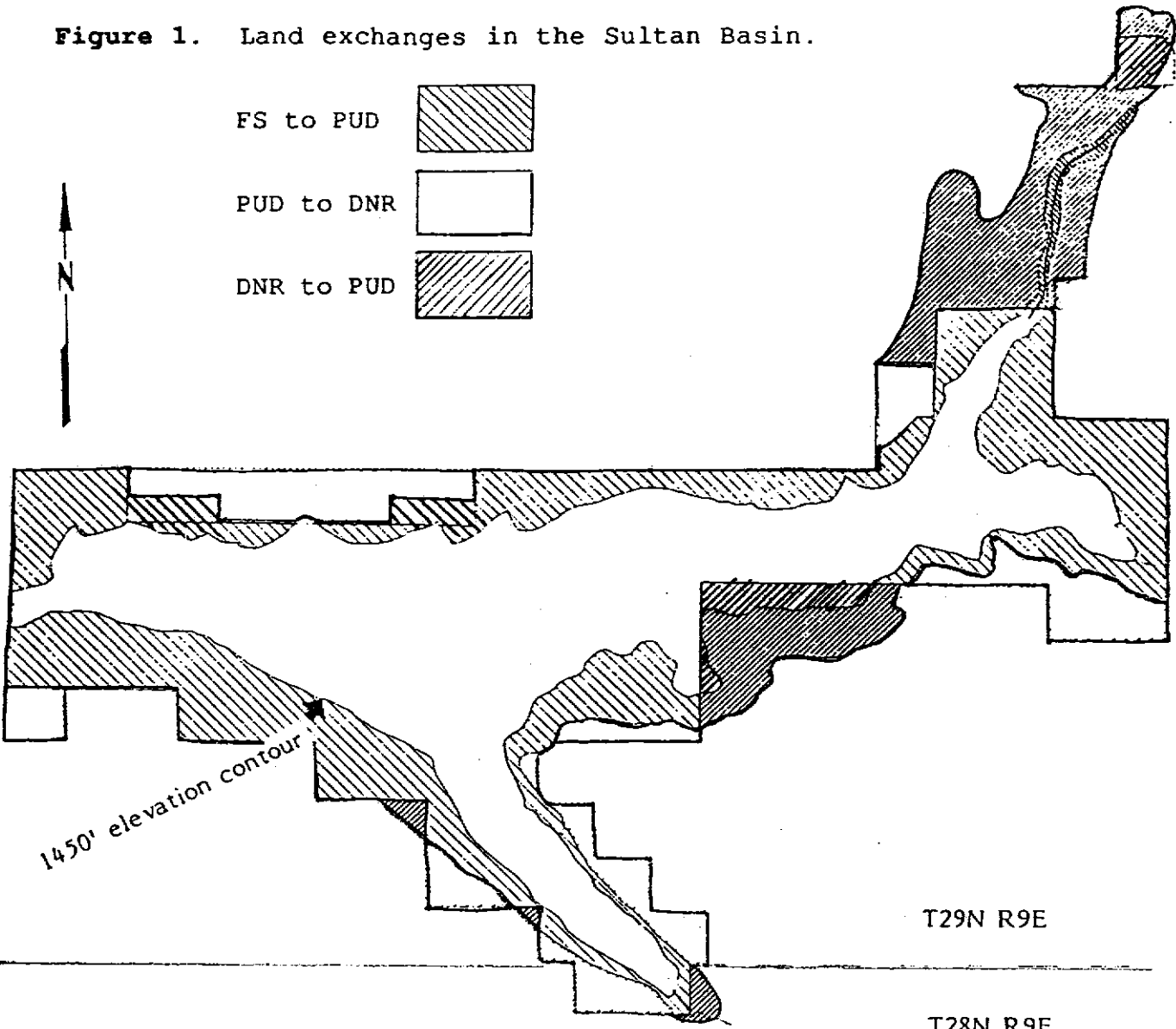
FS to PUD



PUD to DNR

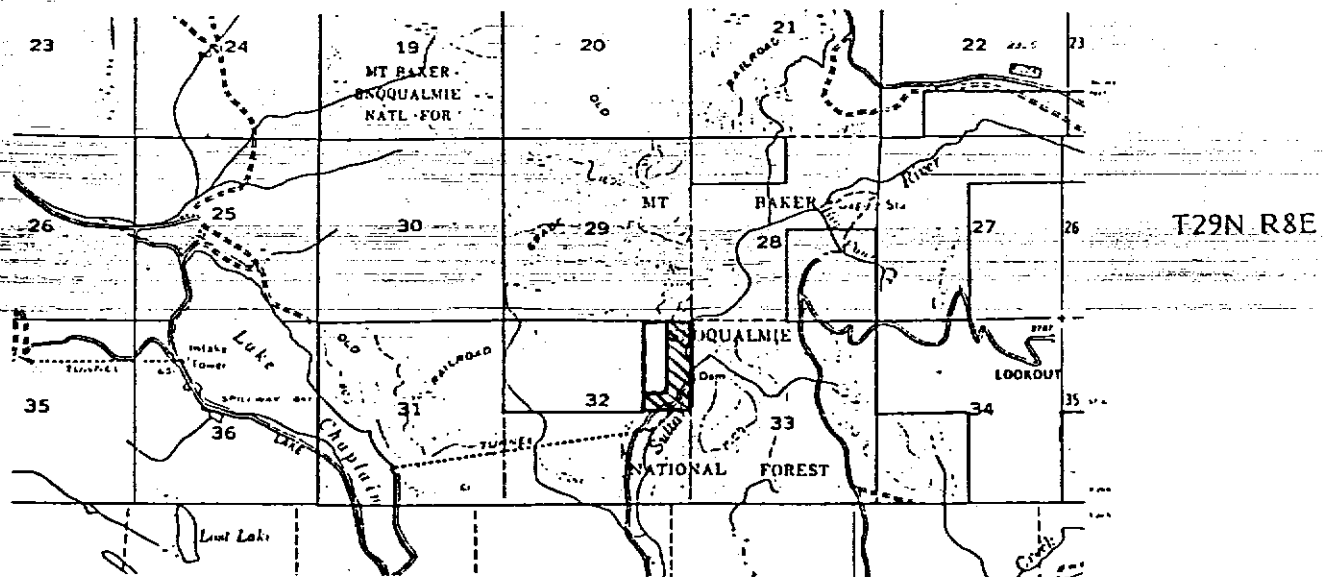


DNR to PUD



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T28N R9E

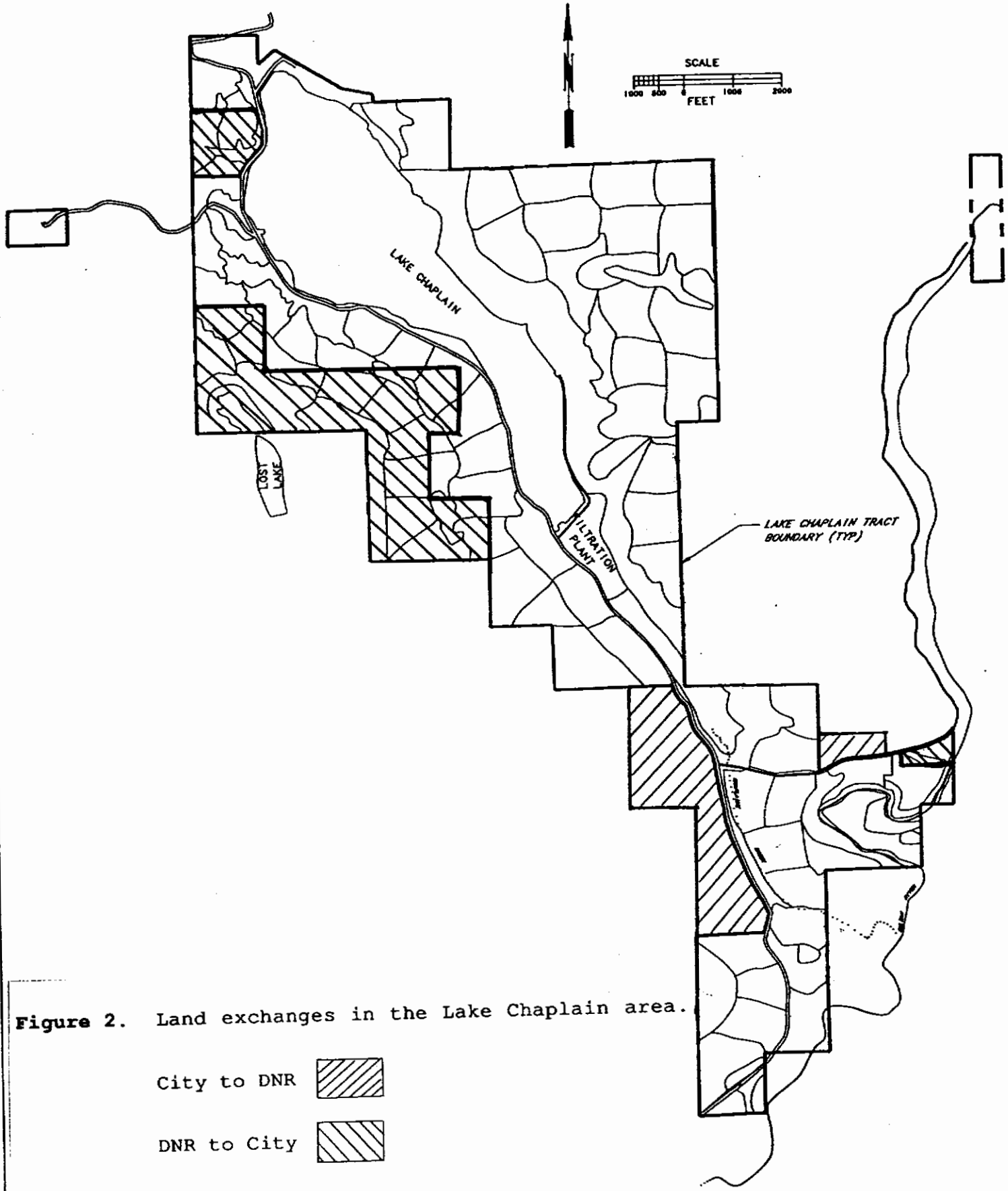


T29N R8E

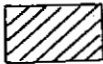

MACAULAY & ASSOCIATES, LTD.

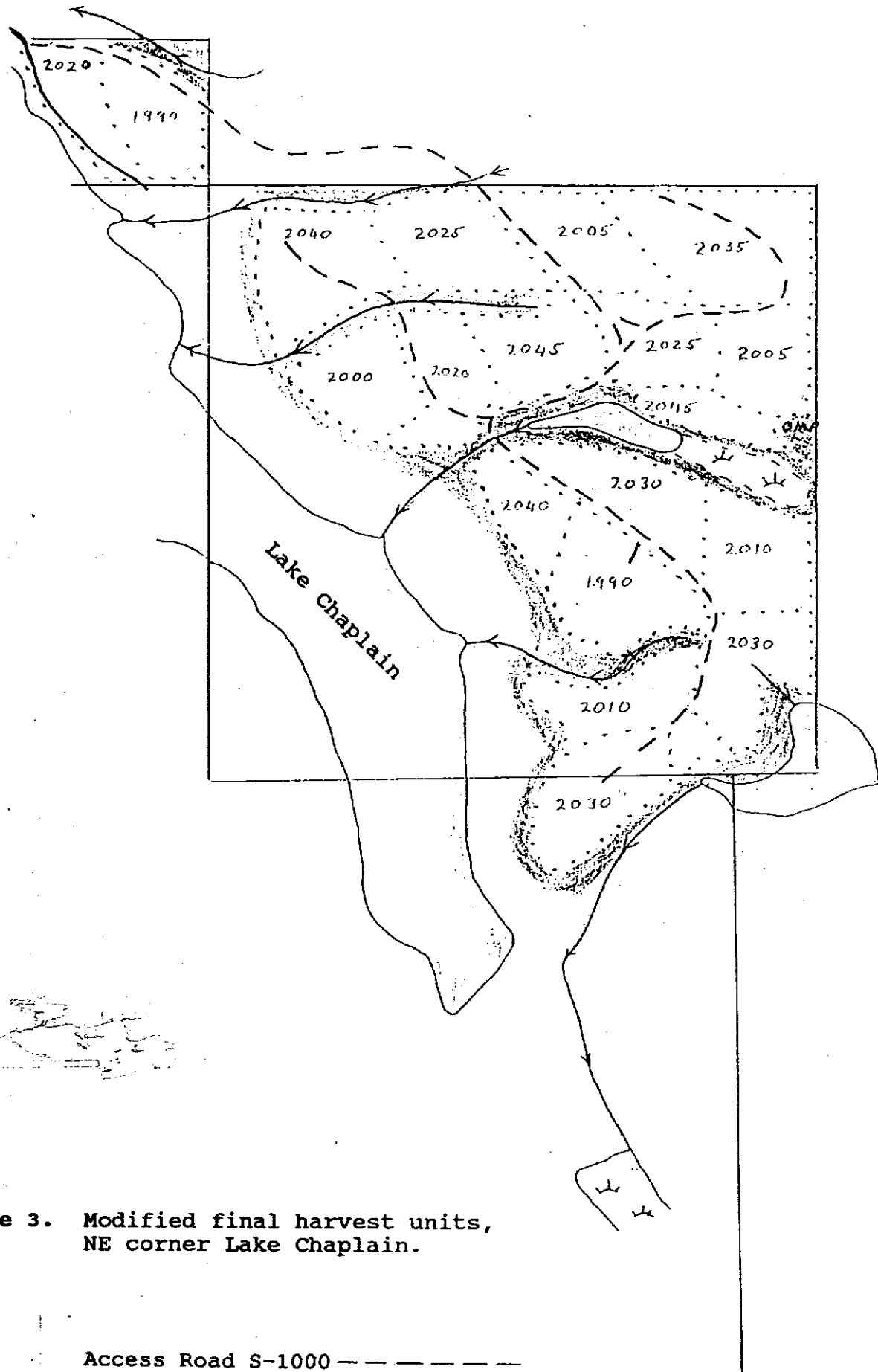
EVERETT, WASHINGTON





**Figure 2.** Land exchanges in the Lake Chaplain area.

- City to DNR 
- DNR to City 



**Figure 3. Modified final harvest units, NE corner Lake Chaplain.**

Access Road S-1000 — — — — —

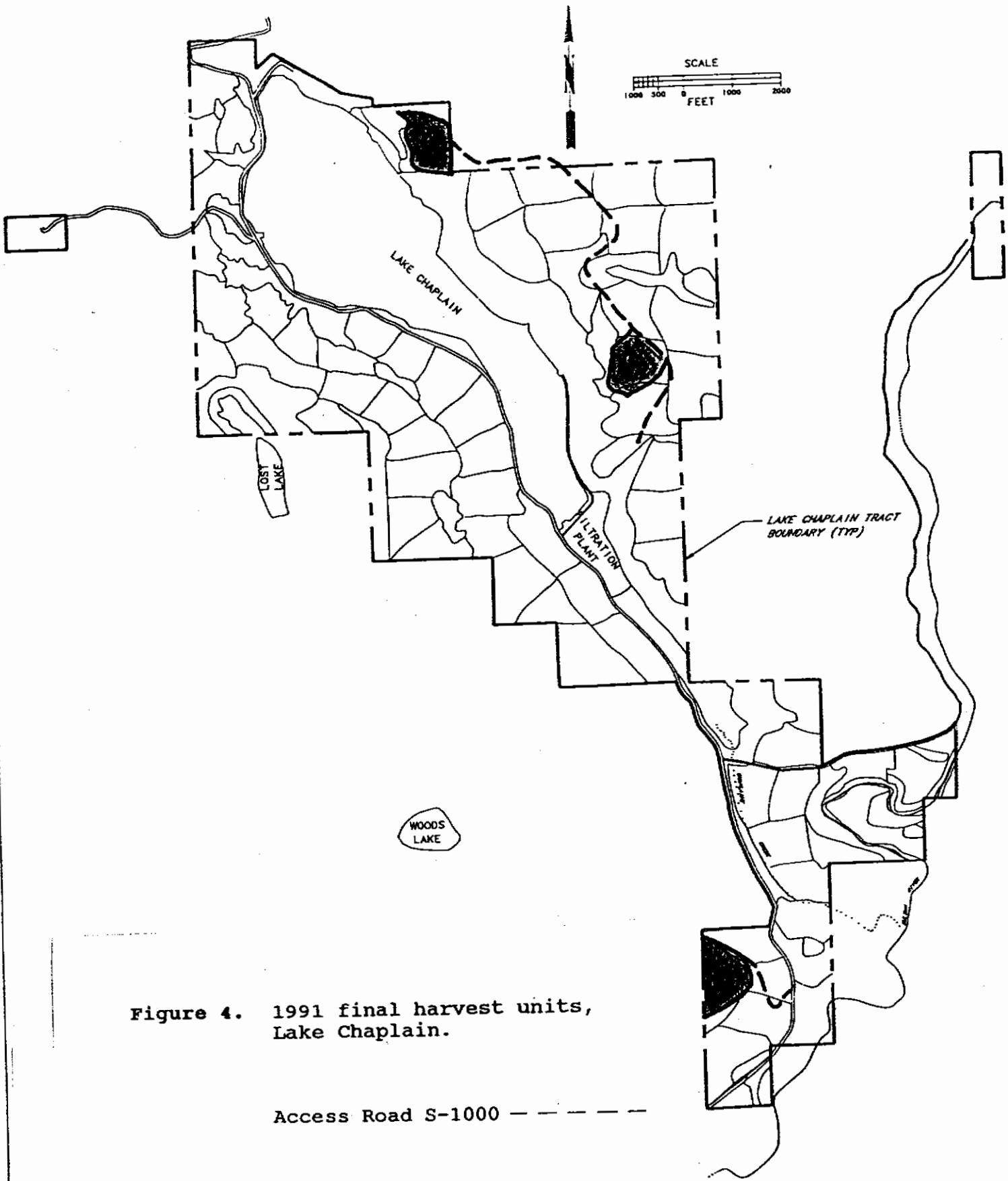
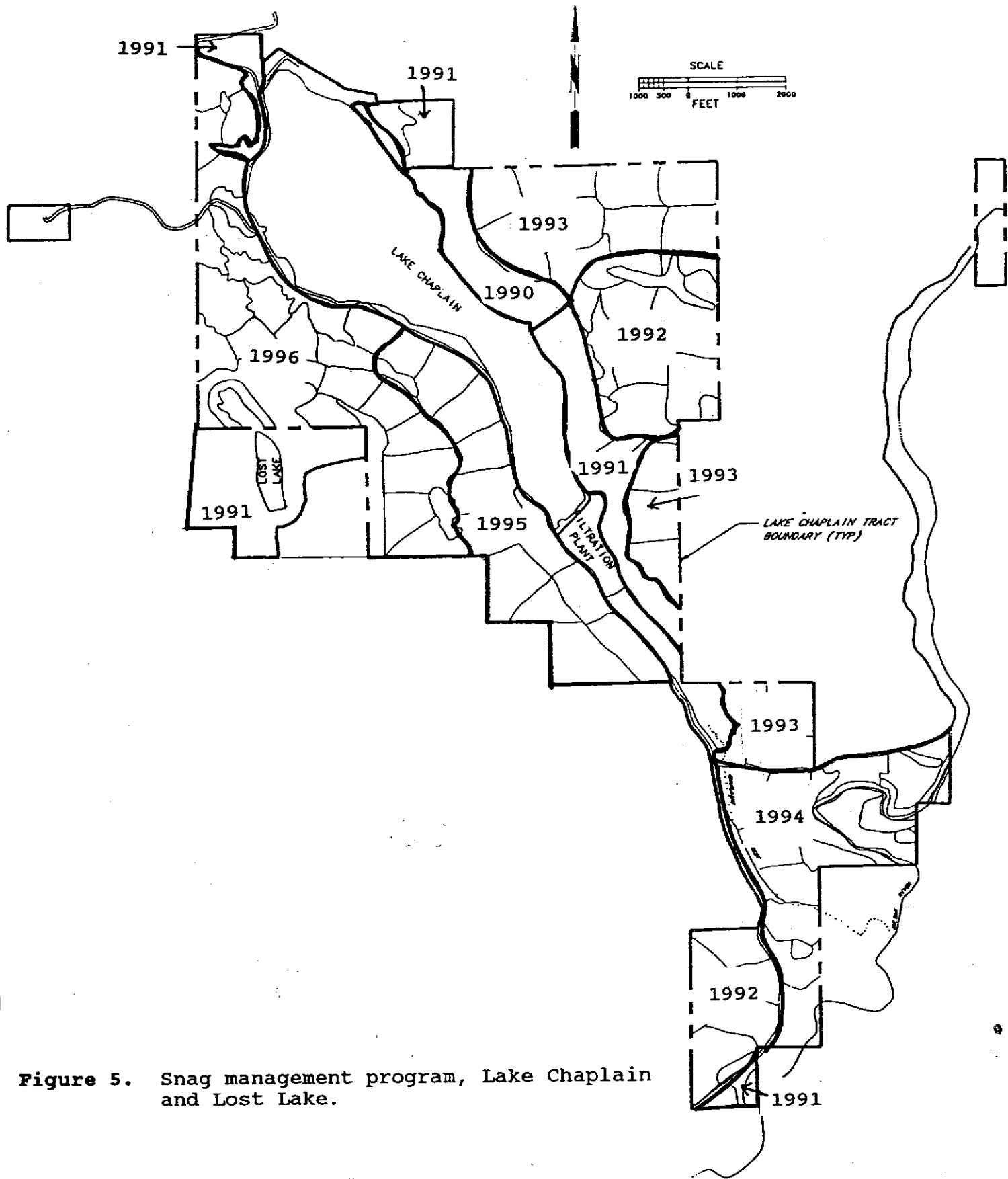


Figure 4. 1991 final harvest units, Lake Chaplain.

Access Road S-1000 - - - - -



**Figure 5.** Snag management program, Lake Chaplain and Lost Lake.

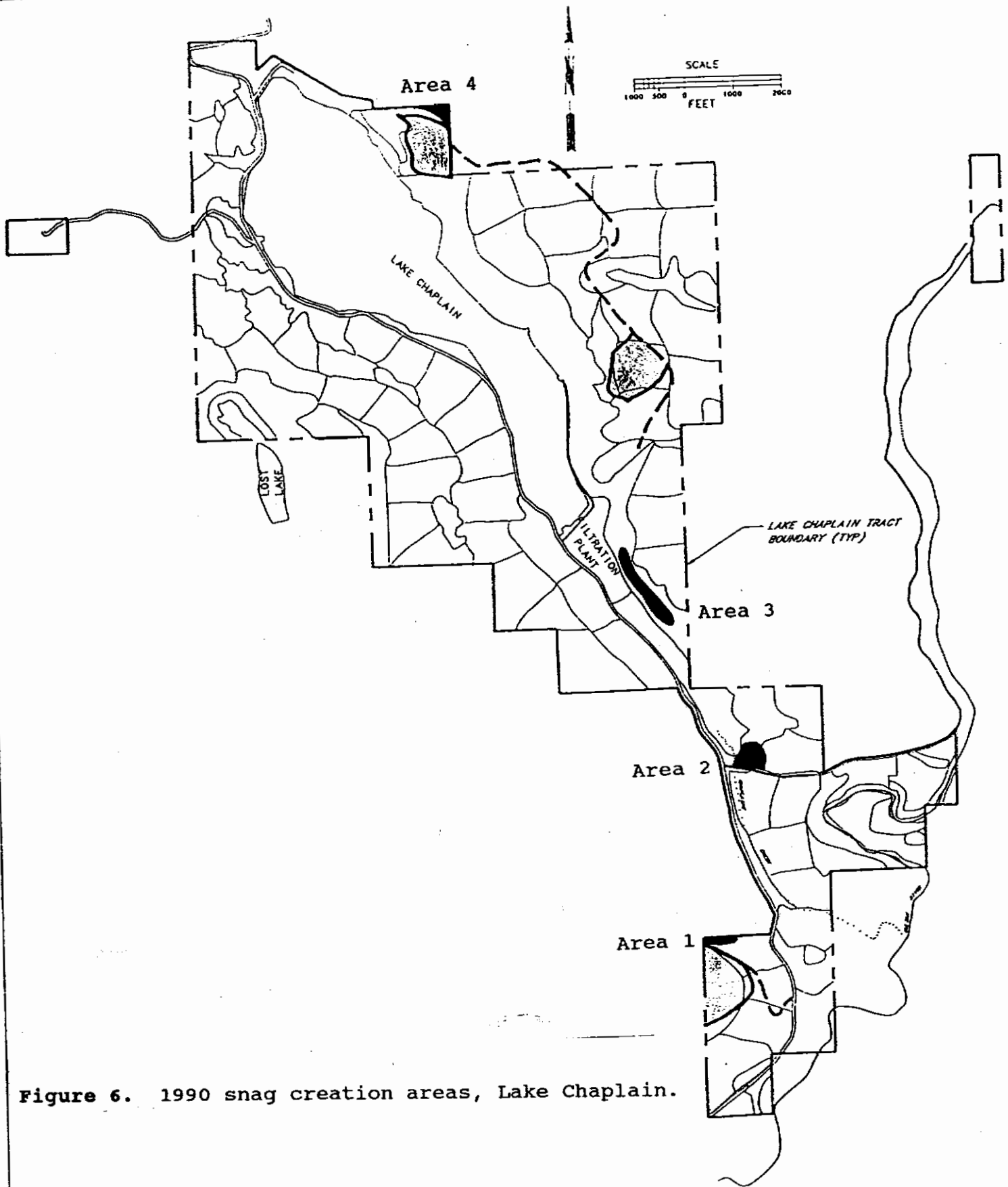
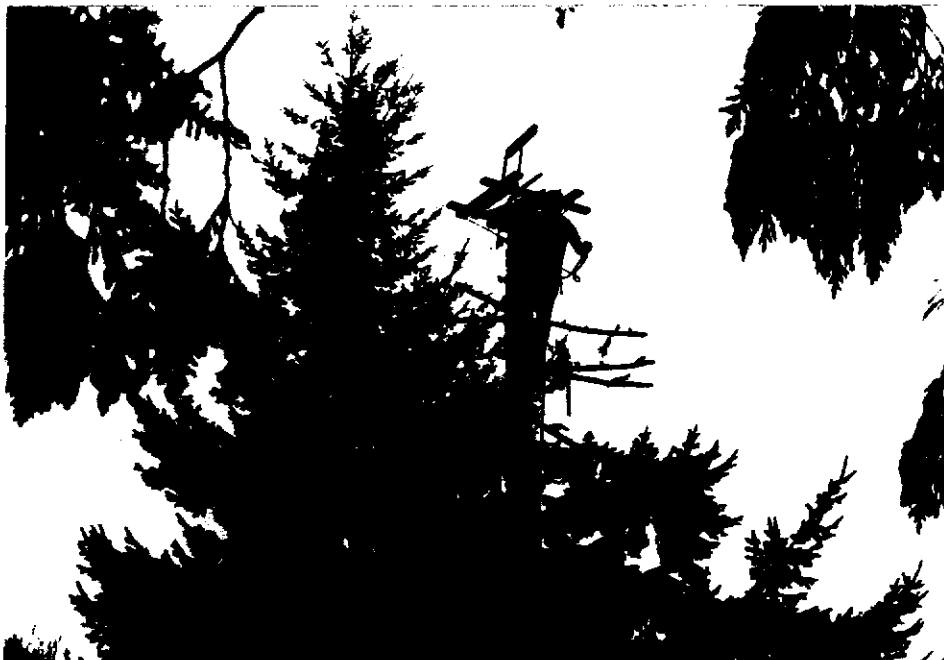


Figure 6. 1990 snag creation areas, Lake Chaplain.



**Figure 7. Lost Lake wood duck nest box**



**Figure 8. Lost Lake osprey nest platform**

**ATTACHMENTS**

**6.1 AGENCY MEETING NOTES**

WILDLIFE HABITAT MANAGEMENT PLAN  
JOINT AGENCY MEETING - MARCH 14, 1991

I. INTRODUCTIONS

Those in attendance: Karen Bedrossian, Rick Goodell, Nephi Johnson, Bernice Tannenbaum and Bruce Meaker from the PUD; Don Farwell from the City of Everett (City); Gary Engman from Washington Department of Wildlife (WDW); Gwill Ging from U. S. Fish and Wildlife Service (USFWS); Larry Cordova from U. S. Forest Service (USFS); and Tom Hoppensteadt from Tulalip Tribes.

II. WHMP PROGRESS

A. Land Acquisition/Easements

After introductions were made Goodell passed out color-coded drawings of Spada Lake and Williamson Creek showing an outline of project boundaries after completion of land exchanges between the District, Department of Natural Resources (DNR) and USFS (Figure 1 of Annual Report). Phase I of the Land Exchange with the USFS (4,189 acres for \$6.42 million) was completed February 28, 1991. Phase II of the Land Exchange with the Department of Natural Resources (DNR), which is scheduled for June 6.

Bedrossian discussed goals for the supplemental management plans which will be prepared as part of the Wildlife Habitat Management Plan (WHMP) for the new lands obtained by the PUD from USFS. It is stated in the WHMP that plans for these exchange lands (which are located above 1460 MSL) will place an emphasis on black-tailed deer with due regard for other species and will be compatible with the Recreation Plan.

Goals for Plan:

- 1) Preserve old growth, riparian, and wetland habitat and enhance where feasible.
- 2) Enhance second growth forest, primarily for deer.
- 3) Preserve water quality and aesthetics.

Agency representatives agreed that these goals were appropriate.

Lake Chaplain - Farwell explained what was State land and what lands would come to the City in their Land Exchange (Figure 2 of Annual Report), which should be accomplished in July, 1991.



Lost Lake - Tannenbaum showed a map illustrating access to Lost Lake and explained that an easement was obtained from Weyerhaeuser for access rights.

Pipeline right-of-way - An easement was obtained from DNR for rights to plant vegetation on the right-of-way.

B. Forest Vegetation Management

Farwell showed harvest units around Lake Chaplain. He explained changes in the harvest unit boundaries and the updated schedule. He distributed a timber sale map for harvest scheduled in 1991 (Attached).

Snag Management: Tannenbaum presented results of 1990 snag inventory. Smaller size classes were over-abundant, and larger size classes were deficient in second-growth (60-year rotation stands). Thirty snags were created in 1990 and 165 acres were incorporated into the Snag Management Program. In 1991, 226 acres will be incorporated into the program.

Hoppensteadt asked how snags will be created. The PUD plans to top and limb the trees.

Bedrossian emphasized that the PUD has changed the way it will approach the Snag Management Program. Rather than estimating the number of snags which will be created each year, the PUD will incorporate a given number of acres into the program each year as specified in the annual report.

Ging was concerned with sufficient snags in younger stands. Tannenbaum explained that in some stands there would not be trees in the larger sized categories. She would prefer to wait and let those trees grow rather than create more smaller sized snags.

Lost Lake - Tannenbaum reviewed plans for pre-commercial thinning. Specifications were written on thinning Hemlock vs. Alder, to achieve a mixed conifer/hardwood canopy. Thinning will be conducted in 1991.

Hoppensteadt asked what kinds of species would be benefited and what would be done with the slash? Tannenbaum and Bedrossian explained that deer and grouse represent the species benefited and that the slash would remain on the ground.

C. Revegetation Program

Tannenbaum provided an update on the revegetation program. On the power pipeline right-of-way the contractor has informed us that because of the poor soil conditions, it will take a while (up to 20 years) to build up the sod layer by seeding. Installation of gates should help the revegetation effort. Johnson showed where gates will be placed to keep down trash and vandalism.

Tannenbaum explained plans for planting along the wetland and road on the Lake Chaplain Tract. She is hoping to have plantings done in the fall, if plant material is available. Hoppensteadt and Cordova may know of suppliers of saplings and will provide that information to Tannenbaum.

- D. Nest Structures: Two wood duck boxes and an Osprey nest structure were installed at Lost Lake in 1990. Osprey constructed a nest on the platform during the summer, but did not breed. Two Osprey platforms will be installed on Spada Lake in 1992.

Tannenbaum explained that two waterfowl nest platforms were placed on Lake Chaplain and two were placed on Lost Lake. The WHMP called for three platforms to be placed on Lost Lake only. The City agreed that two platforms could be placed on Lake Chaplain since Lost Lake is probably too small for three platforms, and Lake Chaplain is regularly used by loons. Agency representatives approved this modification.

- E. GIS - PUD acquired Arc/Info. Tannenbaum and Bedrossian received some training for map production/data entry. Consultants will be automating the system in 1991.
- F. Monitoring Program - Standard operating procedures will be developed in 1991. Monitoring of nest structures was initiated in 1990.

- G. Schedule - Bedrossian reviewed the new schedule.
- H. Visitor's Center - Goodell discussed plans for a Jackson Project Visitor's Center. It will be designed this year and constructed next year. It will be a daylight basement structure for storage purposes and located just up from Powerhouse. The main floor will have displays of wildlife, fisheries, powerhouse information, etc. and will have an auditorium where movies and videos of things pertaining to the Jackson Project can be viewed.

Ging asked if it is already part of the recreation area. It is not part of recreation area, but visitors already come for tours. Bedrossian explained that it would be built within the Project Facilities Tract of the WHMP where some minor enhancement activities had been planned. Hoppensteadt would like to have some Native American history of the area included in the exhibit area.

- III. Problems & Concerns: No major concerns were expressed. It was requested that goals for the Management Plans for Spada Lake be included in the annual report.
- IV. Written Comments - Bedrossian stressed that comments are due from agencies on March 15 and they are needed as soon as possible.
- V. Next Meeting: It was agreed that unless something unexpected comes up, a meeting prior to sending the 1992 annual report to FERC will be fine.
- VI. Summary - Everything is going fine. The PUD is making the transition from a conceptual plan to actual implementation. Need comments from Agencies.
- VII. Other Jackson Project Issues:
  - Recreation Plan - Need comments on recreation plan by March 20.
  - River Temperature Reports - Need comments by March 25.

Jackson Project - FERC 2157  
Wildlife Habitat Management Plan  
Joint Agency Meeting - March 14, 1991  
Page 5

Shooting Range - Snohomish County Sports Council is trying to get a shooting range set up at old Olney Creek Park because there is a lot of shooting going on with automatic weapons and guns. They figure if the shooters had a place to go, it may cut down on some of the target trash and improve the safety in the area. This subject was discussed and the PUD's position was summarized.

ATTENDEES

Agency Meeting - 14 March 1991

Jackson Project - Wildlife Habitat Management Plan

Snohomish County PUD Operations Center Building

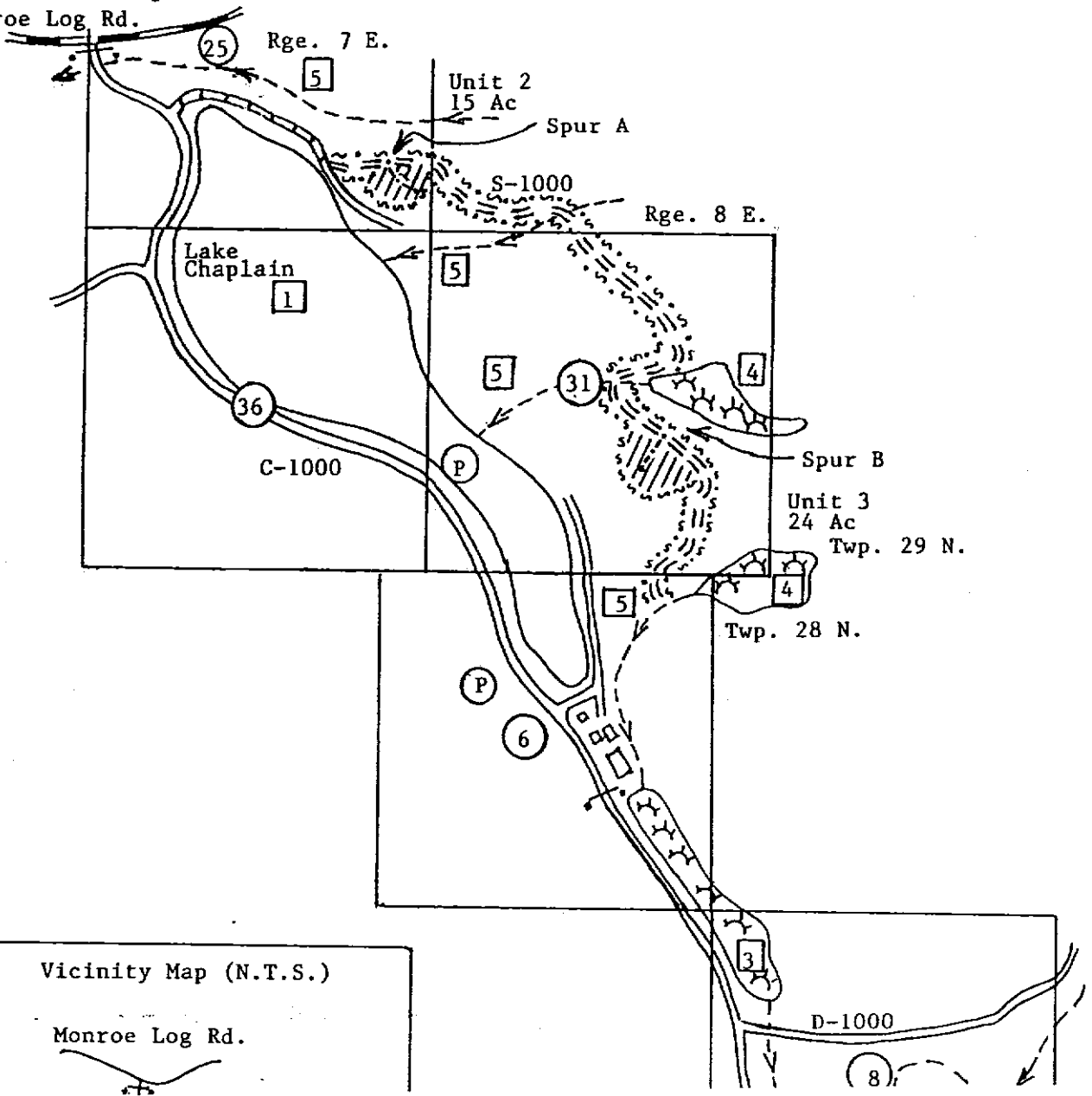
<u>Name</u>	<u>Agency</u>	<u>Phone #</u>
Richard Goodell	Snoh PUD	347-5563
R. GARY ENGMAN	WADW	714-6612
SWILL ENG	USFWS	753-9440
Larry Cordova	USFS	677-2677 (-2414 work)
Tom Hoppenstedt	Totalip Tribes	653-0220
Don Farwell	Everett	259-8817
Bernice Tannenbaum	SnoPUD	347-4319
Karen Bedrossian	" "	347-4374
NEPHI JOHNSON	PUD	347-5549

TIMBER SALE MAP

Scale Name: Chaplain

Contract No:

Monroe Log Rd.



Vicinity Map (N.T.S.)

Monroe Log Rd.



**ATTACHMENTS**

**6.2 AGENCY LETTERS COMMENTING ON ANNUAL REPORT**

TULALIP FISHERIES DEPARTMENT  
3901 Totem Beach Road  
Marysville, WA 98270  
(206) 653-0220  
FAX (206) 653-0234

March 18, 1991

Bernice Tannenbaum  
Snohomish County PUD  
P.O. Box 1107  
Everett, WA 98206

Dear Bernice:

The Tulalip Tribes offer the following comments in response to your 1990 Jackson Project WHMP Progress Report and subsequent information meeting.

We sincerely appreciate your efforts towards implementation of the WHMP and feel your general direction and progress to be on track with the intent of the original concepts established in the plan.

At the informational meeting on March 14, I presented a series of questions and comments pertinent to the plan and its implementation. I now have a better image of the objectives in the plan and how they are prioritized. For the most part we support your goals and the paths you have established for implementation. However, there are two elements that we suggest be reviewed and changed:

1. Snags and recruitment green trees be maintained on logging units. These components will provide habitat for wildlife immediately after harvest as well as, during the early and mid-successional stages. We recommend leaving a minimum of four large, defective, recruitment wildlife green trees per acre and any existing snags which do not pose safety threats to the loggers. Leave trees can be clumped to accommodate logging operations, but as implied in the plan, wildlife habitat mitigation is the priority. We suggest that no more than 400 feet separate green tree clumps. We feel this will not only provide resting, foraging and nesting habitat for cavity/snag dependent species but will also provide screening habitat, within units, for ungulates.

2. At the March 14 meeting you stated your wildlife management goals for the newly acquired Spada Lake Tract. We commend you on clearly identifying these goals, consistent with the WHMP. However, it was stated that there is an



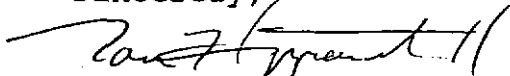
Jackson Project WHMP  
Comments/Recommendations  
March 18, 1991

Page 2.

underlying, overruling objective that all of the wildlife goals be compatible with the recreation plan. We feel strongly that the wildlife goals should have precedence and that recreation goals should not impede the wildlife mitigation intended to offset losses associated with the FERC #2157 project.

Thank you for considering our comments. Our intent is to offer constructive criticism for the benefit of wildlife.

Sincerely,



Tom Hoppensteadt  
Fish & Wildlife Biologist

CURT SMITCH  
Director



STATE OF WASHINGTON  
DEPARTMENT OF WILDLIFE

16018 Mill Creek Blvd., Mill Creek, WA 98012

Tel. (206) 775-1311

March 22, 1991

Bernice Tannenbaum  
Environmental Coordinator  
Snohomish County PUD  
P. O. Box 1107  
Everett, WA 98206

Dear Ms. Tannenbaum:

Re: Wildlife Habitat Management Plan Annual Report, Jackson  
Project, FERC 2157

We have reviewed your draft report outlining the District's progress on implementation of the Wildlife Plan. As you know, we had the opportunity to discuss this report at our meeting March 14. And, at that time, we conveyed the minor comments we had concerning this report. We have no further specific comments.

In general, however, we would like to say we appreciate the progress the District has made. In particular, we were pleased to learn that completion of the exchange of lands for the Spada Lake Tract is at hand. This will finally solidify the overall plan and substantially enlarge the land base managed for wildlife benefits.

Thank you for the opportunity to comment.

Sincerely,

R. Gary Engman  
Mitigation Coordinator  
Region 4 - Habitat Management

c: Ted Muller  
Lora Leschner  
Dan Guy

CURT SMITCH  
Director



STATE OF WASHINGTON  
DEPARTMENT OF WILDLIFE

16018 Mill Creek Blvd., Mill Creek, WA 98012

Tel. (206) 775-1311

March 22, 1991

Bernice Tannenbaum  
Environmental Coordinator  
Snohomish County PUD  
P. O. Box 1107  
Everett, WA 98206

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Re: Wildlife Habitat Management Plan Annual Report, Jackson  
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Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Gary Engman".

R. Gary Engman  
Mitigation Coordinator  
Region 4 - Habitat Management

c: Ted Muller  
Lora Leschner  
Dan Guy

PHONE CONVERSATION NOTES  
April 1, 1991

I spoke with Gwill Ging, U.S. Fish and Wildlife Service, about the annual report for the Wildlife Habitat Management Program. He added to the comments made during the March 14, 1991, agency meeting regarding revisions in the snag management program.

Gwill said he agreed with the District's intention to defer snag creation in forest tracts that lack sufficient larger trees, and to allow the trees to grow to a better size. However, he wants to see an addendum of some sort to the WHMP that spells out what was the deficit in snags, and what would be required to alleviate this deficit in each forest tract that we inventory. He would also like an estimate of how long it will take for trees that are retained for future snag creation to grow to an appropriate size.

The purpose of documenting this information is to ensure that the locations of these future snag trees will be known so that the District can actively work on reducing the snag deficit through the life of the project, and to spare these trees from being harvested. Gwill did not specify a format for presenting this information, but thought it should be done annually as snag inventory/management units are incorporated into the program. I suggested that the District could supplement the annual report with this information, but that I would prefer not to modify the WHMP. Another possible place to report the information would be the District's Resource Management Plans that are currently in preparation. Gwill said either format would be satisfactory; the important thing was to enter the information into the written record.



**Bernice Tannenbaum**



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Fish and Wildlife Enhancement  
3704 Griffin Lane SE, Suite 102  
Olympia, Washington 98501  
206/753-9440 FTS 434-9440

March 29, 1991

Ms. Bernice Tannenbaum, Environmental Coordinator  
Snohomish County Public Utilities District No. 1  
P.O. Box 1107  
Everett, Washington 98206

Re: Jackson Project - FERC #2157  
Wildlife Habitat Management Plan - Annual Report

Dear Ms. Tannenbaum:

This responds to your February 25, 1991 request for U.S. Fish and Wildlife Service (Service) comments on the draft Annual Report on the District's progress in implementing the Wildlife Management Plan for the Jackson Project. It supplements our comments presented earlier at the March 14, 1991, informational meeting.

Overall, the Service concurs with the approach presented in the draft report. We also acknowledge that some modifications to the adopted wildlife management plan may be necessary to account for "on-ground" conditions, such as soil stability (resulting in reconfigured management units) and the absence of suitable trees with which to create snags. We appreciate the District's efforts to coordinate the proposed changes with us.

The Service is pleased that fewer roads than originally planned will be constructed. Consequently, road construction should result in fewer impacts to wildlife than expected. The Service encourages such efforts.

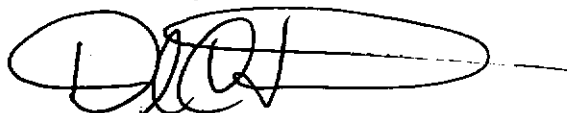
According to the annual report, the District proposes to reconfigure the boundaries of certain management units to account for certain topographic features. Because of the importance of diversity and "edge effect" to many species of wildlife, including black-tailed deer, the Service identified its concern over the potential for the reconfiguration of the management areas to result in larger clear cuts. District staff stated that the reconfigured management areas would not exceed the limits specified in the wildlife management plan. With this understanding, the Service does not object to modification of the management unit boundaries.

Ground truthing during 1990 also revealed that certain management areas lack trees of the larger size class, and therefore, the creation of large snags is not currently possible. While the management plan provides some flexibility by

allowing the substitution of one size group for another, the creation of only the smaller size class of snags would not fully meet the biological objectives of the plan. The Service concurs with the District's proposal to defer a portion of the snag creation efforts until there are trees of sufficient size to create the larger diameter snags. The rationale for this approach is to provide habitat for species which require the larger diameter snags and to assure that snags will be available for the entire license period (smaller snags are assumed to have a shorter lifespan). For those management areas in which a portion of the snag creation effort is to be deferred, a supplemental plan is needed which details both the timeframe and future actions that would be implemented.

The Service appreciates the opportunity to respond to the District's draft annual report, and looks forward to working with the District on the ongoing implementation of the wildlife management plan. If you have questions regarding this letter, please contact Mr. Gwill Ging at the letterhead telephone/address.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Frederick', enclosed within a large, hand-drawn oval. A horizontal line extends from the right side of the oval.

David C. Frederick  
Field Supervisor

gg/kr

c: WDW, Mill Creek (G. Engman)  
Tulalip Tribes, Marysville (Kurt Nelson)