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Forest Service

**Pacific
Northwest
Region**

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Appendix K

Final Environmental Impact Statement

Land and Resource Management Plan

Olympic National Forest

OLYMPIC NATIONAL FOREST
FINAL ENVIRONMENTAL IMPACT STATEMENT

APPENDIX K

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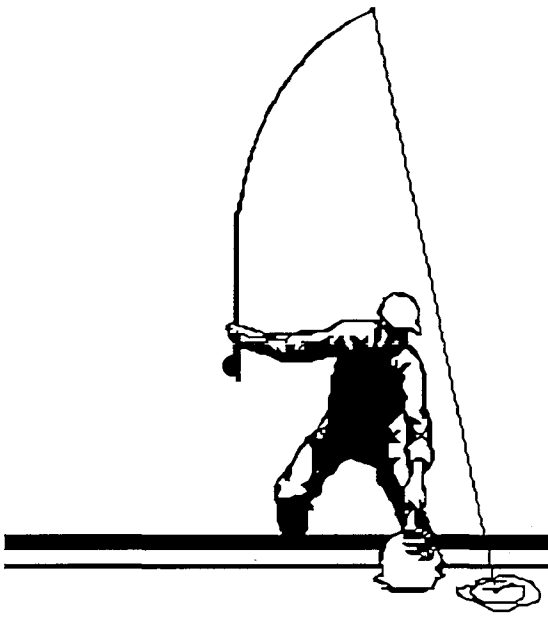
Appendix K

Public Comments and Responses



Olympic National Forest

APPENDIX K

PUBLIC COMMENTS AND RESPONSES

Part I - Public Participation

INTRODUCTION

This Appendix details the Olympic National Forest's efforts to involve and consult with the public during the review of the proposed Land and Resource Management Plan (LRMP) and the accompanying Draft Environmental Impact Statement (DEIS). It also incorporates the public participation efforts for review and comment on the Supplement to the DEIS. A brief summary of informal meetings and field trips held with various interest groups prior to preparation of the Final Environmental Impact Statement (FEIS) and LRMP is also included.

Part I of this Appendix describes the Forest's public participation process, and summarizes the comments received in response to the DEIS and Supplement.

Part II lists the people, organizations and agencies who responded to this involvement effort. A summary or a complete FEIS and related documents have been sent to those listed, unless they chose to have their name removed from the mailing list.

Part III contains summary statements of comments made by respondents, followed by a Forest response to the statement. These are organized by subject area.

In Part IV, copies of response letters from elected officials and government agencies are displayed.

RELEASE OF THE DOCUMENTS

The draft planning documents of the Olympic National Forest were first available for public comment on November 17, 1986. Documents were mailed directly from the printer as well as from the Supervisor's Office. The initial 90-day comment period began November 28, 1986, the date of publication in the Federal Register, and ended February 27, 1987. On January 23, 1987, the Regional Forester extended the comment period an additional 15 days based on requests from several organizations for an extension due to the loss of review time that occurred around the major holidays, in this case Christmas and the New Year. On March 14,1987, the extended comment period closed. This resulted in a total response period of approximately 110 days.

During this time, 2,000 Reviewers' Guides (including Summaries) and 950 DEIS, Appendices, and Proposed Plans were sent to interested public on the Forest's mailing list and to others requesting documents.

By the end of the response period our supply of documents had been virtually exhausted. On September 30, 1988, the Forest issued a Supplement to the DEIS, which described a "No Change" alternative based on continuation of the Timber Resource Plans (TRPs) and it provided an analysis of the methods selected to meet management requirements of NFMA. Closing date for public comments (90 days) was December 29, 1988.

EXTERNAL AND INTERNAL INFORMATIONAL MEETINGS

Ten informational meetings were held throughout the greater Puget Sound area. A briefing was also conducted in Washington, D.C., to members of the Washington Congressional Delegation, Selected National Organizational groups and leaders, and to WO Forest Service Staff groups in the Chief's Office. In addition, due to subsequent requests, by the end of the comment period in March, approximately 35 informational presentations had been made to interested groups by the Forest Planning Team, Forest Supervisor, Rangers and Staff.

Prior to and during the public meetings, Forest employees were informed about the planning process and documents; specific focus was on the alternatives developed and contents of the preferred alternative. Meetings were held at each Ranger District Office and at the Supervisor's Office. Most employees attended the sessions.

For both the external and internal meetings, attendance is conservatively estimated at 1,300.

Finally, a series of informal meetings and field trips with interest groups and agency employees expressing concerns in their responses to the draft planning documents were held (refer to Appendix A, Consultation with Others).

THE RESPONSE RECEIVED

By the end of the response period in March, the Forest had received over 3,600 responses. The majority of comments came from respondents living in Washington (91 percent). There were also responses from Oregon and other parts of the country. Form letters made up 48 percent of the public response. The following is a more detailed breakdown of the responses including their origin:

How Many ?

Number of responses	3,651
Number of signatures	3,988
Number of comments	13,911

From Where ?

Location	Number of Respondents	Percent
Washington	3,321	91
Oregon	141	4
Other States	189	5
TOTAL	3,651	

Where Demographically ?

Eastside Peninsula 1/	1,058
Shelton Cooperative Sustained Yield Unit Area 2/	68
Westside Peninsula 3/	475
Metro (Urban) Washington	1,856
Other States	194
TOTAL	3,651

1/ Eastside Peninsula = Port Angeles to Hoodsport
2/ Shelton Cooperative Sustained Yield Unit Area = Hoodsport to McCleary
3/ Westside Peninsula = McCleary to Port Angeles

Who Responded ?

Who	Number of Respondents
Federal Agencies	23
State Agencies	9
County Agencies	7
City Agencies	2
Organizations	146
Indian Tribal	4
Individuals/Families	3,449
Others	11
TOTAL	3,651

What Organizations ?

	Number of Respondents
Academia	3
Professional Societies	6
Conservationists/Environmentalists	34
Civic Groups	3
Business Groups	28
Timber Industry	42
Associations	13
Riding and Hiking Interests	3
Hunting and Fishing Sports Groups	6
Mining Interests	1
Other	7

RESPONSES BY ALTERNATIVES (IN DEIS)

These are responses to the alternatives presented in the DEIS. These responses include a range of opinions expressed, and **do not** indicate preference in this listing. Form letters received in response to an alternative are also included. For preferences stated in responses, see "Responses by Alternatives in DEIS."

Alternatives in General	203
Alternative A (Current Direction)	49
Alternative B (RPA-Departure)	128
Alternative C (Preferred)	267
Alternative C (Departure)	2
Alternative D (Departure)	7
Alternative E	7
Alternative F	8
Alternative G	27
Alternative H	380
Alternative I	55

OTHER ALTERNATIVES SUGGESTED (NOT IN DEIS)

These are responses to alternatives **not** presented in the DEIS. These responses **do** include support for the alternative being proposed. Form letters received supporting these alternatives are also included.

The "Community Stability" Alternative may also be referred to as the "Industry" Alternative. The "Environmental Alternative" may also be referred to as "Alternative H, Modified" Alternative. Also refer to "Other Alternatives Suggested," page 13, for a description of these alternatives.

Environmental Alternative (Alt. H Modified)	732
Community Stability Alternative (Industry)	621
Earth First! Alternative	13
Alternative "Z" Stop Olympic Deforestation (SOD)	8
The Olympic National Forest Biological Preserve and Critical Habitat Area Alternative	1

Form Letter Responses (48%)

Number of responses	1,771
Number of signatures	1,771
Number of individual comments	926

Subject	Number of Responses
Off-Road Vehicles (ORV)	73
"Bill's Bog" (Mushroom area on Quinault Ranger District)	55
Wild and Scenic River (Without Comments)	171
Wild and Scenic River (With Comments)	253
Community Stability (Without Comments)	453
Community Stability (With Comments)	687
Environmental Alternative H+ (Without Comments)	62
Environmental Alternative H+ (With Comments)	6
Environmental Alternative H+ #2 (Without Comments)	37
TOTAL	1,771

EXPLANATION OF FORM LETTERS

Off-Road Vehicles (ORVs): Responses received on this issue were the direct result of a bulletin issued by Congressman "Rod" Chandler which solicited special comments on ORVs. Chandler's bulletin suggested constituents send responses or copies of responses directly to the Forest. Therefore, these responses were received from people not on the Forest mailing list to receive draft Forest Plan documents, but from Representative Chandler's constituents (mailing list).

Bill's Bog: These responses specifically mentioned this lowland area on Quinault Ranger District, primarily as a concern for the "unique" flora and resident mushroom population. Responses were received from the local Quinault area (Amanda Park) as well as from the Seattle area. This concern had not been previously addressed in the draft planning documents.

Wild and Scenic Rivers (Without Comments): The original concern surfaced in the early 1980's when Congressman Bonker indicated an interest was developing regarding Wild and Scenic status for several Peninsula Rivers. A citizen's group developed during this period in strong opposition to the Wild and Scenic River concept centered primary in the Forks area. As a result of the Preferred Alternative in the DEIS showing two Peninsula river systems being recommended for Wild and Scenic River status, similar opposition surfaced again, this time on the east side of the Forest in the Brinnon area (where the rivers are located). This response dealt with opposition to including the Duckabush, Dosewallips, Hamma

Hamma and other Olympia Peninsula Rivers into the Wild and Scenic Rivers System. Respondents wanted these rivers removed from the proposed plan, and they were opposed to any other rivers being considered.

Also included in this form letter was opposition to the following:

- The loss of home and property to the Forest Service.
- The loss of jobs from the decrease in logging activity.
- The loss of tax base and subsequent impoverishing of the area economies due to the above.
- The closing of roads with timber access for fire management and public use.
- The loss of firewood permits and subsequent increase in the cost of firewood.
- The increase in the Federal budget deficit for new programs when the current Forest and Park facilities are closed.

Many of these responses indicated a preference for Alternatives which do not propose any Wild and Scenic Rivers and provides for maximum timber harvest.

Wild and Scenic Rivers (With Comments): Included same content as in previous form letter. Additional comments were made on the bottom of the form letter which included a pre-addressed fold-up mail envelope. The vast majority of comments stressed opposition to the establishment of Wild and Scenic Rivers and in general, opposition to any proposals that might result in reduced local employment opportunities.

Community Stability Alternative (Without Comments): This form letter was developed by a coalition of timber industry interests called the Olympic Resource Council. The focus of this alternative is on the timber and recreation resources for the Peninsula. It stresses recognizing the recreation supplied by the Olympic National Park and using more of Olympic National Forest lands to meet timber supply needs of local communities, especially on the east side of the Peninsula.

This form letter was a structured Questionnaire with seven questions that favored the community stability alternative as proposed by the coalition.

Community Stability Alternative (With Comments): Includes the same content as the previous form letter. In addition, under the heading "comments", the respondent was asked to consider writing a personal letter or comment on the form on how they think the Olympic National Forest should be managed and why.

Environmental Alternative H+ (Without Comments): This form letter is also referred to as Alternative H+, with modifications. It was proposed by the Olympic Task Force and the Washington Wilderness Coalition.

In addition to supporting Alternative H, the following modifications were offered:

- Close the Silver Creek Road, the Boulder Creek Road, the Alckee Creek Road, and the Wright Canyon Road.
- Prohibit off-road vehicle use of Mt. Zion, Dry Mountain, South Fork Skokomish, and Mt. Washington roadless area.

- Protect the South Fork Skokomish, Sitkum, Wynoochee, and East Fork Humptulips Rivers under the Wild and Scenic Rivers Act.

Environmental Alternative H+ (With Comments): Includes the same content as the previous form letter. Additional comments were included.

SUMMARY OF RESPONSES

RESPONSES BY SUBJECT

This section summarizes the comments by major subject areas:

Subject	Number of Responses
No subject	192
Recreation	
General	298
Developed	47
Undeveloped	40
Trails	177
Off-road vehicles-ORV	749
Horse use	17
Primitive or Semi-Primitive recreation	104
Hiking and climbing	28
Management of area A4B (river corridors)	19
Scenery	176
Wild and Scenic Rivers	
General	176
Duckabush	67
Dungeness-Graywolf	47
Dosewallips	65
Hamma Hamma	22
S. Fork Skokomish	212
W. Fork Humptulips	13
E. Fork Humptulips	201
Sitkum	195
Soleduck	19
Four or more rivers specifically named	553
Others	22
Special Interest Areas	
General	204
Existing areas	24
Bill's Bog	55
3 O'clock	277
Cranberry Bog	295
Other areas	294
Wilderness	
General	67
Management	15

Subject	Number of Responses
Unroaded Areas	
General	284
Rehabilitation	14
Quilcene	15
Mt. Zion	25
Jupiter Ridge	11
Upper Skokomish	226
Moonlight Dome	12
South Quinault Ridge	33
Rugged Ridge	15
Soleduck	223
Four or more of above named	45
Other unroaded	327
Old-Growth	
General	618
Intrinsic value	141
Habitat	395
Old-growth inventory	12
Genetic storehouse concept	21
Multiple Use Comments	206
Wildlife (In General)	
General	139
Deer numbers	12
Elk numbers	26
Winter range	97
Introduced species	22
Habitat	155
Management Requirements	32
Pileated Woodpecker	13
Pine Marten	14
Spotted Owl Management	130
SOHAs	13
Habitat requirements	100
SEIS comments	7
Distribution	39
Fish	
General	77
Anadromous	36
Habitat enhancement	35
Habitat	140
Hatcheries	11
Riparian Habitat	
General	35
Protection of lakes and streams	56
Timber harvest in riparian areas	33
Management requirements	10
Threatened, Endangered and Sensitive Species	
General	38
T, E&S plants (endemic)	35
T, E&S habitat requirements	14

Subject	Number of Responses
Research Natural Areas	
Existing (incl. Quinault)	25
RNA - proposed	25
RNA - other	119
RNA - research (in general)	10
Timber	
General	43
Harvest levels	452
Reforestation	43
Sustained yield	85
Below cost sales	35
Land suitability	36
Harvest methods	91
Timber stand improvement	16
Timber improvement and genetics	14
Logging systems	11
Yield tables	18
Timber harvest effects	480
Supply, harvest management off Forest	18
Simpson Timber Company	23
Cooperative Sustained Yield Unit	104
Log exports	62
Water	
General	23
Quality	103
Watersheds	92
Soil	
Erosion control	50
Landslides	29
Air	
General	11
Land Status	
Land acquisition	49
Energy	
Hydro projects	99
Transportation System	
General	26
Road closures and management (density)	92
Extent of existing roads	29
Extent of planned roads	160
Road construction and design standards	10
Road closures and management (wildlife)	38
Close Dungeness-Silver Creek	59
Close Boulder Creek	35
Close Silver Creek, Boulder Creek, Alckee Creek and Wright Canyon Roads	529
Fire	
Prescribed fires	12

Subject	Number of Responses
Economic Considerations	
General	76
Present Net Value	44
Receipts to counties	51
Receipts to Government	20
Economic diversification	19
Employment and job security	228
Short-term economic benefits	53
Long-term economic benefits	38
Rec/tourism employment based economy	177
Timber employment based economy	287
Other commodity based economy	42
Timber value and trends	49
Other value and trends	44
Social Considerations	
General	11
Changes in life styles	20
Historic use patterns	18
Community stability	97
Future generations	212
Budget	
Forest Service	17
Forest Coordination Efforts	
General	12
Olympic National Park	15
Indian Rights	
Treaty rights	11
Planning Comments	
General	101
Monitoring	22
Management strategies (prescriptions)	22
Standards and Guidelines	46
Miscellaneous (FORPLAN MODEL)	49
Consideration of outputs from Olympic National Park	55
Consideration of outputs from any other Landowners	19
Cumulative effects	16
Miscellaneous Comments	116
Summary of Responses by Subject	
Wild and scenic rivers	1,592
Timber	1,537
Recreation	1,479
Unroaded areas	1,230
Old-growth	1,187
Special interest areas	1,149
Economic considerations	1,128
Fish and Wildlife	1,107
Transportation system	978
Social considerations	358
Planning comments	330

RESPONSES BY ALTERNATIVES IN DEIS

ALTERNATIVE A - CURRENT DIRECTION (NO ACTION)

The purpose of this alternative is to project the outputs and effects associated with continued management of the Forest on the basis of current plans, policies, and direction.

Comments on this alternative were about equally divided between those who felt comfortable with the "status quo" and those who felt that it was oriented too much toward timber harvest.

ALTERNATIVE B - DEPARTURE (RPA)

This alternative was designed to assess the effects associated with meeting (to the extent possible) the resource output targets of the 1980 RPA Program.

The alternative received support from industry and commodity interests because of its emphasis on timber production. In addition, no rivers are recommended for Wild and Scenic status, therefore, those individuals and groups against such classification were in support of this alternative.

ALTERNATIVE C (PREFERRED)

The purpose of this alternative is to determine the outputs and effects that would be associated with changing existing management direction so as to (1) increase the emphasis on nonmarket outputs in areas of high public interest, and (2) develop timber harvest schedules on the basis of contribution to PNV rather than harvest volume.

The majority of comments received indicated that the reduction in timber harvest was too great. Some respondents stated environmental effects were too negative; this concern focused primarily on proposed timber management activities and related roading into unroaded areas. A few responding thought this alternative represented a good compromise and they endorsed it.

ALTERNATIVE C - DEPARTURE

The purpose of this alternative is to evaluate the effects of applying a departure harvest schedule to the land allocations and management strategies of Alternative C. Virtually no support was received for this alternative.

ALTERNATIVE D - DEPARTURE

This alternative was developed in response to concerns expressed by timber industry organizations regarding the effect of Minimum Management Requirements on harvest levels. Its purpose is to assess the effects of maintaining, in the early decades, the nondeclining flow of timber harvest that would occur if there were no MRs. No rivers were recommended for Wild or Scenic designation in this alternative. Virtually no support was received for this alternative.

ALTERNATIVE E

Under this alternative, management of the Forest is designed to retain a large proportion of existing unroaded areas while maintaining harvest at the level provided in an alternative with substantially lower unroaded recreation outputs. Intensification of timber management on the remaining available harvest base is the strategy used to accomplish this goal. Virtually no support was received for this alternative.

ALTERNATIVE F

The purpose of this alternative is to evaluate the effects of terminating the Shelton CSYU Agreement, while concurrently allocating lands to the uses suggested by the Puget Sound conservation organizations. Comments on Alternative F were evenly divided for and against termination of the CSYU Agreement but virtually no support was received for the alternative in general.

ALTERNATIVE G

This alternative was developed on the basis of some initial advice from several conservation organizations of the greater Puget Sound area. It represents an approach to the resolution of issues and concerns from the perspective of a strong orientation toward amenity outputs and nonpriced benefits.

Nearly all comments received on this Alternative were favorable toward amenity outputs and increased recreation, particularly unroaded recreation. Surprisingly, however, the alternative received very little support. In general, the environmental organizations preferred the orientation of Alternatives H and I. Those individuals and groups favoring commodity outputs were not interested in this alternative.

ALTERNATIVE H

This alternative was developed primarily in response to the wildlife habitat issue. It was designed to evaluate the effects associated with providing an age class distribution that would yield the best mix of habitat conditions for elk and deer populations, while also stressing the availability of habitat for old-growth dependent species and retaining the amenity emphasis of Alternative I in other respects.

The alternative received support from the environmental community, however, most respondents wanted to modify it to further restrict timber harvesting and road building. Those favoring this alternative were supportive of the high level of Wild and Scenic River recommendations. The modified version of Alternative H was called the Environmental Alternative by some respondents (see Section F, Other Alternatives Suggested).

ALTERNATIVE I

This alternative was developed to provide the maximum possible level of amenity outputs and nonpriced benefits that can be obtained from the Forest. It is the "amenity emphasis" alternative specified in Regional planning direction.

This alternative received a minor number of comments, all of which were supportive. It would provide the maximum possible level of amenity outputs and nonpriced benefits that can be obtained from the Forest.

ALTERNATIVE "NO CHANGE" (NC)

In September 1988, the Forest released a Supplement to the DEIS, which described a "No Change" alternative based on continuation of the existing Timber Resource Plans (TRPs) and provided an analysis of the methods selected to meet management requirements of NFMA. One hundred and seventy-four responses to the Supplement were received. They followed the same pattern of the previous responses to the Draft Plan. Timber interests restated their desire for emphasis on maintaining local jobs and economic stability by maintaining or increasing timber harvest levels from the Forest (see page 13, the "Community Stability" Alternative). The Environmental Community response reiterated their position of further restricting timber harvest with greater amenity emphasis as displayed in Alternative H, and as modified in the "Environmental" Alternative, also described in "Other Alternatives Suggested." Many respondents reiterated the Forest position stated in the Supplement that this alternative would be in direct conflict with existing laws and regulations.

OTHER ALTERNATIVES SUGGESTED

THE "COMMUNITY STABILITY" ALTERNATIVE

This alternative was proposed by the timber industry and supported primarily by those responding by a form letter provided by a coalition of timber interests called the Olympic Resource Council. It proposed higher timber harvest levels (approximately 250 MMBF) and less consideration for scenic values, recreational benefits, and unroaded areas. It also opposes the establishment of Wild and Scenic Rivers (also refer to: Explanation of Form letters, page 5).

THE "ENVIRONMENTAL" ALTERNATIVE

This alternative was developed through the efforts of a group of environmental organizations. Its focus is similar to Alternative H in the DEIS, but with several modifications that propose specific road closures, greatly reduced off-road vehicle use, additional rivers to be protected under the Wild and Scenic Rivers Act, more old-growth retained, more unroaded areas retained, and protection of available winter range for deer and elk (also refer to: Explanation of Form letters).

THE EARTH FIRST! ALTERNATIVE

This proposal was developed by the Earth First! coalition. It was submitted during the public response period following a meeting between Earth First! and the Forest. Consisting of 15 major points, the alternative proposes to eliminate all logging, hunting, fishing, prescribed fire, open roads, livestock grazing, and motorized vehicles within the Olympic National Forest. Expansion of the Forest through purchase of private land or eminent domain is recommended.

ALTERNATIVE Z - PROPOSED BY STOP OLYMPIC DEFORESTATION (SOD)

Similar to the Earth First! Alternative, this proposal would impose a 25-year moratorium on all timber sales. All private vehicle use would be replaced by limited public transit access. An old-growth corridor would be developed to connect the Olympic Peninsula with the Cascade Mountain forests.

THE OLYMPIC NATIONAL FOREST BIOLOGICAL PRESERVE AND CRITICAL HABITAT AREA ALTERNATIVE

Designate the Olympic National Forest a National Natural Preserve. No surface or subsurface activities or development. Designate 229,000 acres as Wilderness to be included in the National Wilderness Preservation System. Preserve all old-growth in a National Old-growth Sanctuary System.

SUBJECTS IMPORTANT TO THE PUBLIC

Subject: Recreation (General)

Background: Many people expressed an interest in "recreation". Most of these comments were very general in nature. Reasons for wanting greater recreation emphasis ranged from a desire for beauty and solitude of the Forest to support for a recreation based economy.

Message: Those responding see the Olympic as a very desirable recreational area. Recreation, in a general sense, is important for a variety of reasons.

Subject: Recreation - Undeveloped (Trails)

Background: Future development and management of the Forest Trail System received a good deal of attention. Comments stressed protection of the existing system which included not clearcutting along or across established trails, replacement of existing trails with roads, or cutting across established trails with roads. Many requested that more trails be constructed based on projected increases in recreational uses. No responses wanted to decrease trail mileage on the Forest. Also, comments stressed avoidance of motorized travel on trails or trailheads leading into established wilderness areas.

Message: Trails are very important recreational facilities and should be maintained and protected. As a minimum, retain the existing trail system and plan to expand the system to provide for projected increases in dispersed recreation demand.

Subject: Recreation - Undeveloped (Off-Road Vehicles - ORV)

Background: Considerable comment was received regarding specific trails for specific uses (primarily motorized versus nonmotorized), with most comments favoring nonmotorized. Many hikers commented that ORVs (motorized) interfered with their hiking experience. ORV users, however, did not object to sharing trails with hikers and they also expressed their desire to use their ORVs in an undeveloped (Primitive or Semi-Primitive) setting. A large portion of the response was received on form letters (see Explanation of Form Letters - Off-Road Vehicles (ORVs), page 5).

Message: Future development and management of the trail system has received a good deal of attention. Interest has centered around plans for expansion of the trail network, expected levels of (and funding for) trail maintenance and reconstruction, and designation of specific trails for specific uses (primarily motorized versus nonmotorized, with most comments favoring nonmotorized). This response reflects the continuing social conflict between users based on their expectations and desires. The public is divided on the

appropriateness of motorized trail use on the Forest, primarily within undeveloped (Primitive and Semi-primitive) areas.

Subject: Recreation - Undeveloped (Primitive or Semi-Primitive)

Background: This is generally recognized as a major issue in the Forest planning process. The responses received stressed a desire for opportunities to recreate in this type of "primitive" environment. Many mentioned limiting management activities to those that would not compromise the undeveloped nature of these areas. Some responses also dealt with our recreation analysis and questioned whether assigned values were adequate. They also wondered if our projections for increases in the demand for Primitive and Semi-Primitive opportunities were sufficient. Other responses focused on the existing availability of established or "reserved" areas such as the million acre National Park and 88,265 acres of Wilderness on the Forest; therefore, these responses were not in favor of allocating additional timberland to Primitive or Semi-Primitive recreation.

Message: Two messages have emerged from these responses: one being the desire to protect existing areas and/or expand the opportunities for recreation in a primitive and semi-primitive setting on the Forest; the other is that lands presently dedicated to this use on the Peninsula are already out of balance, and further allocations to primitive and semi-primitive recreation use would only add to this imbalance.

Subject: Scenery

Background: The Forest received 175 responses on this subject. Initially, during our public meetings, there was relatively little comment on visuals or the scenic resource. Most people responding stated scenic quality was important to both visitors and residents of the Puget Sound area who view the Forest from their homes or from roads and highways. Many advocated protection of the scenery, some stating the views were becoming increasingly negative due to timber harvesting (clearcutting) and road building activity. Others suggested that scenic resources were of relative low importance since virtually every feature offered by the Forest can be offered many times over by the adjacent National Park. Some responses suggested not bothering with managing for scenery since timber management was not unattractive per se. Along the same view, questions were raised regarding the effect managing for scenic quality might have on the harvest level. Managing the Forest's scenic resources is an issue that developed early in the public involvement process. How the scenic resource of the Forest is to be managed is one of the ten planning issues developed through the public involvement process beginning in 1979.

Message: Responses dealt with essentially two concerns: aesthetic and economic. One suported protection of the Forest's scenic resources, including a general disdain for clearcutting and road building that is visible from popular vistas and scenic travelways. This view was expressed primarily by urban residents in cities such as Bremerton, metropolitan Seattle and other south Puget Sound cities between Seattle and Olympia. However, concerns expressed by many in the smaller communities around the Peninsula stressed the need to be more "realistic" and suggested urban residents must expect to view harvested areas as well as scenic corridors. There is concern as to the effect of management for scenic quality on timber harvest levels.

Subject: Wild, Scenic, or Recreational Rivers

Background: This subject became an issue on the Olympic Peninsula (Forks area) during the energy crisis of the early 1980's. Numerous hydro projects were being proposed, and people became concerned about

potential loss of anadromous fish habitat. There were many responses indicating a strong interest in having rivers recommended for inclusion in the Wild and Scenic River System. At the same time, considerable concern has been registered regarding the effects of such a classification system on current land uses and future land values, particularly with respect to private land holdings within and/or outside existing river corridors. Locally (Brinnon area) strong opposition against Wild and Scenic River status developed as a result of the DEIS showing two (eastside) river systems being recommended for Wild and Scenic study in the Preferred Alternative. Approximately 1,600 responses were received, the largest for any subject during the public response period. (The bulk of these responses were form letters - see Explanation of Form Letters.) Unfortunately, a considerable amount of incorrect or distorted information was produced by the citizens group opposing the Wild and Scenic River concept. This group raised fears of condemnation among local landowners. This fear led to form letters which were generally against establishing any rivers as part of the Wild and Scenic River System. The form letters overwhelmingly supported implementation of Alternative B - Departure (RPA), despite other substantially negative amenity effects of implementing this alternative. There are no Olympic Peninsula rivers currently in the National Wild and Scenic River System although several are suitable for inclusion.

Message: One segment of the public wants Wild and Scenic river classification for several rivers (over 550 responses suggested four or more Wild and Scenic rivers). Reasons include: protection of scenic, streamside and anadromous fish values and to protect the rivers from the "ugliness" of timber harvest and road building. However, many area residents and landowners are against the idea of a Wild and Scenic River System. They want the Forest Service to remove the three rivers now being recommended and do not want them considered for the future designation. Although designation of a river as Wild or Scenic does not authorize condemnation of private lands within a river corridor, the main reason for this opposition seems to be the fear that Wild and Scenic designation will result in property condemnation. How the corridors adjacent to eligible Wild, Scenic, or Recreational rivers are managed is one of the planning issues developed through the Forest's public involvement process.

Subject: Special Interest Areas

Background: This subject area deals with land or areas that may be set aside to protect, preserve, and interpret unique geological, biological, and cultural resources for education, scientific uses, and public enjoyment. A small organized campaign generated comments regarding several specific sites on the Forest.

Message: Both "Environmental Alternative" and Alternative H without modification supporters favor designating areas that support substantial populations of native and other "interesting" plants to protect them from destruction by logging, etc. Others had small, specific areas they want protected (e.g., Bill's Bog). Some respondents favoring commodity uses of resources were not interested in establishing any new special interest areas. Most expressed a concern that enough already exist in established Wilderness areas and the Olympic National Park.

Subject: Wilderness

Background: The Washington State Wilderness Act of 1984 designated approximately 91,500 acres (currently 88,265 acres) of the Olympic National Forest in five Wildernesses. The balance of the RARE II (unroaded) lands were released from other management considerations as addressed in the Forest Planning process. The concept of Wilderness still generates considerable interest in both its supporters and opponents. However, there were relatively few specific comments received.

Message: There is a group of respondents which continues to press for adding to the Wilderness System from the unroaded areas that exist now. Others are firmly against any further allocations to Wilderness on the Forest, citing the acres currently in the Wilderness System, as well as the comparable lands within the Olympic National Park.

Subject: Unroaded Areas

Background: These are areas identified in the planning documents that remain as unroaded. The Washington State Wilderness Act of 1984 released them for full multiple use management as may be developed through the Forest Planning process. Management of these areas was one of the original planning issues identified through the Forest's public involvement process.

Message: Comments supporting continued unroaded area management identified them as valuable for the preservation of old-growth timber, wildlife habitat, and to provide non-motorized recreation opportunity as well as future additions to the Wilderness System.

Those opposed to unroaded area management were most concerned about economic values foregone and often stated enough lands were already set aside as Wilderness, along with similar lands available within the Olympic National Park system.

Thirteen unroaded areas have been identified in our planning documents with varying degrees of management proposed under the Preferred Alternative. In addition to these, proponents of the Environmental Alternative have identified twelve more areas they felt should be managed as "unroaded."

Subject: Old-Growth

Background: Respondents supporting Alternative H and the modified version were opposed to harvesting any more old-growth timber. They cite its values for watersheds, aesthetics, wildlife habitat, etc.

Several respondents suggested that we give stronger consideration to greater use of partial cutting or other harvesting options rather than clearcutting relatively large blocks.

The greatest concern of those who support continued harvest of old-growth timber is the economic effect of reduced harvest levels of this component of the Forest.

This subject generated a large number of specific comments and was at the core of many other comments supporting or opposing various alternatives. It is a key element or component of the timber harvesting level issue.

Message: There is strong polarization of responses from "don't cut old growth" to "don't save old growth."

The feelings of some of the respondents run along the lines of ".... how can we justify cutting any more old growth....old-growth area is already severely reduced....the Preferred Alternative leaves only token stands in the long run."

On the other hand, others feel that there is no need to retain additional old-growth given the amount available in the National Park, Wildernesses, etc. Specific concerns are:

The proportion of total Forest harvest from old-growth over the next 50 years;

The future mix of products (considering both species mix and age classes); and

Long-term effect of specialty old-growth products, particularly those derived from old-growth cedar.

Subject: Multiple Use

Background: Comments that mentioned Multiple-Use as a subject specifically used it to back their position for whatever they were for or against.

There were not many comments that spoke directly to this subject, but it is obvious that it means different things to different people.

Message: One set of interests feels that our current management direction is toward timber harvest and its economic benefits at the expense of the other Forest resources.

An opposing viewpoint is that we are too conservative in our evaluation of how much timber can be harvested and still provide for minimum levels of protection and outputs of the other Forest resources.

Subject: Wildlife

Background: Comments identifying concern with this resource area often supported Alternative H or the modification of it. Wildlife benefits were a primary consideration in the development of this alternative.

There was some criticism of the use of "indicator species" concept ranging from its inability to do what it is supposed to do, to a concern that we had not identified suitable species to serve as indicator species (and to some extent the same for native and Threatened and Endangered plants).

Other comments expressed the opinion the Olympic National Park provides sufficient mature and old-growth habitat for wildlife restocking of the Forest when habitat grows back to the proper stages to accommodate them.

Responses related to big game generally addressed the issue of habitat management, particularly winter range. There are opposing views as to the levels of old-growth necessary to provide appropriate habitat.

Message: There is a considerable interest in wildlife. Much of it is based on habitat needs of game species, but there is also a strong interest in non-game species. To some extent, the same is true for native and Threatened and Endangered plants. For amenity oriented proponents, old-growth timber is seen as a key component of wildlife habitat on the Forest. Commodity oriented responses often stressed minimum output levels for non-game, old-growth dependent wildlife, as well as opposition to the concept of Management Requirements.

Related Message and Concerns:

While the subject of spotted owl management was dealt with in a separate SEIS, the Forest also received responses on the subject. One group of respondents feels that viable owl populations will not be assured as displayed in the DEIS or under the SEIS preferred alternative.

Questions have also arisen regarding the isolated nature of the Olympic Peninsula owl population. On the other hand, there is an opposing viewpoint which feels that the proposed management requirements are extreme, and that ample spotted owl habitat is available in lands already withdrawn from harvest (Olympic National Park, Wildernesses, etc.).

Subject: Fish

Background: Those respondents who mentioned fish favored doing what was necessary to protect and/or enhance this resource. This was particularly true of anadromous species.

The fisheries issue is closely tied to water quality and where alternative preference was expressed, it was generally for the alternatives that indicated the highest levels of habitat protection, water quality, and fish production.

More detailed display of effects/outputs by drainage and fish species is desired by some, and there is concern that fisheries values are underrated.

Message: Respondents suggest a display of more detail by drainage. In addition, habitat capability rather than fish numbers would be more useful to many who commented. Related messages and areas of concern regarding management of fish habitat have been as follows:

What practices are used to control erosion and sedimentation, and how will they be applied?

Does the preferred alternative provide the level of anadromous fish habitat protection implied by the Boldt II decision?

Are there plans to rehabilitate fish habitat, particularly within the Shelton CSYU?

Why do fish outputs decline after the first decade in most alternatives?

Peninsula Indian Tribes that responded indicated a strong interest in the management of the anadromous fishery.

Subject: Riparian Habitat

Background: A principal area of concern has been management of riparian areas. Most questions have concerned the specifics of streamside zone management. Items of particular interest include types of prescriptions to be applied, use of selective logging versus clearcutting, future policies regarding retention of trees along streams, logging practices to be required, and the overall set of Standards and Guidelines which will apply to riparian area management.

Industry's concern is that we are being too conservative in our Standards and Guidelines for activities in these areas, citing the recent TFW guidelines developed by the State as being more reasonable.

Other comments from environmental interests feel that our Standards and Guidelines are too loosely written and would allow for maximum activity within the riparian zone which is unacceptable.

Message: Riparian areas are important from both positions being advocated by respondents. Industry wants to see a minimum standard emphasized while the environmental community desires more stringent constraints, and in general, a reduced harvest in all riparian areas.

Subject: Threatened and Endangered Species

Background: Most respondents addressing this subject supported Alternative H with modifications proposed by the Audubon Society or Alternative I. Some examples:

A number of respondents want a moratorium on all harvesting of old-growth occurring within 75 KM of saltwater due to its apparent value as reproductive habitat for the Marbled Murrelet that is listed as a State sensitive species.

The Washington Native Plant Society is concerned that we have not identified a system of native plant sites and have an inadequate inventory of Threatened and Endangered species and sites. They are afraid that we will wipe out rare plants and drastically effect native plants through our timber harvesting activities.

Message: Our documents do not appear to be very sensitive to plants, animals and their habitat situations and do not appear very responsive to their protection. Standards and Guidelines are absent as currently proposed in the planning documents.

Subject: Research Natural Areas

Background: Those responding supported the existing Quinault RNA. The Environmental oriented responses supported additional RNAs if they could be found. Most comments came as support for Alternative H or the Environmental Alternative.

Message: Many respondents favor the protection afforded RNAs from logging or other management activities that could disturb the natural conditions within an RNA. Commodity oriented groups were not interested in the RNA concept. There was some concern expressed by local residents over the potential danger of falling trees within the RNA corridor. Otherwise, the responses for this subject were similar to those received for special interest areas.

Subject: Timber Harvest

Background: Responses received were strongly polarized on this issue. They ranged from requests for a complete moratorium on all harvesting of timber or support for a drastically reduced level of harvest, to support that harvest levels be maintained at current levels or increased.

Because of its perceived effects on the environmental and economic values of the Forest, including the communities that depend on it, the level of timber harvest and where it is conducted during the Forest plan implementation phase is a major issue for the Forest.

Message: There was minimal support expressed for the preferred alternative (Alternative C). Industry and commodity interests felt it set harvest levels too low and the environmental community felt harvest levels were too high; primarily because of their effects on old-growth and sedimentation, and in general the perceived low level of amenity outputs. The amount of response has served to validate the importance of this issue as developed throughout the planning effort and the public involvement process.

Related Messages and Areas of Concern:

The overall supply-demand picture and the relationship of Forest harvest levels to off-Forest conditions. Peninsula timber interests feel very threatened by expected substantial drops in State and private harvest.

The financial balance sheet for timber management, or "sales below cost." We were often asked if our timber program pays its own way. There seems to be a perception in the environmental community that timber harvest is subsidized on most National Forests.

Timber interests have expressed concern over the difficulty of assessing what is really happening with output volumes (Alternative A versus current plans versus actual sell versus proposed alternatives). The feeling is that none of our "current" harvest figures express the true situation.

Concern in some quarters that National Forest logs are being exported; lack of understanding of export restrictions.

The source of the Forest's timber harvest targets (i.e., "who tells us how much to cut?") and the relationship of these to the proposed Forest Plan. There is some perception that our targets are now, and will continue to be, based on edicts from above (regardless of the results of the planning process).

Timber interests within specific localities (Forks, Quilcene and the east side of the Forest as a whole) are concerned about local harvest levels. Concern is especially high in the Quilcene area where a reduction is projected.

In general, timber interests feel strongly that reductions in the harvestable land base have already gone too far, and that any further reductions are unjustifiable.

Other Employment-Related Concerns:

How did we evaluate employment effects? Were all factors (indirect employment, Forest Service employment) considered? Did we consider employment changes other than within the timber sector?

Timber interests are especially concerned about the relative importance of employment effects in the evaluation of alternatives and selection of a preferred. Was a dollar value for jobs gained or lost included in PNV analysis? Were all indirect costs of unemployment considered? Just how were employment effects weighed in the evaluation process?

The environmental community has expressed concern that we are overstating the employment effects of reduced harvest. Did we consider that the number of jobs per MMBF is likely to drop in the future due to mill modernization?

Subject: Water

Background: Responses concerning water were principally addressed to erosion resulting from timber harvesting and/or roads and effects on water quality and runoff timing. These effects were often referenced to effects on fisheries and other values affected by sediment in runoff waters.

Message: All comments expressed the view that clean high quality water was a primary resource value of the Forest and sedimentation should be kept at minimum levels. There was some concern over "cumulative effects" of Forest activities on water quality.

Subject: Soil

Background: Protection of soil from the effects of erosion was strongly advocated by the respondents who commented. As a basic resource, it is seen to have value in itself. Concern for soil protection was mentioned because of its potential degrading effects on water quality and fisheries habitat.

Message: Soil is a basic resource and its retention in place is important and basic to any proposed management activity. Again, concern has been expressed over "cumulative effects."

Subject: Air

Background: There were only a few direct references to air as a resource. These centered mainly upon smoke impacts on visibility and its related effects on air quality.

Message: Comments spoke to this subject as a relatively new area of concern, but one that will become more important and can have substantial effect on future management activities such as road building and timber harvest, or viewing wilderness or scenic areas.

Subject: Land Status

Background: The majority of responses that addressed this subject were opposed to any increase in Federal ownership of lands on the Peninsula. This was apparently a spinoff to the perception that if the rivers on the Peninsula were under Wild and Scenic River status, this would lead to widespread condemnation of property adjacent to these streams and acquisition by the Government.

Message: Continuation of exchanges or purchase of relatively small amounts of key tracts where we have willing exchangers or sellers is appropriate. Due to the perception of widespread property condemnation resulting from Wild and Scenic River designation, any acquisition which might be considered in these areas can expect considerable opposition.

Subject: Energy (Hydropower)

Background: The few comments received referred to specific proposals or were generally opposed to dams or diversion of streams on the Peninsula.

Message: Free flowing streams are considered to be of high value and should be protected.

Subject: Minerals

Background: Very few comments were received on this subject. The Bureau of Mines expressed concern about what they see as "new policy" regarding our proposed response to mining claims near Wilderness boundaries as proposed in Forestwide Standards and Guidelines. Several "rock hound" groups expressed concern that their activity was not mentioned in the Plan.

Message: Although responses were minimal, our documents should be checked for clarity and ensure our Standards and Guidelines are accurate regarding claims adjacent to Wilderness. Also, check to see if various interest groups are mentioned.

Subject: Transportation System

Background: Most respondents who addressed this subject were concerned about the effects of roads in steep areas on soil stability and siltation of streams. A large number of responses were against substantial increases in the road system on the Forest, especially into the presently unroaded areas.

There is support for closure of roads not needed to meet current management needs, while there was a small group of respondents who suggested closing almost the entire road system to use. There was support expressed for road closures for the protection of wildlife.

There is considerable anti-ORV feeling among respondents identifying themselves as hikers, horsemen, and non-motorized users of trails.

Message: The concern over roads is that they will bring more people into the quiet places, increase competition for their use, and lower the quality of experience.

Generally, those responding felt closing roads was appropriate for soil and water protection. Some expressed the concern that closures would be beneficial to wildlife and a higher recreation experience would result. Considerable response was received on this subject, and management of the Forest's transportation system (Roads and Trails) is an issue that developed early in the planning process and was mentioned consistently throughout the Forest's public involvement activities.

Subject: Economic and Social Considerations

Background: Economic effects comments ranged from concern over basic values used in the calculations to the view that PNV, as used in our analysis, was not a valid measure for comparison of alternatives.

This subject area and the area of Social Considerations received comments from people who feel that they will "lose benefits" if the preferred alternative is implemented and they are concerned or threatened by that alternative.

Specifically, there has been a good deal of interest in economic analysis, especially regarding what it included and how it was used. Common questions have included the following:

What costs and values were included in the analysis, and how were they derived and used?

What is the effect of maximizing PNV on allocations and management intensities, especially with respect to timber harvest?

What are the assumptions regarding future changes in output values, particularly timber values versus recreation values?

What is the relationship of PNV to Treasury receipts and payments to counties?

How were outputs with no assigned monetary value (e.g., scenic quality) treated in the overall evaluation of alternatives?

Message: There was a general "uneasiness" by those commenting as to how the economic analysis would be used in the decisionmaking process, and how our data and analysis were developed.

Subject: Forest Coordination

Background: Several respondents urged that the Forest Plan specify management direction that will provide a buffer for the perimeter of the Olympic National Park while some others suggested that we "pool" the Park's capabilities for providing old-growth habitat, unroaded recreation, etc., with the Forest's capabilities and base the Plan on the combined Olympic National Forest/Olympic National Park lands.

There were several comments from individuals who felt we developed the DEIS without adequate consultation with them.

There is concern by some that we have not adequately addressed cumulative effects, primarily in relation to private land ownerships adjacent to or surrounding the Forest.

Message: Most responses received dealt with coordination options involving the National Forest and the National Park; several suggested combining lands of both agencies to provide both amenity and commodity outputs, depending on the point of view being expressed. A greater "in-depth" treatment of cumulative effects of proposed Forest management activities upon surrounding private ownerships was also mentioned by several respondents.

Subject: American Indian Rights

Background: One tribal group felt we should identify this as an issue. Several of the tribes felt that we had inadequately evaluated the fishery resource in relation to their economy and culture. They were concerned about what they feel is our high estimate of habitat productivity.

Also expressed was concern over cumulative effects. Specifically, the Squaxin Island Tribe feels that the effects of the transfer of Simpson Timber Company's operations to Simpson Timber Company lands in the SCSYU may have significant effects on watersheds, rivers and streams that are critical to their fisheries interests.

Message: The Squaxin Island Indians indicate they will seek whatever recourse they must to protect their interest if they are not satisfied with management direction for Simpson Company lands within the Shelton Cooperative Sustained Yield Unit (SCSYU).

Subject: Planning

Background: The Forest received high marks and many compliments for the effort and quality of the Plan presentations made during the series of public meetings held around the Peninsula.

However, for some there is a level of distrust of our planning process and methods, such as our basic data, the FORPLAN model, outputs, and other analyses we made.

Several respondents asked that we make the documents more readable.

Message: We can expect to have the Plan and its supporting documentation carefully reviewed by people who have very specific interests.

These people are reading and reviewing the planning documents with considerable interest and detail (ref: Summary, Number of Responses by Subject). Responses were received from a general planning perspec-

tive. In addition, more specific responses dealt with monitoring, management strategies, standards and guidelines, output considerations from Olympic National Park, output considerations from landowners, etc.

Subject: Shelton Cooperative Sustained Yield Unit (SCSYU)

Background: Specific management concerns have been raised by the public, Simpson Timber Company, and from the Planning process perspective, the Forest Service. These are related to: 1) the intensity of timber management activity in relation to the cost of the activities; 2) the current terms of the Shelton Cooperative Unit Agreement in relation to recent changes in the market conditions affecting timber management; and 3) the need for changes in land classification on National Forest land to respond to requirements of NFMA and subsequent direction.

We received general questions on the purpose of the SCSYU Agreement, how it works, and whether its goals are being accomplished. There is also interest in whether Alternative F (which examines the effects of terminating the Agreement) could be implemented, and what would happen if it were. Concern has also been expressed over the condition of National Forest lands within the SCSYU (there seems to be a perception that these lands have been "seriously damaged" as a result of past SCSYU management).

Most of the comments on the SCSYU condemned the effects of the concentrated harvest on the National Forest portion of the Unit, using it as a "horrible example" of the effects of clearcutting in steep terrain. These comments were from the environmental community.

There were several comments from people identified with the forest industry who felt that the Unit Agreement should be terminated, suggesting sanctions against Simpson because of past benefits they have received under it.

Earth First! suggests not only termination of the Agreement, but that the Government condemn Simpson's land in the Unit and force Simpson to use the funds previously received to compensate for the impact on the local communities.

Message: This subject is a focal point for those opposed to road building and timber harvesting, particularly through the application of clearcutting. It is also seen by some as an unfair competitive advantage that has been given to Simpson.

MISCELLANEOUS ITEMS OF GENERAL INTEREST

At many of our public meetings, we received questions regarding the following:

The process used to select the preferred alternative.

Whether we expect changes in the preferred alternative from DEIS to FEIS and, if so, what process will apply (a new comment period versus publication of FEIS).

How public comments will be weighed and evaluated (what sort of comments will have an effect and what will not?).

The process for dealing with changes in demand, values, basic planning data, etc., after implementation. What will precipitate revision, amendment, or a new plan?

The effect of recent National Forest/National Park boundary adjustments on the proposed plan.

Native American concerns--what are they and how were they addressed in the analysis?

The extent to which adjacent landowners' objectives and uses were considered in the development of alternatives, especially the preferred alternative.

The relationship of the Forest budget to Forest revenues, both in total and for individual resource programs when the plan is implemented.

ADDITIONAL REFERENCES IN PLANNING RECORDS

The following references are part of the background information used in developing the public participation process for the development of the FEIS and Forest Plan (also refer to Chapter I of the FEIS, "Planning Records"):

- The Identification Process -- (First version of public issues)
- Consultation with Others -- (Citizens' Work Group, et al)
- Selected Issues, Concerns, Opportunities -- (The screening process)
- Public Involvement Strategy -- (Post public response period)
- Forest Plan Reports (Newsletters) -- 1 - 23 editions
- News Releases

NATIONAL UPDATE

Public Involvement— The Olympic National Forest Assesses Its Efforts

By Thomas W. Sayre

In November 1986, the Olympic National Forest released a Draft Environmental Impact Statement (DEIS) for its proposed land- and resource-management plan. A number of factors combined to make the DEIS release a matter of considerable public interest. The Olympic covers 650,000 acres on Washington's Olympic Peninsula and is within a half-day's drive of Seattle and Portland, Oregon. The small communities that surround the forest look to its abundant resources to recreate and to earn their living. Finally, the Olympic's DEIS was among the first released of the 19 national forests in USDA Forest Service Region 6. The Olympic and the Siuslaw national forests were the first west of the Cascades to release their documents for public review.

It was clear to us that the public review-and-comment period, lasting until March of this year, would be a lively one both in the state and on a national level. In the midst of the comment period, five members of the forest team traveled to Washington, DC, to brief members of Congress from Washington State and representatives from a wide range of national organizations on our DEIS.

During our presentation at SAF headquarters, the idea of summarizing the effectiveness of our public involvement efforts first surfaced. We are often evaluated in our efforts by others, but we don't often critique ourselves, at least publicly. We asked ourselves two questions: (1) Does the public review-and-comment period work for the Forest Service? (2) Does the review-and-comment period work for the public from a Forest Service standpoint?

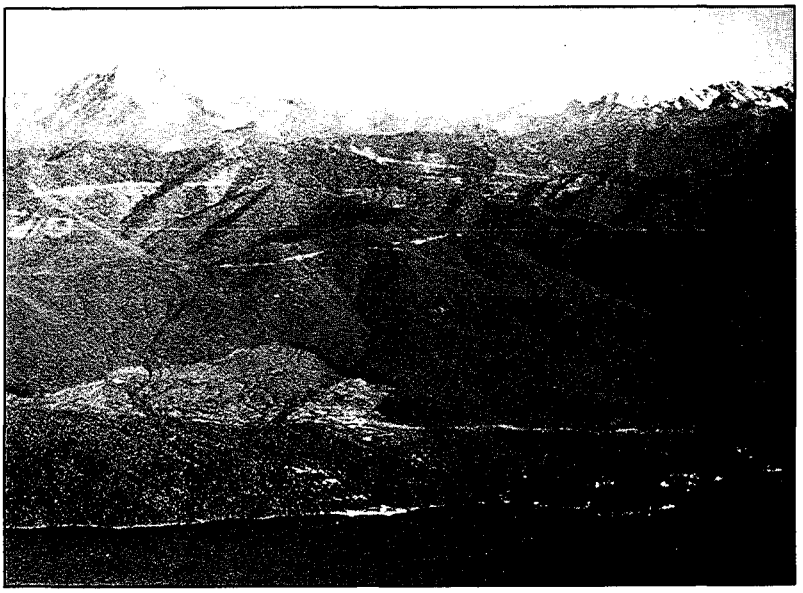
These and similar questions are asked continuously throughout all undertakings involving the Forest Service. The conclusions we reached will improve our next round of public participation. Planning (and public involvement) for natural-resource management is as dynamic as the actual activities themselves. Out of necessity, change occurs.

One thought recurred throughout our planning process: will the words of the final forest plan, by which we manage the resources of the Olympic National Forest for the next 10 to 15 years, reflect an accurate picture of our interpretations of what the public told us? We've attempted to listen carefully to new information and are currently evaluating written responses and comments. This information will be combined with existing data, from which conclusions will be made leading to the forest's final plan. This, then, becomes a measure of the effectiveness of our public involvement efforts.

Forest Service Perspective

For the Olympic National Forest, the public review-and-comment period worked well. To a person, we felt satisfied with our efforts in presenting a draft plan and providing our publics with an opportunity to ask clarifying questions relating to the planning process and to information presented in the documents.

In an attempt to evaluate our efforts during the review period, interdisciplinary team members, the forest supervisor, district rangers, and staff officers were canvassed. At the midpoint of the review period, we had participated in approximately 25 public meetings in



Private land, wilderness areas, the Olympic National Park, and the Olympic National Forest—parts of all shown here—share the Olympic Peninsula.

NATIONAL UPDATE

the greater Puget Sound area and in Washington, DC. Eventually we participated in more than 35 meetings with a total attendance in excess of 1,200.

Some sample responses:

"To date our sessions have gone well. A long road ahead, but we've taken the bumps out of the first stretch and we're on a roll."

"When we receive applause at the meetings from a group of people who've just been told they probably won't get all they wanted from the forest, we've done something right."

"At times we may have been too careful to avoid conflict and debate. More forceful answers may have been a good idea at times."

"Our audiences indicated their appreciation of our professionalism, willingness to listen, lack of rigidity regarding the preferred [alternative], and knowledge of the subject matter."

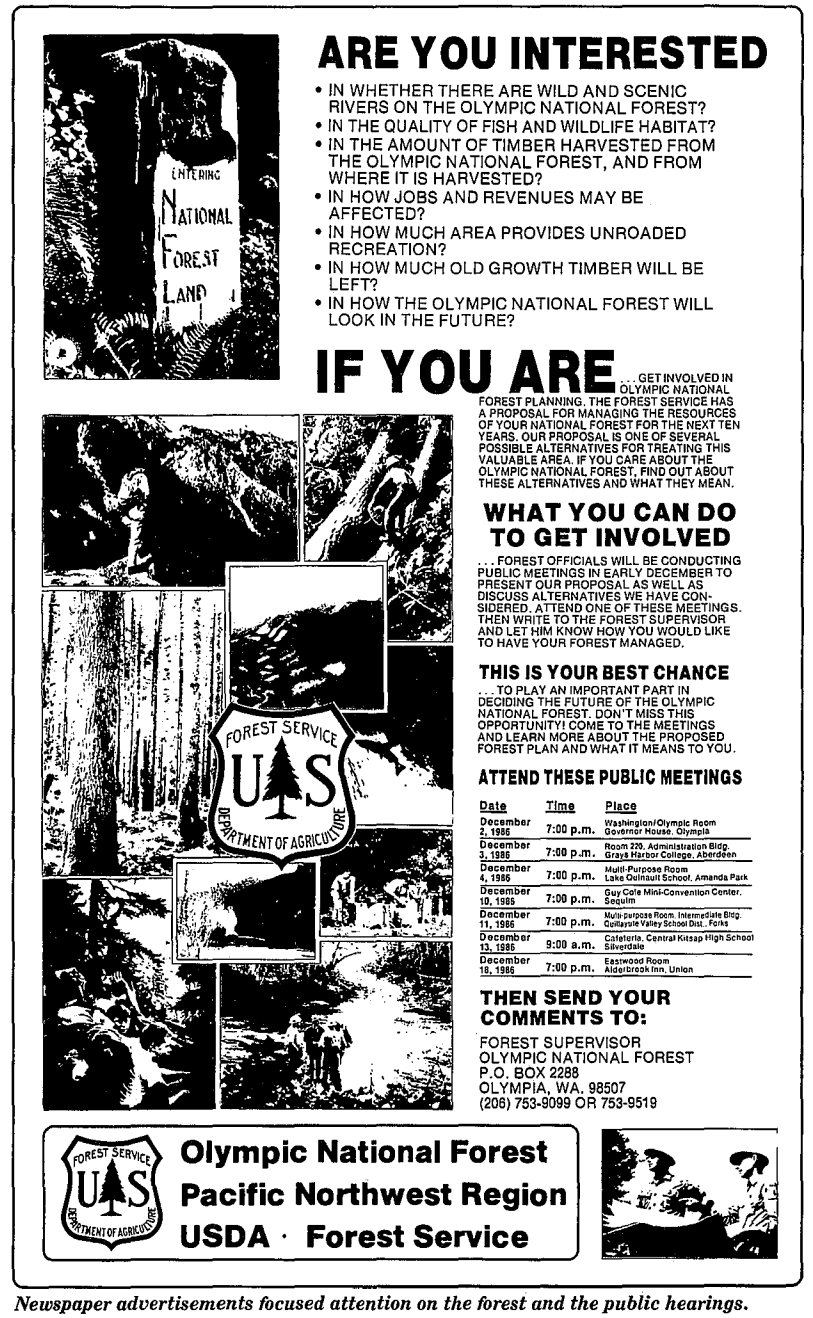
"Strong points are our willingness to take constructive criticism, candor, and the fact that the entire forest planning and management team was involved in the meetings."

For us, the review period provided an excellent opportunity to listen to concerns and opinions on planning documents that we have been familiar with for more than 6 years. The eight interdisciplinary forest-planning team members who drafted the documents attended all the public meetings. This provided the unique chance to hear interpretations of, and conclusions drawn from, their findings and recommendations. In effect, the face-to-face exchanges were the barometer by which we refined our presentations to improve public understanding of their content.

Public Perspective

The objective of a public review-and-comment period is to ensure that interested people are aware of the relevant documents, understand them, and have sufficient time to respond.

We found that we continually needed to upgrade how we presented our information. Most important was a clear understanding by the audience of the meeting's objectives. Many people would come with their own agenda. This was disruptive in some instances, but once people knew they would be



Newspaper advertisements focused attention on the forest and the public hearings.

given "air time" in a structured atmosphere, the problem was resolved.

The top two or three process-related concerns voiced at the meetings were the limited supply of documents, lack of time to adequately study them, and the resulting need for an extension of the comment period. These complaints were voiced by only a small percentage of individuals, but they were recurring. The comment period was extended by several weeks.

With the possible exception of organizations and individuals who communicate regularly with the Olympic National Forest, most people had catching up to do once the documents were released. As expected, most concentrated on their particular area of concern and limited comments to those subjects, ranging from timber supply to rock collecting. Very few people were interested in all the information contained in the documents.

We expended considerable effort in alerting the public of the intent and importance of forest planning and the need to become involved in the review-and-comment period. Citizen working groups were used as a communications network, key contact assignments were made to forest-management team members, and full-page advertisements were purchased in five daily newspapers within the Olympic's zone of influence.

Misunderstanding of information presented in the documents was reflected in comments both voiced at meetings and received in writing. Key areas that appeared to be subject to varying degrees of understanding included timber offerings (stumpage values) and harvest calculations; the role of the forest in the Olympic Peninsula economy; sedimentation levels; and a fear that extensive government acquisition would result from designation to the Wild and Scenic Rivers System.

The review-and-comment period enabled our publics to highlight their concerns to us and for us to clarify misunderstandings. This was an exciting and particularly challenging stage in the total planning process and one that was very beneficial because of the discussion of issues that took place with *individuals*.

The Next Step

The public review-and-comment period for the Olympic's draft plan went quite well for us, and, we believe, for those commenting. We felt a quality level of communications took place, reflected in approximately 3,700 written responses from reviewers of the draft planning documents. These written comments, currently being evaluated by forest officials, address management of the forest's resources.

Much was learned about the design of the public involvement process, to the benefit of the public as well as ourselves. We will immediately use this information for our upcoming public review-and-comment period for the supplement to the DEIS.

The Olympic National Forest is one of seven Pacific Northwest Region forests that will be issuing a supplement to its DEIS. The final forest plan is slated for completion in late 1988.

The importance of a formal public review-and-comment period cannot be overstated. If the opportunity is taken by agency officials to truly listen as individuals express their concerns, the results should be beneficial to the resources as well as all parties concerned. This "window" that opens as a small part of the total planning process is intense, enjoyable, and critically needed by both the Forest Service and the clients of the country's national forests.

Thomas W. Sayre is public affairs officer, Olympic National Forest, Olympia, WA.

Part II - List of Respondents

FEDERAL AGENCIES/OFFICIALS

US Department of Agriculture, Soil Conservation Service
US Department of Commerce, Oceanic
US Department of Interior, Bureau of Mines
US Department of Interior, Office of Environmental Project Review
US Department of Defense, Army Corp of Engineers
US Department of Energy, Bonneville Power Administration
US Department of Transportation, Federal Aviation Administration
US Department of Transportation, Federal Highway Administration
US Environmental Protection Agency, Region 10
US Senate, Brock Adams

STATE AGENCIES/OFFICIALS

Washington House of Representatives
Washington Senate
Washington State Department of Community Development
Washington State Department of Ecology
Washington State Department of Fisheries
Washington State Department of Game
Washington State Department of Natural Resources
Washington State Interagency Committee for Outdoor Recreation
Washington State Mineral Council

COUNTY AGENCIES/OFFICIALS

Clallam County Economic Development Council
Clallam County Board of Commissioners
Jefferson County Board of Commissioners
Jefferson County Repub. Centl.
Mason County Board of Commissioners
Mason County Economic Development Council
Pierce County Maintenance

CITY/MUNICIPAL AGENCIES/OFFICIALS

City of Forks
Mayor of the City of Seattle, Honorable Norm Rice
Port of Grays Harbor
Port of Port Angeles

INDIAN TRIBES

Hoh Indian Tribe
Pt. No Pt. Treaty Council
Quileute Tribe
Quinault Indian Nation Tribe
Squaxin Island Tribe

BUSINESS AND INDUSTRY

A & L Topsoil
Allen Logging Co.
Arness Logging & Contracting
Atlas Trucking, Inc.
Ben Levine Timber
Buse Timber & Sales, Inc.
Cedarville Timber Products
Columbia Helicopters
D&R Cedar Products
Dahlstrom Lumber Co.
Envirotest, Inc.
Floradora Perfumes
Georgia Pacific Corp.
Hamilton Cedar Products, Inc.
Hand Crafted Carvings
Handly & Phillips Logging
Harper Oil Co.
Hoh River Timber, Inc.
Jack Ogle & Co.
Jim's Pharmacy
Leonard Guss Associates, Inc.
Limb-Kot Logging, Inc.
Loth Lumber
M B Logging, Inc.
Marys River Lumber Co.
McGuire Bearing Co.
Merrill & Ring, Inc.
Mollick & Moravan Law Office
Mt. Baker Plywood, Inc.
Olympia Forest Products Co.
Olympic Reforestation Inc.
Pacific Lumber & Shipping Co.
Peake Petrol, Inc.
Pope & Talcott, Inc.
Portac, Inc.
Portland Sawmill Machinery
R. J. Cameron Trucking
R. W. Henningsen Logging Co.
Reeves Lumber & Hardware Co.
RHD Elma, Inc.
Rowland Motors
Saltman & Stevens, PC
Seattle-Snohomish Mill Company
Seton Construction, Inc.
Spurs Natureview Photos
Vaughn Bay Lumber Co., Inc.
Welco Lumber Co.
West End Business/Professional Associates
Weyerhaeuser Co.
Wood Craft By The Stoneman

ORGANIZATIONS

The American Alpine Club
Antioch University
Association for Washington Archaeology
Association of Washington Cities
Audubon Society - Black Hills
Audubon Society - Kitsap
Audubon Society - North Cascade
Audubon Society - Pilchuck
Audubon Society - Western Region
Audubon Society - Admiralty
Audubon Society - Blue Mountain Chapter
Audubon Society - Lower Columbia Basin
Audubon Society - Olympic Peninsula
Audubon Society - Seattle
Audubon Society - Tacoma
Backcountry Horsemen of Washington, Inc.
Bicycle Adventures
Chamber of Commerce, Forks
Chamber of Commerce, Grays Harbor
Citizens for Perpetual Resources
Cosmic Awareness Communications
Earth First! Olympia
The Evergreen State College
Friends of Whitewater
Grays Harbor Opportunity 80's
Hood Canal Environmental Council
Lakeview Elementary School
Mazamas
Mid Columbia Archaeological
Mountaineers
Mt. St. Helens Club
The Nature Conservancy
Northwest Forest Resource Council
Northwest Forestry Association
Northwest Independent Forest Manufacturers
Northwest Prospectors
Northwest Steelhead & Salmon & Trout Council - Olympia
Northwest Steelhead & Salmon & Trout Council - Bremerton
Olympic Park Associates
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Pogorelc
Charles Pole
Max Poljak
Joan Pollard
S. Pollard
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Dan Poncar
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Karl G. Slot
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Ted Smeclstine
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Chester Smith
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Irving E. Smith
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Ron Smith (Marysville)
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Kenneth Swearingin
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Jerg Swenson
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Stuart M. Thompson
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Jim Thomsen
Horst Thomson
John E. Thorp
Deborah Ivy Thorsos
Tom Thotcher
Polly Thurston
Gene Tillett
Pat Tillman
Robert B. Tilson
Mark Tipperman
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Mrs. Rudy Tlemec
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Osmo Toyra

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Paula Tusup
Robert W. Tuttle
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Robert F. Tyler
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W. Banning Vail
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Loll Valentine
Michael Valentine
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Emerson Ward
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Woodrow P. Ward
Robert Wardlow
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John Warring
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Linda Waterfall
Andy & Victoria Waters
Kent Watne
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Robert P. Watson
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Lowell G. Watts
Kathleen Waugh
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Jeanette Weed
L. M. Weeks
Artelle G. Weer
Gerald Weidem
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Raymond O. Winders
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M. E. Winjum

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Howard Winnem
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Velma S. Wolfe
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David J. Yankee
Karen J. Yankee
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Richard L. Yates
Robert Yekel, MD
Joseph Yetter, MD
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Elsie & Richard Zarnowitz
David & Christianne Zella
Devin Zender
Donna Davis Zender
Jerry Zender
Jamie Zender
Kerry Zender
Sherrie L. Zeoli
Kim S. Ziegler
Mary Ziegler
Richard & Sandy Zielesch
Lloyd Zimmerman
Wanda Zimmerman
Stephanie Zimser
Delwyn C. Zollanan
Pat Zorich
Vime Zorich
Joan K. Zumstein
Robert J. Zumstein
Troy Zuono

Part III - Response to Comments

INTRODUCTION

Each letter on the DEIS and the Supplement was read and considered in the development of the Final EIS and Forest Plan. Comments were broadly characterized as those statements dealing with omissions in content, with problems in data or modeling, and with individual preferences. Due to the large number of comments, specialists in each discipline separated them into categories and paraphrased similar comments, while still attempting to reflect subtle differences in meaning. These comments and others received from groups and individuals are presented on the following pages and are displayed under headings and subheadings to facilitate review. The Forest's response follows each comment and shows how the comment was addressed in the development of the FEIS and Plan. The responses are not intended to completely answer the points raised by the comments. Rather, they will direct the reader to the section of the documents where the issue is addressed in some detail.

NATIVE PLANTS

COMMENT: *Evaluate plant management as a developed "issue" in the Olympic National Forest Plan. Standards and Guidelines governing treatment of rare plants should be substantially strengthened and expanded. These should be developed in consultation with organizations such as the Washington Native Plant Society and the Audubon Society. An assessment of the environmental effects of the Proposed Plan on native plants should be displayed in the Final EIS. Native plants, including mushrooms, seem to have little, if any, protection. They are vital to the ecosystem and need to be treated so. These species should be included in monitoring with specific protection provided.*

RESPONSE: It is not necessary that protection of native plant species be treated as a developed "issue" in order to be adequately addressed in the Final EIS. Many key resource management concerns are not included among the list of major forest issues. This does not mean they will be slighted in any way. However, based in part on meetings and discussions with individuals and groups such as the Washington Native Plant Society, we have included the protection of native plants as an issue in the FEIS. In addition, the standards and guidelines designed to protect native plant species have been strengthened. A monitoring element for native plants has also been included in the Monitoring section of the Forest Plan.

COMMENT: *The DEIS should address the Forest's obligation to recognize and coordinate with the plans of other agencies regarding threatened, endangered, and sensitive plants.*

RESPONSE: We recognize this obligation and have addressed it in the "Vegetation" section of Chapter IV of the FEIS.

COMMENT: *Mountain goats should be managed so they will not have an adverse impact on the native, endemic plants of Olympic National Forest. The diversity of native plants on the Forest may be the highest of any landholder on the Peninsula.*

RESPONSE: The mountain goat population on Olympic National Forest is discussed in greater detail in the Chapter III of the Final EIS than in the DEIS. The effects of this population on the native, endemic plants of the Forest are being studied and will be monitored during Plan implementation.

COMMENT: *A species list for sensitive plant species should be included in the FEIS and/or Plan.*

RESPONSE: A list of sensitive, native plant species on Olympic National Forest has been included in the FEIS in the "Vegetation" section, Chapter III.

COMMENT: *The claim in the Plan that most rare plant species occur only above timberline or in other areas where logging is not planned is incorrect.*

RESPONSE: This was not meant to imply that there are not species of concern within lower elevation management areas which permit timber harvest. In such cases, threatened, endangered, and sensitive plant species will be provided necessary protection as specified within the Standards and Guidelines.

BOTANICAL AND RESEARCH NATURAL AREAS

COMMENT: *Locations of botanical and/or research natural areas that contain sensitive plant species should not be displayed or located on public maps in order to protect the species involved from unscrupulous plant collectors and vandals.*

RESPONSE: Research Natural Areas and Botanical Areas will be included on the FEIS maps as a means of displaying differences in land allocations among alternatives. The botanical areas will not be shown on the Forest recreation maps which receive general public distribution. Every effort will be made to provide the necessary resource protection for these areas.

COMMENT: *Olympic National Forest should be inventoried for areas containing fragile or unique flora and fungi. Priority should be given to areas outside of Wilderness and most susceptible to damage.*

RESPONSE: A complete inventory of areas containing fragile or unique flora and fungi would be desirable. However, the completion of such an inventory is beyond the scope of this management plan. As funding and personnel allow, the forest will continue to be inventoried over time. The Forest has recently hired a botanist to assist in this effort. The selected preferred alternative allocates land to a variety of multiple uses, including RNAs and BAs, in an effort to achieve high net public benefits. The rationale for selection of the preferred alternative is displayed in the Record of Decision for the Forest Plan. Forest-wide standards and guidelines for Wildlife, Threatened and Endangered species require that surveys for threatened and endangered species be conducted prior to conducting activity.

COMMENT: *The DEIS makes no attempt to assess the cumulative effects or "spill over" of management activities generated by the alternatives on Botanical or Research Natural Areas. The effects on such small areas may be substantial and possible mitigation should be considered.*

RESPONSE: The cumulative effects and "spill over" effects of management activities on Botanical Areas and Research Natural Areas are a source of concern. As specified in the Standards and Guidelines, mitigation measures will be taken to minimize the likelihood of negative impacts to the reserved areas.

COMMENT: *The uncontrolled, commercial harvest of mushrooms in the last few years is of great concern. Information has been given that "not one permit has ever been requested" for commercial harvest of mushrooms on Olympic National Forest land. This issue should be dealt with and strict enforcement employed. This valuable resource must be preserved not only for its sake but for the role it plays with trees. The major part of the commercial harvest is mycorrhizal and could have a real impact on forest vitality, as mushrooms cannot be artificially seeded and must be protected to regenerate.*

RESPONSE: The Forest is concerned over past uncontrolled, commercial and private harvest of mushrooms. The Forest has adopted a policy of requiring charge permits for gathering of mushrooms and other miscellaneous forest products. The issuance and enforcement of permits for mushroom harvesting is a site-specific concern which is beyond the scope of this Plan. Such concerns should be directed to the ranger district for the areas where overharvesting has been identified as a problem.

COMMENT: *The planning documents do not clearly discuss the role of Botanical and Research Natural Areas or the consequences of the alternatives on present and future Botanical and Research Natural Area designations. It should be made clear in the Plan that each designated area will have a site-specific management prescription as a later amendment to the plan.*

RESPONSE: The discussion of Botanical Areas and Research Natural Areas has been substantially expanded in the several places within the FEIS, including Chapters III and IV. An evaluation of the alternatives relative to RNAs and BAs is included in Chapter IV.

COMMENT: *Colonel Bob Mountain, Mount Ellinor, Mount Washington, Thorsen Peak, Cranberry Lake, Three O'clock Ridge, Pat's Prairie, the South Fork Calawah River, and Bill's Bog should be considered as Botanical or Research Natural Areas.*

RESPONSE: Each of these areas and many others have been considered for recommendation as a Botanical Area or Research Natural Area. As specified in the documents, Wet Weather Creek has been recommended as a RNA along with the existing Quinault RNA. Twelve areas have been designated as Botanical Areas. These areas are listed and discussed in Chapter IV of the Forest Plan.

COMMENT: *Range improvement and erosion control projects should not introduce or spread non-native plant species as these often have detrimental impacts on native species and ecosystems. In the DEIS, it is stated that traffic helped to spread weeds. It should also be acknowledged that clearcuts facilitate the spread of noxious weeds with windblown seeds, such as tansy ragwort and Canada thistle.*

RESPONSE: A discussion of the negative effects of introducing non-native plant species has been included in the "Vegetation" section of Chapter III of the FEIS. Included is a recognition of the means by which such species are distributed.

COMMENT: *"Research Natural Areas" as it occurs in the proposed Land and Resource Management Plan and the DEIS appendices contain several misleading or confusing statements. It should be rewritten for accuracy.*

RESPONSE: The discussion of Research Natural Areas has been expanded and strengthened in the FEIS and Final Plan.

COMMENT: *Add "Plans of others" for a discussion of Research Natural Areas in relation to the State of Washington Natural Heritage Plan (DNR, 1987), the State of Washington Natural Area Preserves Act (79.70 RCW), Research Natural Area Needs of the Pacific Northwest (USDA PNW-38, 1975), and the Pacific Northwest Research Natural Area Committee.*

RESPONSE: This discussion has been added to the "Vegetation" section of Chapter III of the FEIS.

COMMENT: *Research Natural Area and Botanical Area should be defined in the glossary.*

RESPONSE: The terms Research Natural Area and Botanical Area have been added to the Glossary and the List of Acronyms.

COMMENT: *The chapter titled "Affected Environment" should include a discussion of Botanical Areas.*

RESPONSE: This discussion has been added to the "Vegetation" section of Chapter III of the FEIS.

COMMENT: *Botanical and Research Natural Area management should be added as a monitoring item to be tracked during implementation of the plan.*

RESPONSE: Monitoring of native plant species and communities, including those in RNAs and BAs, has been added to the Monitoring Section of the Final Plan.

FISHERIES

COMMENT: *Since each of the drainages support distinct fish populations, the effects of the alternatives on each of the indicator fish species that utilize each of the drainages need to be assessed and displayed in the Plan.*

RESPONSE: The estimated effects of the preferred alternative on fisheries resources for decades 1, 2, and 5 are listed by planning drainage area in Chapter III of the Forest Plan. These estimated effects should only be used to compare expected impacts on the 18 drainages evaluated in the Forest Plan. The data used to estimate these effects is not reliable enough to accurately show actual impacts on any particular drainage or the individual species within the drainages.

COMMENT: *Critical decisions that impact fisheries are made without considering other significant factors such as forest canopy, width of riparian zone protection, risks of mass wasting and water temperature changes.*

RESPONSE: Factors such as canopy cover, width of riparian zone protection, and risks of mass wasting were either considered and utilized in formulating the Forest Plan Standards and Guidelines or were incorporated into the approaches used to evaluate the effects of the various alternatives on fisheries resources.

COMMENT: *Fish habitat which is adjacent to and dependent on existing old-growth environments is still being degraded by siltation and logging debris. Such impacts will increase with the continued harvest of old-growth. This is especially true on the CSYU where no official habitat protection is afforded.*

RESPONSE: Fisheries habitat impacts due to sediment yields will continue, to some extent, as long as tradeoffs are made for the purpose of managing other forest resources. Some logging debris may also end up in streams. However, the Management Requirements (MRs) for riparian areas, as well as other Forest-wide Standards and Guidelines (S&Gs), are designed to minimize and/or avoid many of the negative sedimentation/debris loading types of impacts which occurred in the past. See the S&Gs section of the Forest Plan for more information on Riparian Management. The same level of habitat protection is provided on the National Forest portion of the CSYU as on the rest of the Forest. Habitat protection on the Simpson Timber Company portion of the CSYU is subject to and governed by State laws and regulations.

COMMENT: *The cumulative effects of alternatives on fisheries consider only the predicted aggregate effects of Forest Service management activities which do not meet NEPA requirements, i.e., Section 1508.7.*

RESPONSE: The cumulative effects of the alternatives on fisheries resources were derived utilizing the Sediment/Habitat Quality Indices developed for an entire drainage, including the portions located off of National Forest lands. The effects of sediment on fisheries resources were estimated for both on-Forest habitat and influenced habitat located downstream off-Forest. Since the Forest Service has no control over the magnitude and/or duration of management activities on adjacent lands, the assumption was made that sediment yields from these sources would remain constant for all of the alternatives.

COMMENT: *The DEIS fails to identify the potential long-term effects of certain kinds of sediments which can cement the bed of a stream, turning spawning gravels for salmon, steelhead and trout into impermeable pavement. This kind of harm takes decades for natural processes to repair.*

RESPONSE: Sedimentation of the type which results in the "cementing-in" of substrate materials has not been observed within Forest streams, therefore, was not included in the discussion of potential impacts in the DEIS. This exclusion was an oversight and we have addressed the topic in Chapter IV of the FEIS.

COMMENT: *The effect of increased sediment levels on salmon, steelhead, and trout spawning gravels, as well as on the Hood Canal oyster beds, has not been adequately addressed*

RESPONSE: The effects of increased sediment yields on aquatic resources is discussed in Chapter IV of the FEIS. The discussion includes additional material not included in the DEIS.

COMMENT: *The potential effects of lethal, low water temperatures on fisheries resources in devegetated areas within the Forest need to be addressed in the FEIS/Plan.*

RESPONSE: The potential effects of low water temperatures on fisheries resources is addressed in Chapter IV of the FEIS.

COMMENT: *The analysis of the effects of the alternatives on fisheries is contradictory because it indicates that fisheries impacts will decrease as timber harvest and sediment yields increase, yet the analysis is based on the perception that sediment increases will decrease fisheries potential. Why the apparent discrepancy?*

RESPONSE: Our analysis of the effects of the alternatives on fisheries resources is based on the premise that management-induced increases in sediment yields will result in decreases in potential fish habitat capability. The apparent discrepancies with this premise are centered around the atypical outputs estimated for Alternative A-Current Direction, during the first decade. A slight increase in the first decade sediment index is predicted, which would normally result in a proportional reduction in potential fish habitat capability.

However, in this instance, the potential fish habitat capability is not lowered below existing levels because the increases in sediment yields are predicted to occur in drainages with relatively low fish production potentials. Furthermore, some habitat recovery is occurring in the drainages with higher fish production potentials and the net result is a slight increase in the predicted fisheries outputs.

COMMENT: *Habitat descriptions for the alternatives in Chapter II do not coincide with fish Habitat Capability Index (HCI) estimates shown in DEIS Chapter IV.*

RESPONSE: The DEIS (Chapter II) habitat descriptions for the alternatives did not coincide exactly with fish HCI estimates shown in Chapter IV. In the FEIS, the habitat descriptions for the alternatives have been modified to more clearly reflect the predicted habitat conditions.

COMMENT: *Wildlife and Fish User Day (WFUD) estimates, Table II-3a, for year 2030 indicates that Alternative B WFUDs exceed WFUDs estimated for Alternatives A and C. Why?*

RESPONSE: The WFUD estimates in the DEIS include both fish user days and wildlife user days. In this instance, the predicted increase in wildlife user days, from hunting use, overshadowed the reduction in fish user days. The FEIS has been modified to display both wildlife user days and fish user days.

COMMENT: *How can commercial fish production (Table II-3a) predicted for Alternative A-Current Direction, in year 2030, increase if there is also an increase in timber harvest?*

RESPONSE: The DEIS indicates an increase in commercial anadromous fish harvest for Alternative A-Current Direction during 2030; however, the table also indicates a *decrease* in timber harvest activities.

COMMENT: *An alternative that maximizes true fishery resource values at the expense of all other values needs to be developed and displayed in the FEIS.*

RESPONSE: An alternative that maximizes one resource at the expense of all others is not consistent with Forest Service management direction and NFMA. An adequate range of alternatives has been presented, including a high amenity emphasis alternative (Alternative I) which provides for very high fisheries values.

COMMENT: *How can fish numbers increase when the runs keep getting smaller and smaller and the number of escapement fish has been on a steady decline since 1977.*

RESPONSE: Actual escapement numbers are the responsibility of the harvest management agencies and Indian Tribes and are beyond the direct control of the Forest Service. The fisheries estimates displayed in the planning documents were derived from the fish Habitat Capability Indices that predict the numbers of fish that the habitat could produce assuming the habitat was fully seeded.

COMMENT: *The projected fish outputs on page II-15 and page II-16 (Tables II-6 and II-7, respectively) do not show anadromous fish recreational output; only the commercial output is listed. Also, a source for the information should be referenced.*

RESPONSE: Tables II-6 and II-7 of the Draft Plan display both anadromous commercial outputs and recreational outputs which include combined anadromous and resident salmonid fish user days (FUDs). The associated tables in the Final Plan display commercial pounds, anadromous FUDs, and resident FUDs. Estimates displayed in the tables were derived from the Forest Fish Habitat Capability Indices.

COMMENT: *In the absence of specific standards and objectives for riparian management, what is the basis for the conclusion that the Plan will provide a level of fish habitat quality "somewhat" above the existing?*

RESPONSE: Specific Standards and Guidelines (S&Gs) for management activities in riparian areas are included in the FEIS and Final Plan. The intent or objective of these S&Gs is to maintain or improve, when applicable, the fish habitat quality and/or quantity within a given drainage.

COMMENT: *What potential fisheries losses can the Quileute Tribe expect for summer coho, fall coho, summer chinook, fall chinook, and winter steelhead stocks as a result of the designated Preferred Alternative?*

RESPONSE: The predicted effect of the preferred alternative on fisheries resources is displayed in Chapter III of the Forest Plan. The outputs listed in the table are relative estimates derived from fish Habitat Capability Index and the Fish/Sediment Yield Indices model. The estimates derived from this model are gross indicators of potential changes in habitat capability. Potential losses or gains of specific fish stocks in a given drainage cannot, with any degree of accuracy, be estimated with this model.

COMMENT: *The Forest Service should reinventory the fisheries habitat located within Olympic National Forest to identify habitat areas critical to natural fish production.*

RESPONSE: We agree that on-Forest fisheries habitat needs to be periodically reinventoried. This topic, in conjunction with other inventory needs, is addressed in Chapter V of the Final Plan. Currently, the Forest Service is in the process of reinventorying the riparian and aquatic habitats located on the Forest. This inventory and subsequent reinventories should provide an adequate basis for future management decisions.

COMMENT: *The fisheries information presented needs to include, on a drainage-by-drainage basis, the life histories and critical habitat requirements for all indicator fish species. When applicable, the information needs to address spring chinook, pink and Quinault River sockeye salmon stocks as well as Dolly Varden and bull trout.*

RESPONSE: The general life histories and pertinent, freshwater habitat requirements for the indicator species groups are well documented in the literature. The predicted existing potential anadromous salmonid habitat capability for each of the Forest planning drainages is displayed in the "Fisheries" section of Chapter III of the FEIS. Bull trout, according to Washington Department of Wildlife personnel, do not inhabit any of the Forest drainages.

COMMENT: *Nonconsumptive fisheries attributes, as well as other important fisheries values such as catches by the Treaty Tribes for subsistence and ceremonial use, need to be addressed in the FEIS/Plan.*

RESPONSE: Subsistence and ceremonial use of fisheries resources by the Treaty Tribes, as well as nonconsumptive fisheries attributes, are addressed in Chapter III of the FEIS.

COMMENT: *The combined fisheries information for the Hoh and Bogachiel rivers in Table III-15 of the DEIS needs to be presented by individual drainage.*

RESPONSE: No future management activities that will affect fisheries resources are planned for the small parcel of National Forest land located within the Hoh River drainage. Therefore, fisheries information pertaining to the Hoh River has been excluded from the planning documents. Fisheries information pertaining to the Bogachiel River is provided in Chapter III of the FEIS and Chapter III of the Forest Plan.

COMMENT: *Statements pertaining to the adverse effects of water temperatures on fisheries resources need to be clarified. See page III-22 of the DEIS.*

RESPONSE: The discussion pertaining to the adverse effects of water temperature on fisheries resources in Chapter III, Water Quality section of the FEIS has been modified to clarify the text.

***COMMENT**: On-Forest fish habitat that is above a natural barrier to upstream migration by salmon and steelhead, but receives substantial annual plants of juvenile, anadromous fish (e.g., the Hamma Hamma River system), is not counted as contributing to anadromous fish production. Why?*

***RESPONSE**:* The Forest Service was not, at the time the draft planning documents were prepared, aware of the fact that the Treaty Tribes were outplanting anadromous juvenile hatchery fish into the Forest drainages above natural barriers to upstream fish migration. Information of this type has been included in our 1989 update of the Forest fish Habitat Capability Index and is included in our Final planning documents.

COMMENT: *Existing fisheries habitat condition estimates, based on current inventories of the quantity and quality of habitat within the individual drainages should be determined and presented in the FEIS/Plan. These condition estimates, displayed as a percent of biological potential, should then be utilized to determine if a given drainage is to be managed for recovery or at an acceptable level of degradation.*

RESPONSE: Currently, we are in the process of reinventorying riparian and aquatic habitats on the Forest. The primary objective of the reinventory is to collect and/or update the habitat quantity and quality information pertaining to each of the Forest drainages. This information will be used to estimate the existing condition of the habitat within each of the Forest drainages. The habitat condition estimates will, in part, serve to determine future management activities within a given drainage. Reinventory of the riparian and aquatic habitats within Forest drainages has recently been initiated (summer 1989) and will not be done in time to provide additional aquatic resource data that can be utilized in Forest planning at this time.

COMMENT: *The term "fish bearing," as used in the documents, needs to be modified to reflect potential as well as actual use.*

RESPONSE: The term "fish bearing habitat," as used in the planning documents, is defined to include potential habitat as well as habitat that actually supports fish. The term is defined in this manner because the Forest Service is charged with the management of all on-Forest habitats capable of supporting fish.

COMMENT: *Figures and tables pertaining to pink salmon should specify that pink runs (spawning migrations) only occur during odd years.*

RESPONSE: Footnotes have been included with the applicable figures and tables in the final planning documents to specify that pink salmon runs within the Olympic Peninsula drainages occur only on every other year.

COMMENT: *Both sediment and fish production estimates should be identified and listed as indices throughout the planning documents.*

RESPONSE: All sediment and fish production estimates in the planning documents have been labelled and designated as indices.

COMMENT: *The collection of additional information to develop coefficients and other factors to be used in future analysis models needs to begin now. The gathering of data on parameters such as water temperature and pool to riffle ratios, should be started in order to calibrate their influence on fisheries resources.*

RESPONSE: The process of collecting additional information to be utilized in developing coefficients and other factors for future analysis models has already begun. The reinventory of on-Forest riparian and aquatic habitats was initiated in the South Forth Skokomish River drainage during the summer of 1989.

COMMENT: *The Forest Service mitigation responsibility for reductions in fish habitat capability should be based on the difference between predicted fish production outputs resulting from Forest Service activities and natural production potentials. Mitigation measures should also include both on-Forest and applicable off-Forest losses.*

RESPONSE: The Forest Service is responsible, by law, for the mitigation of fisheries resource losses resulting from Forest Service management activities. This responsibility also includes mitigation for off-Forest fisheries resource losses as well as on-Forest losses. However, we disagree with the premise that mitigation should be based on the differences between fish production outputs and potential, natural production estimates that are predicted in our Forest planning documents. Our Forest planning estimates, which are derived from broad-based indices and models, were developed to indicate the relative differences between the alternatives in terms of fish habitat capability. The fish habitat capability estimates are fisheries output predictions of existing habitat productivity potentials. These predictions should not be construed to be estimates of actual fish habitat productivity which is governed by numerous off-Forest factors beyond our control. As such, the Forest Service mitigation responsibility for fisheries losses should be based on estimates of actual habitat productivity instead of the existing potential productivity estimates provided in the Forest planning documents. Furthermore, we believe that mitigation should be based on current site and/or drainage-specific project monitoring efforts that more realistically measure fish and fish habitat conditions.

COMMENT: *What does the column "Year Needed" on page A-8 of the Plan refer to?*

RESPONSE: The "Year Needed" column on page A-8 of the Draft Plan should have read Fiscal year. This indicates the Fiscal year in which the project is planned for.

COMMENT: *Fisheries impacts resulting from past Forest Service management activities, as identified by the analysis in the DEIS, have never been mitigated.*

RESPONSE: In many instances, mitigation measures to correct or minimize fisheries impacts resulting from past Forest Service management activities have been implemented. However, we realize that there are still many impacted habitat areas that need rehabilitation. Rehabilitation of these areas is a continual, ongoing process and is an integral part of our Forest Fish Habitat Improvement Program. Our goal is to identify and rehabilitate all impacted habitat areas as soon as project funding becomes available.

COMMENT: *Mitigation measures should be expanded to include spawning channels, egg incubation stations and juvenile rearing ponds.*

RESPONSE: The habitat improvement projects listed in the Final Plan include egg incubation, stations and spawning channels will be considered when appropriate locations for their development are found.

COMMENT: *Special mitigation measures should be provided for the drainages that are identified as most susceptible to resource damage.*

RESPONSE: There are no "special" fisheries mitigation measures for drainages that are identified as most susceptible to resource damage. Fisheries mitigation measures are applied to either avoid or minimize potential fisheries impacts or to provide the means of restoring habitat impacted during previous management activities. Mitigation measures are, therefore, applied proportionately to fisheries habitat perturbations within a given drainage.

COMMENT: *Funding for fisheries mitigation or habitat restoration should be a firm Forest Service commitment in the Forest budget. The FEIS/Plan should specify that management activities would not be implemented when mitigation funds are not available.*

RESPONSE: It is Forest Service policy to mitigate, to the extent possible, the adverse effects of its land management activities. In this context, the Forest Service is committed to request adequate funding for applicable fisheries mitigation efforts. However, the Forest Service cannot specify that proposed land management activities will not be implemented unless adequate mitigation funds are available because, by law, the Forest Service is not mandated to do so. The key point is not how much money we spend, but that we meet the intent of the Standards and Guidelines and achieve the Desired Future Condition of the Forest. This will be monitored during Plan implementation.

COMMENT: *Since the alternatives show variable impacts on natural fish production potentials, the estimated costs of mitigating these impacts should also vary accordingly.*

RESPONSE: Fisheries mitigation costs do vary with respect to predicted effects of the alternatives. These costs were not displayed specifically in the planning documents, but are included in the predicted implementation costs for each of the alternatives (primarily as a component of logging cost).

COMMENT: *The Washington Department of Fisheries recommends an "up-front" or one-time budget package to correct all known past fish habitat damages on the Forest with smaller annual sums to correct new damage as it occurs.*

RESPONSE: The Forest Service disagrees with this recommendation because the extent of past habitat degradation directly attributable to Forest Service management activities is unknown. Furthermore, the State agencies that administer the State's Hydraulic Project Approval Law (RCW 75.20.100) may have also contributed to on-Forest fish habitat degradation as a result of excessive stream clean-out specifications.

COMMENT: *In the past, funding for fisheries projects has not been dependable and, as such, there is no guarantee that fisheries habitat will be either maintained or improved.*

RESPONSE: Our current management direction is to maintain or improve on-Forest fisheries habitat. We are presently funded at levels to accomplish this task. Funding for fisheries management has been increasing. It should be remembered, however, that investments in fisheries projects are only one means of achieving the Desired Future Condition.

COMMENT: *Various terms that imply fisheries resource "enhancement" is used improperly throughout the draft documents. This description should only be used for an incremental increase in fish production above the natural potential. Production increases anywhere in the area below natural potential should be referred to as "mitigation."*

RESPONSE: Our definition of "enhancement" differs from above interpretation and is included in the Glossary section of the Final EIS.

COMMENT: *Are the fish habitat improvement projects listed in Appendix A of the Plan in order of priority?*

RESPONSE: The anticipated types of fisheries habitat improvement projects listed in the Final Plan are not listed in any order of priority.

COMMENT: *Specific techniques and types of projects to be utilized in the proposed fish habitat improvement program should be presented in the FEIS/Plan.*

RESPONSE: The list of projects to be utilized in the Fish Habitat Improvement Program can be found in the Activity Schedule (Appendix A) section of the Forest Plan. The specific techniques utilized to accomplish these projects are most often site-specific and need to be identified and selected on a case-by-case basis.

COMMENT: *What criteria and data will be utilized to prioritize fisheries improvement projects and will these projects be coordinated with the Tribes and State management agencies?*

RESPONSE: We utilize many criteria to prioritize our fisheries habitat projects. Some of the more important criteria include: (1) the overall condition of the habitat within the drainage, (2) the fish species and the distribution of fish species that utilize the drainage and the habitat area to be improved, (3) the fish production capability of the habitat to be improved, (4) the estimated cost of the project, (5) the expected longevity of the project, (6) the estimated benefit to cost ratio for the project, and (7) both internal and external political considerations. All of our fisheries habitat improvement projects are coordinated with the applicable State agencies and Indian Tribes.

COMMENT: *Is the removal of barriers to anadromous fish migration intended as mitigation or enhancement?*

RESPONSE: The removal of a barrier to anadromous fish migration is considered to be mitigation if the blockage has been created by the activities of man. The removal of a natural barrier to anadromous fish passage is considered to be an enhancement.

COMMENT: *The FEIS/Plan should emphasize that all fish passage barriers, within on-Forest streams, caused by Forest Service management activities should be removed early in the planning period.*

RESPONSE: The removal of barriers to anadromous fish passage resulting from Forest Service activities is discussed in Chapter IV of the FEIS.

COMMENT: *The types of fish habitat enhancement projects contemplated in the Plan are directed only at improving rearing habitat. This indicates that rearing habitat condition and/or quantity are the primary factors limiting fish production on the Forest. Are rearing habitat condition and/or quantity the major limiting factors in all of the Forest drainages?*

RESPONSE: In general, rearing habitat quality and quantity are assumed to be the major factors, controlled by the Forest Service, that are limiting fish production within the Forest drainages. We recognize, however, that in some instances and in some site-specific areas, other factors that influence migration, spawning, and/or incubation habitats may also be limiting fish production. Although the majority of our proposed projects are of a type designed to improve rearing habitat, other types of projects are also contemplated and will be specified during Plan implementation.

COMMENT: *Are the projected fish production gains attributable to habitat improvement projects, i.e., 20 percent per year per decade over current levels of production, realistic estimates? Attaining such gain is critical because the Preferred Alternative would only meet the goal of maintaining fish populations if the enhancement projects were successful.*

RESPONSE: The text, on page IV-38 of the DEIS, is misleading and is in error. It is estimated that, with the described capital investment program, a 20 percent increase in existing fish habitat capability can be achieved by the end of the first decade of plan implementation. Thereafter, fish habitat capability should remain fairly constant for the remainder of the planning period. In our opinion, a 20 percent Forest-wide increase in existing fish habitat capability via the capital investment program, is a realistic estimate.

COMMENT: *How were the enhancement figures determined for the individual drainages?*

RESPONSE: The enhancement figures, i.e., acres of habitat to be treated annually, are based on the predicted need to obtain a more optimum salmonid pool to riffle ratio in each of the planning drainages. The distribution of habitat acres to be treated is based on the amount of suitable on-Forest habitat in each drainage and our most current information concerning pool to riffle ratio in each drainage.

COMMENT: *The assumption of full fisheries habitat utilization (No. 3, page 13-93) is incorrect. The State and Treaty Indian Tribes are currently developing "Watershed Plans" that will, among other things, specify long-term management intents for discreet salmon stocks. A description of expected long-term fishery management practices should be included in the FEIS/Plan.*

RESPONSE: Actual utilization of the habitat is primarily dependent on the fish harvest management practices of the State and Treaty Indian Tribes. Since fish harvest management is beyond Forest Service control, it is our contention that our planning efforts and assumptions are correct and must be based on habitat capability rather than the actual productivity of the habitat. It is our understanding that long-term fisheries management objectives for the majority of the Olympic Peninsula drainages are being negotiated between the State and Treaty Indian Tribes. Information of this type will be incorporated into our planning process as it becomes available.

COMMENT: *Is it assumed in Table II-7 of the Draft Plan that all the non-natural sediment flow into streams will be eliminated? With this assumption, which is impossible at current sediment yield levels on the Forest, the displayed fisheries figures are meaningless.*

RESPONSE: Table II-7 of the Draft Plan does not indicate that future non-natural sediment yields will be eliminated. The table is a relative demand index which displays selected fisheries outputs based on predicted increases in the future population. The output estimates for the initial or "present" year of the index are based on current habitat conditions resulting from existing sediment yields. The output estimates displayed for subsequent years are merely the base-year estimates expanded by the appropriate demand

index multiplier. Therefore, the predicted outyear estimates listed in the table are also based on current habitat conditions.

COMMENT: *The Plan assumes that all species of anadromous fish thrive in the same habitat. This ignores the fact that species have dissimilar requirements for spawning and rearing habitat. Rearing habitat, rather than spawning habitat or escapement numbers, is assumed to be the major factor limiting the production of adult salmon of all species. Rearing habitat is not the major limiting factor for pink or chum salmon. The final Plan should recognize that different species have different biological requirements, and should provide detailed assessment of effects of Forest management in light of these requirements.*

RESPONSE: We recognize that different anadromous fish species have dissimilar, specific requirements. Some of the more significant, specific requirements for the different species, as well as some of the more general salmonid habitat requirements are described in Chapter III of the FEIS. Escapement is definitely a factor that limits anadromous fish production; however, since escapement is beyond Forest Service control, it was not considered or utilized as a factor in our evaluation process. Our stream inventories indicate that the quality and quantity of on-Forest rearing habitat are the major factors limiting salmonid production. The surveys also indicate that the quality and quantity of on-Forest spawning habitat is adequate for spawning populations to fully seed the available rearing habitat. Furthermore, our surveys indicate that the productive capability of on-Forest pink and chum salmon spawning habitat has remained relatively unchanged. Due to the lack of adequate, baseline data, our assessment of the impacts of forest management activities on fisheries resources is currently based only on the adverse effects of excessive sediment yields on fish and fish habitat. In the future, pending the collection of additional and more accurate baseline data, our assessment process will include significant factors that are known to limit fish production.

COMMENT: *The assumption that if current salmon/steelhead escapement goals were met, then the available habitat would be fully seeded. This may not be valid, and may foreclose some future management options.*

RESPONSE: Escapement goals are established by the State and Treaty Indian Tribes and are intended to provide the necessary spawners to fully seed the habitat, given the existing environmental conditions. The escapement goals can, therefore, be modified with respect to environmental changes and, as such, will not foreclose on any future management options.

COMMENT: *With regard to Table III-15 in the DEIS (page III-80), is it feasible to add another column titled "Adult Prod. Nos./River Mile of Habitat?" This would allow for comparison of relative capabilities of drainages, at least for resident fish (for anadromous fish, the number of smolts produced per river mile might be more meaningful)?*

RESPONSE: Relative anadromous and resident salmonid habitat capabilities per mile of river may be calculated from the smolt numbers given in Table III-21 and the river miles given in Table III-20 of the FEIS.

COMMENT: *The Sediment/Fish model is based only on sediment yields and does not take into account other factors such as large, woody debris, channel morphology, temperature and other environmental factors. Sediment is also based on a model that needs verification. Actual fishery outputs could vary considerably from estimates derived from this model.*

RESPONSE: We are aware of the many factors, other than excessive sediment yields, that affect fisheries resources. The majority of these factors are addressed in Chapter III of the FEIS. We also recognize the shortcomings of using only the sediment-fisheries relationship to evaluate the effects of the alternatives on fisheries resources. Field verification of the sediment yield model, as modified for the Forest, is currently in progress.

COMMENT: *Although needs of anadromous fish are stated as commitments of Forest management, the DEIS/Plan lack sufficient information to evaluate or comment on whether these needs will be met by the Plan.*

RESPONSE: The fisheries Habitat Capability Indices have been updated, and additional, explanatory information has been included in the final planning documents. These inclusions will provide sufficient information to evaluate our commitment to the management of fisheries resources influenced by Forest Service activities.

COMMENT: *The total on-Forest fisheries habitat is stated to be 5,696 surface acres (page II-15, Plan). How was this figure derived and does all of this habitat support anadromous fish species?*

RESPONSE: The total surface-acre estimate of on-Forest fisheries habitat was calculated by summing the surface acres of on-Forest anadromous and resident salmonid habitat in streams with the surface acres of resident salmonid habitat in lakes and reservoirs. In total, there are approximately 5,696 surface acres of on-Forest salmonid habitat. Anadromous salmonids only utilize approximately 1,507 surface acres of this total.

COMMENT: *Since many coastal communities and Native American Tribes rely heavily on recreational and commercial fisheries revenues, the word "somewhat" should be deleted from the text on page II-14 of the Plan.*

RESPONSE: We concur, and the word "somewhat" has been removed from the text in the Final Plan.

COMMENT: *Peaked streamflows from increased run-offs following removal of vegetation should be considered as a variable that will influence fish production. Such flushing events can scour stream channels, destroy redds, displace fish, and cause loss of spawning and rearing habitat.*

RESPONSE: Increased peak streamflows within Forest drainages following the removal of vegetation are not considered to have significant influence on fisheries habitat. The effects of peak streamflow events resulting from the removal of vegetation are described in Chapters III and IV of the FEIS.

COMMENT: *How was the direct correlation between fish production and sediment loading established? Were the effects of sediment loading on all the different indicator fish species and their respective life cycle stages considered and were other related habitat parameters included?*

RESPONSE: The approach utilized to make the linkage between sediment yields and potential fish production is described in Appendix B of the FEIS. In general, the approach considers the effects of sediment on our defined salmonid indicator groups and their applicable life cycle stages. The average effects of sediment on water quality, spawning, incubation, rearing and migration habitats have been considered.

COMMENT: *The impact analysis fails to account for several other fish impact factors which may individually have less impact than sediment input from road construction, yet increase total impact significantly. Road surface use erosion, steep slope erosion and increased slope failures weren't mentioned. Temperature impacts in larger downstream areas when temperatures approach maximums and survival decreases were not mentioned. The general idea of splitting off impact factors to diminishing smaller parts and allowing each part to be set at minimum standard ignores the significant cumulative impacts which increase as these factors are allowed to further deviate from the optimum for which the particular stock has evolved maximal survival rate strategies.*

RESPONSE: Sediment yields predicted by the Sediment Yield Indices Model, include sediment generated by road use erosion, steep slope erosion, and slope failures as well as the sediment generated by road construction and reconstruction. See Chapters III and IV of the FEIS for additional information. Possible impacts resulting from adverse changes in water temperatures are also addressed in Chapters III and IV of the FEIS. Our intent is neither to ignore nor diminish the effects of the alternatives on fisheries resources by not including other significant factors in our evaluation process. Currently, we simply do not have an adequate data base to evaluate the other parameters and factors that influence fisheries habitat.

COMMENT: *Sufficient reference to known, acceptable analytical procedures involving fisheries impacts could not be identified in the Draft Planning documents. This should be corrected in the FEIS/Plan.*

RESPONSE: The references listed in our planning documents pertain only to the information cited in our documents or to the data base-dependent analytical procedures we utilized in our evaluation process. References pertaining to other analytical procedures that could not be used, because of data base deficiencies, are considered to be beyond the scope of our planning documentation needs.

COMMENT: *The derivation of existing on-Forest fish habitat capability (Table IV-15, page IV-39) needs to be described.*

RESPONSE: The general approach utilized to generate the existing on-Forest fish Habitat Capability Index outputs is described in the "Fisheries" section of Chapter III of the FEIS. Species-specific information such as escapement goals and the factors and coefficients utilized to calculate the output estimates are available and are included with other planning process records at the Forest Supervisor's Office in Olympia, Washington.

COMMENT: *Because of the apparent importance being placed on habitat enhancement to achieve the fisheries goal of the Plan, a well-planned and consistent program should be instituted to monitor and evaluate the results of enhancement projects. The FEIS/Plan should identify criteria for both planning and monitoring improvement projects and whether these criteria will be measured against data collected on the Forest or elsewhere.*

RESPONSE: We recognize the importance of developing a well-planned and consistent program to monitor and evaluate our fish habitat improvement projects. Currently, Forest Service fisheries research scientists from our PNW Research Station are in the process of developing such a program. Although the evaluation criteria which are being developed for the program are fairly "generic" with respect to the given types of projects, the effectiveness of a given project is to be determined utilizing site- or drainage-specific information. This issue is addressed in the monitoring sections of Chapter V and Appendix B of the Forest Plan.

COMMENT: *It is not clear that the riparian MRs will assure an adequate source of large, woody debris. This needs to be elaborated upon.*

RESPONSE: This issue is addressed within the Standards and Guidelines of the Forest Plan, Chapter IV.

COMMENT: *Economically, avoiding impacts to fisheries resources makes more sense than trying to recreate or rehabilitate degraded habitat.*

RESPONSE: We concur, economically, that avoiding impacts to fisheries resources makes more sense and is more cost-effective than trying to rehabilitate degraded habitat. Consequently, one of the primary purposes of our project-level environmental assessment process is to identify such impacts early on, during the alternative selection phase of project planning. This process, therefore, provides the decision-maker options to select an alternative that will either avoid or minimize fisheries resource impacts. The Standards and Guidelines are designed to avoid these potential conflicts.

RIPARIAN

COMMENT: *The new Timber, Fish, Wildlife (TFW) Agreement that is in effect in the State of Washington should be addressed in the Final EIS. While the Forest Service is not bound by this agreement, it should be taken into account for future plans.*

RESPONSE: The Forest Service must meet or exceed the standards established by the State of Washington Departments of Natural Resources and Ecology. New Forest Practice Rules and Regulations were issued on January I, 1988. In 1988 the Timber, Fish, Wildlife (TFW) Agreement was implemented by the State of Washington. Forests in the State of Washington must meet or exceed these standards.

Forest Service management practices will meet or exceed State of Washington Best Management Practices (BMP) requirements as they relate to forest practices. As State practices change, comparisons are made to ascertain that Forest Service practices meet or exceed these changes. The TFW Agreement would be included when comparisons are to be made. The Forest Service has, for many years, been using site-specific prescriptions by interdisciplinary teams. This type of an approach is the major emphasis of TFW. For further information, see Forest Plan Standards and Guidelines and Appendix J of the FEIS.

COMMENT: *Some reviewers felt that the wetland discussions in the DEIS need to be strengthened. Specific comments addressed include:*

- *Riparian areas should also be designated around lakes and wetlands.*
- *"What Affects Wetlands" should include a discussion of potential negative impacts to wetlands from management practices.*
- *It is inaccurate to represent timber harvest as a creator of desirable wetland habitat.*

RESPONSE: The description of riparian areas in the FEIS has been updated to include all lakes, ponds, streams and water bodies. Wetlands have been left as a separate topic.

The wetlands discussion has been changed to include potential negative impacts to wetlands from management activities. The original discussion in the DEIS was trying to point out that Forest Service management activities have caused wetland conditions in areas where they were not intended to be created.

COMMENT: *The level of timber harvest activities within riparian areas should be less than proposed in the Draft Plan. Specific comments addressed are:*

- *There should be a no-cut buffer strip at least 200 feet wide along Class I, II, and possibly Class III streams.*
- *A Riparian Leave Alone Zone should be of varying width depending upon the stream size. No timber harvest or road construction should be allowed within the zone.*
- *The area that can be clearcut is a major intrusion on streams with fisheries values. The Standard and Guideline should be rewritten to include some reference to input provided by a fisheries biologist.*

RESPONSE: The Standards and Guidelines for timber harvest activities within riparian areas has been changed to address the concerns expressed in this comment. Input from a fisheries biologist shall be provided as part of the site-specific prescription developed by an interdisciplinary team for activities within a riparian area. Road construction will be avoided in riparian areas when possible. If road construction is necessary within riparian areas, BMPs will be used to minimize adverse impacts. Standards and Guidelines discourage any clearcutting within 100 feet of Class I or II streams.

COMMENT: *Large trees should be retained in riparian areas to provide a future source of large, organic debris to streams. Specific comments included:*

- *It is important to ensure retention of large diameter trees along Class III and IV streams to provide future large, woody material to these channels.*
- *A quantified, minimum standard for large conifers along with supporting technical information is needed.*
- *Trees which are left in the riparian management zone should not be all one species or species that may not be as beneficial as a mixture of species.*
- *The Plan fails to describe the extent of the riparian buffer standards proposed under the various plan alternatives.*

RESPONSE: In the Standards and Guidelines it is specified that a site-specific prescription should be prepared for all riparian areas before any timber harvest activities occur there. These areas would include Class III and IV streams. The prescription will be developed by an interdisciplinary team which should include a fisheries biologist or hydrologist. Large diameter trees will be left along Class III or IV streams on a case-by-case basis if the prescription for the riparian area recommends leaving those trees as future source of woody material to the stream.

Standards and Guidelines for timber harvest activities along fish-bearing streams (Class I, anadromous fish and Class II, resident fish) have been changed. No clearcut harvesting should occur within 100 feet of Class I or Class II streams. Trees could be removed selectively if a riparian prescription by the interdisciplinary team recommended it. Site-specific prescriptions are better than general guidelines to manage riparian areas for protection of all resource values.

The Desired Future Condition for riparian area management prescriptions states that "activities within riparian areas should result in a diversity of vegetative communities of various species, sizes, and age classes." Also, the riparian prescription developed by the interdisciplinary team would address the issue of trees which are left in riparian management zones. They should be a mixture of species if there is selective removal of trees from a riparian area.

All of the alternatives meet Standards and Guidelines and Management Requirements for riparian areas. In Chapter IV of the FEIS the effects of the alternatives on riparian areas are discussed.

COMMENT: *The DEIS and Plan do not present specific Forest standards, guidelines, and objectives for managing and preserving riparian values. These comments included:*

- *The timber program element needs to describe size, species, spacing, and timing requirements.*

- *The management prescription for riparian areas does not give assurance that these sensitive areas will be adequately protected.*

- *There is no indication that either slope or soil type are given consideration in riparian protection.*

- *The Standard and Guidelines need to be quantified and supported on a technical basis.*

RESPONSE: As specified in the Standards and Guidelines, the size, species, spacing, and timing requirements for riparian areas will be described in site-specific prescriptions developed by an interdisciplinary team. The site-specific prescription, along with Standards and Guidelines, provide for protection of riparian values.

In addition, there are several Standards and Guidelines which address soil stability. In general, the Standards and Guidelines have been modified in the FEIS and Final Plan to address the concerns expressed.

COMMENT: *The Forest Service Manual (2500) states that timber harvest may be compatible but other resources have priority. The Standards and Guidelines should be changed according to the Manual.*

RESPONSE: The Standards and Guidelines have been changed to reflect protection of other resource values. Timber harvest in riparian areas must be compatible with the Desired Future Condition for riparian areas.

COMMENT: *The Management Requirement modeling for riparian areas received considerable attention. Specific comments included:*

- *The modeling of the Management Requirements for Class III and IV streams are inadequate to protect fish and wildlife resources because of the amount of logging allowed in the riparian area.*

- *The Management Requirements for riparian areas will not assure adequate sources of large, organic debris.*

- *The modeling of Management Requirements for riparian areas exceeds protection requirements. Further explanation is needed on how it was determined.*

- *On the Olympic National Forest the riparian and water quality Management Requirements exceed the Best Management Practices.*

RESPONSE: The modeling of Management Requirements for riparian areas (and other resources) was designed to estimate the effects on forest outputs using FORPLAN. It is not expected or intended that the FORPLAN riparian allocation constraints will be implemented on the ground. The Standards and Guidelines associated with riparian management plus site-specific prescriptions will lead to the desired future condition which the FORPLAN modeling attempts to represent. Protection of Class III and IV streams and adequate sources of large, organic debris to streams will be provided for in site-specific prescriptions for riparian areas.

The MRs which the FORPLAN modeling attempts to represent are necessary to maintain or enhance water quality and fish habitat requirements which are legally required by statute and regulations.

COMMENT: *Approximately 50 percent of riparian areas will be harvested by 2030. This will cause major increases in sediment loads to streams. How do sediment yield indices account for a decrease in sediment loads?*

RESPONSE: Many factors determine estimated sediment yields resulting from timber harvest activities. Timber harvesting in riparian areas is one, however, the major source of increased sediment to streams is from existing and newly constructed roads. A key component is the amount of road usage which is dependent on the amount of timber harvested. The amount of timber harvested on the Forest for the first four decades increased each decade and decreased in the fifth decade. The sediment yield indices reflect this as the sediment yields increased for the first four decades and decreased in the fifth decade. The decrease is due to less timber harvest and vehicle traffic on the roads. Also, there will be fewer disturbed areas and less harvesting in riparian areas. Timber harvest in riparian areas contributes to increased sediment but roads are by far the major source of increased sediment levels.

COMMENT: *It should be explained how activities such as timber harvesting and road building can be made compatible with other riparian area resource values.*

RESPONSE: Timber harvest and road construction are not fully compatible with other riparian resource values. When these types of activities occur within a riparian area, the impact to other resource values will be minimized. The Riparian Standards and Guidelines were designed to provide general direction to minimize impacts to the other resource values. If timber harvest activities are proposed within a riparian area, a site-specific vegetation management prescription will be developed by an interdisciplinary team. Along Class I and II streams there should not be clearcut harvesting within approximately 100 feet of these streams.

TIMBER MANAGEMENT

COMMENT: *Comments related to the retention of snags included:*

- *Forest-wide Standards and Guidelines should specifically prohibit the removal of snags by fuel wood harvesters.*

- *The ONF should take action to regenerate snags. A snag density standard should be established.*

RESPONSE: The Forest-wide Standards and Guidelines specify snag density standards to be met on the Forest. Fuelwood gathering is carefully controlled and monitored at the district level to assure that the requirements for both safety and wildlife snag retention are maintained.

COMMENT: *Broadcast application of all biocides should only be used as a last resort due to high potential for destruction of nontarget species. Final EIS should state under what conditions they will be used and what measures will be taken to protect smaller watersheds, wildlife, and recreationists.*

RESPONSE: Any proposed pesticide use would require site specific environmental analysis. Such analysis would consider all available methods, potential effects and costs. Historically, use of herbicides and pesticides has been minimal on the Forest, being limited to treatment of roadside vegetation and periodic (pesticide) use around facilities. Any use would follow the standards and guidelines stated in the Record of Decision on the Pacific Northwest Region's FEIS for Managing Competing and Unwanted Vegetation (USDA - Forest Service, 1988b).

COMMENT: *Buffer strips should be used when applying fertilizer.*

RESPONSE: Use of "buffer" strips along streams when applying fertilizer has been and will continue to be a standard Best Management Practice (BMP) to insure water quality standards are met. Again, site specific analysis and prescriptions are required prior to application of fertilizers for tree growth enhancement.

COMMENT: *The Forest needs to plan for the future potential of balsam woolly aphid infestation. Generalized references to insects, pests and obvious desirability of recapturing volume loss are inadequate.*

RESPONSE: Annual aerial surveys are conducted to monitor balsam woolly aphid infestations and occurrences. No known effective treatment or preventive actions are currently available to combat this insect. Infestations have occurred, for the most part, in high elevation stands of subalpine fir on the Forest and in the Olympic National Park.

COMMENT: *The yield simulator used is inappropriate due to the significant acres of hemlock and species other than Douglas-fir. The Forest should use the SPS model (stand projection simulator model).*

RESPONSE: In the FEIS, the SPS model was utilized to develop yield tables for those portions of the Forest that are currently predominantly western hemlock and Pacific silver fir. The DFSIM model was retained for use in the predominantly Douglas-fir portions of the Forest.

COMMENT: *Genetics yields should be used on Simpson Timber Company (STC) lands.*

RESPONSE: Genetic yield tables have been included in the FORPLAN model for both STC and National Forest Lands where appropriate.

COMMENT: *Timber yield tables should be corrected to more accurately reflect the productive potential of the Forest.*

RESPONSE: National Forest Lands have been stratified into six different species/productivity zones. Both empirical and managed stand yield tables are based upon these six stratifications.

COMMENT: *The yield tables are arbitrarily reduced without adequate justification.*

RESPONSE: The operational falldown incorporated into the Forest's yield tables is needed to reflect on-the-ground reality (see FEIS Appendix B, "The Forest Planning Model"). The falldown assumptions used in DEIS analysis have been reviewed and modified where appropriate.

COMMENT: *Empirical yield tables should have been built using the concept of approach to normality. As a result, growth estimates are 15 to 20 percent lower than they should be.*

RESPONSE: Actual growth data were used to develop future yields for natural stands. This being the case, the concept of approach to normality does not apply and should not be used.

COMMENT: *Comments related to the timber inventory included:*

- *Inventory is based on obsolete data, with extremely low sampling intensity.*
- *There is not enough timber left to carry the harvest level.*
- *The DEIS should include informative timber volume statistics for reviewers to compare current inventory to FORPLAN starting inventory.*

RESPONSE: The inventory is based on data collected in 1973 to 1974. While it is true this is old data, we have updated the inventory plots to reflect the harvest that has taken place from 1973 through 1989. The volume from the remaining plots was grown to 1994, the mid-point of the first decade. Sampling errors and growth for the 12 yield tables used for this plan are available in the Olympic National Forest office.

A computer model called FORPLAN is used to analyze projected yields and schedule the harvest volume. Based on this model, we do have enough timber to carry the harvest volume. However, this will be monitored, and adjustments can be made if the model's predictions are incorrect.

Please review FEIS Chapter II, Table II-3, "Timber Resource Management Information by Benchmark and Alternative." This table displays the starting and ending inventory as used in FORPLAN. In FEIS Chapter III is the estimated total standing volume on tentatively suitable forest lands. Chapter IV presents a display of the current acres by age class. Future age class distributions are displayed in bar charts in Chapter IV.

COMMENT: *The harvest dispersion Management Requirement is not tied to fish or wildlife. It is self-imposed, redundant, and was only applied to acres available for timber harvest. It should have been applied*

to the whole watershed. This Management Requirement caused an artificially binding constraint on many watersheds. In question is the 4.5 foot height to close and opening, the assumption of 10 years to reach 4.5 feet, and the length of time to cycle over the watershed.

RESPONSE: The dispersion requirement was developed in response to the requirements of NFMA and the Regional Guide for the Pacific Northwest Region (see FEIS Appendix B, "Analysis Prior to Development of Alternatives"). Application of dispersion constraints to harvest areas exclusively helped assure that the desired dispersion patterns would occur within these areas (see FEIS Appendix B). Further discussion of the dispersion management requirements is found in FEIS Appendix I, "Background of Management Requirements."

COMMENT: *Multiple commercial thinnings at extended ages may be uneconomical on a per acre basis.*

RESPONSE: Commercial thinning regimes have been modified to some extent in the development of FEIS analysis. Multiple thinnings at extended ages are no longer modelled in FORPLAN, although they could conceivably occur in implementation if silvicultural analysis so dictates. Refer to FEIS Appendix B, "The Forest Planning Model," for further discussion.

COMMENT: *Harvest levels might be increased overall if commercial thinning volume is scheduled for harvest in the right time periods, rather than not at all.*

RESPONSE: The timber management regimes used in the estimation of timber yields include commercial thinning options where appropriate. The thinning regimes used reflect the most cost-efficient timing patterns of commercial thinning entries, and do contribute to overall harvest levels. See FEIS Appendix B, "The Forest Planning Model," for more detail.

COMMENT: *Comments regarding the issue of timber volume conversion ratios included:*

- *In planning, timber to be sold is measured in cubic feet (inventory) and it is sold in board feet. The conversion ratio is not correct. 42.7 MMCF is equal to 185.6 MMBF today but contrary to page II-94 it will not equal 185.6 MMBF in 50 years because the conversion ratio will change over time.*

- *The conversion ratio change will cause a departure in the board foot level without a departure in cubic feet.*

- *The ratio on Simpson Timber Company lands should be 5.2 BF/CF.*

RESPONSE: Conversions to MBF from MCF are now displayed for only the first decade. The conversion is done to provide a basis of comparison with previous harvest levels which were measured in MBF. Volume control for this plan is based on cubic feet. If board foot measure were used then future decade yields would be less than the first few decades because of differing bdft/cuft ratios between existing older stands and future managed younger/smaller stands. The ratio for Simpson Timber Company lands is 4.625 as calculated by the Company from current bdft/cuft scaling comparisons.

COMMENT: *Price trend assumptions used for timber in the FORPLAN should have been used in DP-DFSIM.*

RESPONSE: The Forest's reanalysis of timber yields included use of the same price trend in DP-DFSIM as was used in FORPLAN analysis. See FEIS Appendix B, "The Forest Planning Model".

COMMENT: *Site indices are understated due to a failure to account for species of sample trees. Used same empirical yield for SI 116 as for SI 92 even though these sites are significantly different.*

RESPONSE: Species of sample trees have been utilized in the determination of appropriate site index for the differing species stratifications now used. Both Douglas-fir and western hemlock site indices are now used. Six different productivity stratifications are now used for both empirical and managed yields. Stratifications used are as follows: western hemlock - high and medium productivity, Douglas-fir - medium and low productivity, silver fir - medium and low productivity.

COMMENT: *There were some questions as to whether there is an adequate range of prescriptions, such as fertilizer and thinning, to maximize the choices in FORPLAN. Comments on prescriptions included:*

- *No harvest within 75 feet of all roads, and selective cutting of up to only 30 percent of the canopy from 75 feet to 200 feet from the road. Selective cut only when adjacent sites are being cut.*
- *Manage old-growth stands for specific products and net increase in cubic volume, tight ring, knot free, rotations over 250 years.*
- *Consider choices other than just even-aged/uneven-aged management, such as shelterwood cutting.*
- *Prescriptions with repeated fertilizations should be considered.*
- *Binding DFSIM to 300 trees per acre indicates that the model is artificially constrained.*
- *Planting on steep, rocky ground has resulted in poor survival and many replants. Assure that these areas shall be promptly and adequately restocked. Consider growing species other than Douglas-fir, such as spruce and cedar.*
- *Cultivation of nutrient-building plants and mycorrhizal symbionts should be included in silvicultural strategies.*

RESPONSE: Silvicultural prescriptions are expected to be developed on a site specific basis by a certified silviculturist with treatments selected which best meet the management objectives of the particular area. Yields are based on a "typical" stand regime for each productivity/species stratification. Prompt regeneration with appropriate species and stocking control are basic treatment assumptions. Fertilization and use of genetic stock is assumed for Douglas-fir stands in the appropriate areas. An even-aged silvicultural system is assumed. Clear cut regeneration methods with artificial regeneration is assumed but shelterwood/seed tree methods with artificial/natural regeneration would be prescribed where these would best meet the objectives for the site. See Appendix B of FEIS for additional discussion on development of yield tables through use of DFSIM & SPS simulator models.

COMMENT: *Cutting down the forest would kill our native plants, thus destroying the ecological community and replacing a diverse, millenia-old interactive community with a sterile, monocrop tree farm dependent upon chemicals.*

RESPONSE: The Standards and Guidelines assure the protection of sensitive, rare, threatened, or endangered plant species. Regeneration of timber harvest units is accomplished with native tree species, either through planting or natural regeneration. In either case, natural seeding of additional species results in a multiple of plant species occupying most forest sites. The Olympic National Forest is not now, nor do we foresee being dependent in any way upon chemicals to maintain forest production. Lastly, much of the

Forest will be unavailable for timber management under the Forest Plan. (See Chapters II and IV of the FEIS for a description of the preferred alternative and summaries of acres "suitable" for timber harvest).

COMMENT: *Forest Service no longer cites (36 CFR 221) but should cite this to strengthen their emphasis on a continuous supply of timber, stabilization of communities, and opportunities for employment.*

RESPONSE: Timber supply, community stabilization, and employment opportunities are cited in 36 CFR 221 (Timber Management Planning) as three principal benefits derived from National Forest timber outputs. Creation of an integrated Forest Plan, however, requires consideration of the benefits derived from all resources and uses in combination. It would thus be inappropriate to emphasize the content of 36 CFR 221 in the development of this Plan. Refer to FEIS Chapter I for discussion of the full range of issues addressed in the Forest's planning process. 36 CFR 219.12(g)(3)(iii) specifies that employment and income effects be analyzed and considered in evaluation of alternatives, which has been done.

COMMENT: *Removal of residue may have long-term impacts on soil fertility.*

RESPONSE: The Olympic National Forest is moving towards a policy of retaining significant volumes of residue on the site after timber harvest. See Forest-wide Standards and Guidelines, in Chapter IV of the Plan.

COMMENT: *Each alternative's ASQ should be compared to the land's productive capability.*

RESPONSE: There are several comparisons of this type within the FEIS. The ASQ of each alternative can be compared to long-term sustained yield capacity (by alternative) using Table II-14 (FEIS Chapter II). Table II-4 (FEIS Chapter II) enables comparison of ASQ figures with the Forest's potential yield under current timber management plans. Finally, the maximum sustainable yield from tentatively suitable timberland is covered in FEIS Chapter III ("Vegetation").

COMMENT: *Establish an annual harvest level for cedar.*

RESPONSE: The volume of merchantable cedar available for harvest on the Forest is a very minor component of the total sale quantity. Inventories are not precise enough for us to determine a separate harvest level for cedar. Due to the long period of time required to produce cedar of merchantable quality, the availability of this resource will continue to decline in the future.

COMMENT: *Sustained yields should be calculated by District. To rationalize non-sustained yield on a district basis based on other available timber (state and private) is unsound. The Forest Service should not give in to logging interests simply because other lands are overcut.*

RESPONSE: Such a calculation technique would limit the Forest's ability to provide timber on a nondeclining flow basis. The mobility of logs from one part of the Forest to another, combined with the Forest's flexibility in scheduling District harvest levels to moderate local area fluctuations, makes Forest-wide nondeclining flow fully reasonable. The availability of timber from other sources has not been a factor in the selection of the land base over which nondeclining flow is to be calculated.

COMMENT: *The Forest should not include Site V lands as suitable for timber production. There are unsuitable acres in suitable land base that should be taken out now, not during project analysis.*

RESPONSE: Site index in itself is not utilized to define "suitability" (see Glossary).

COMMENT: *Disagree with Forest Service supposition that doghair stands will provide substantial input to the timber base over the planning horizon, due to poor soil conditions. What costs are involved and will replacement stands do any better?*

RESPONSE: If stands are harvested in this area then it has been assumed that future stands would produce manageable yields in the future. A five year harvesting study is just being completed. Monitoring of these areas will provide information about their future potential and associated costs and benefits.

COMMENT: *Trees are not being replaced as fast as they are being taken, nor are they being replaced with the original quality or diversity.*

RESPONSE: Harvested stands are being reforested. At any one time,approximately two and one half years of average harvest is awaiting reforestation. Delay is due to time needed to close harvest units in the Timber Sale Contract, perform any needed slash treatment, perform site preparation, grow and obtain site specific seedlings and contract the actual reforestation. Assumed reforestation time from cutting to planting is three years. The Forest's genetics program assures high quality reproduction. Adequate diversity of species has been maintained.

COMMENT: *Measurement of non-declining flow is not adequately explained.*

RESPONSE: As described in the FEIS Glossary, nondeclining flow is any long-term harvest schedule including the basic provision that harvest level not decline from one period to the next. In the case of the Forest Plan, the periods involved are decades. Because the Olympic Forest Plan covers two separate management entities (the Shelton CSYU and remaining National Forest land), the application of nondeclining flow in the Forest's FEIS and Plan can be confusing. Please refer to FEIS Chapter II ("Alternatives Considered in Detail") for further discussion.

COMMENT: *Removal of soil from riverbanks and surrounding areas would have a negative, irrecoverable effect on timber growth.*

RESPONSE: Forested areas where it is estimated that harvest of trees would result in unacceptable resource damage have been classified as unsuitable for timber production. Furthermore, forest-wide standards and guidelines and those for riparian areas are designed to provide ample protection for streambank areas.

COMMENT: *If under-runs on sales continue, the actual logged volume will be considerably less than planned volume.*

RESPONSE: The Forest has a continuing check cruising program to maintain accuracy of estimates of sold timber.

COMMENT: *The Plan calls for an unfair harvest reduction of 80 percent in the Hoodsport and Quilcene area.*

RESPONSE: Harvest allocations by District have been redistributed in the final Preferred Alternative. Please refer to Forest Plan Appendix A for details.

COMMENT: *What effect does not harvesting on the National Forest portion of the SCSYU have on the other Districts - would their cut go up to balance?*

RESPONSE: The Shelton CSYU and remaining National Forest areas are essentially independent insofar as harvest level calculation is concerned. Modifying harvest in one area to balance harvest levels in the other does not occur. Refer to FEIS Chapter II ("Alternative Development Process") for further discussion.

COMMENT: *Sustained yields should be calculated by District. To rationalize non-sustained yield on a district basis based on other available timber (state and private) is unsound. The Forest Service should not give in to logging interests simply because other lands are overcut.*

RESPONSE: Such a calculation technique would unnecessarily limit the Forest's ability to provide timber on a nondeclining flow basis. The mobility of logs from one part of the Forest to another, combined with the Forest's flexibility in scheduling District harvest levels to moderate local area fluctuations, makes Forest-wide nondeclining flow fully reasonable. The availability of timber from other sources has not been a factor in the selection of the land base over which nondeclining flow is to be calculated.

COMMENT: *National Forest lands in the Shelton CSYU should not have management requirements (MRs) applied.*

RESPONSE: Application of management requirements within the Shelton CSYU is fully legitimate, and is consistent with the provisions of the Sustained Yield Unit Act and the Shelton CSYU Cooperative Agreement. See FEIS Chapter II ("Development of Alternatives") for further discussion.

COMMENT: *Changes to the Shelton CSYU Cooperative Agreement must have mutual benefit to Simpson and the Forest Service.*

RESPONSE: There are no changes to the Cooperative Agreement proposed in this Plan. As stated in the discussion in FEIS Chapter I, any modification of the Shelton CSYU Cooperative Agreement proposed in this planning process would require approval of the Chief of the Forest Service. Therefore, such changes would be, at this point, recommendations and not accomplished facts.

COMMENT: *The future of the Shelton CSYU should be a community issue.*

RESPONSE: We agree. In essence, the public involvement process associated with the development of this FEIS and Plan has made the Shelton CSYU a community issue by providing the opportunity for community input as to its future.

COMMENT: *The Shelton CSYU is poorly managed by the Forest Service and could result in a class action law suit. The Forest must do a better job of managing for all the multiple uses of the District.*

RESPONSE: Alternatives for management of the National Forest portion of the Shelton CSYU were developed to address and compare differing levels of all resource outputs, just as they were on the remaining National Forest land. Thus, the concern regarding multiple uses within the Shelton CSYU has been incorporated into the Forest's analysis. Refer to "Development of the Alternatives", FEIS Chapter II, for further detail.

COMMENT: *Since the Shelton CSYU is controlled on cut, not sell, unharvested sold volume (130 MMBF) must be included in harvest projections for future decades.*

RESPONSE: Volume under contract is treated as already harvested in the Forest's planning model. Therefore, while this volume is not included in Plan ASQ figures (which represent allowable sell levels), it is expected that it will be harvested (if this has not already occurred) in addition to (and independent of) the ASQ volume for a given period.

COMMENT: *The DEIS does not say very clearly that the harvest level on the National Forest portion of the Shelton CSYU will return to 1/2 of the current rate in future decades. The rate of cutting on all SCSYU lands should be displayed, showing past, present, and proposed harvest levels.*

RESPONSE: The history of harvest from the Shelton CSYU is displayed in FEIS Chapter III ("Sustained Yield Units"). Proposed harvest levels are presented in Table II-14 (FEIS Chapter II).

COMMENT: *Forest Service claims a lack of ability to analyze or control Simpson's Forest practices. However, the agency does have control over the rate of cutting on Simpson Timber Company lands by terms of the Cooperative Agreement. Environmental impacts should be displayed for STC land within the Shelton CSYU.*

RESPONSE: Environmental effects of timber harvest from Simpson Timber Company lands are now discussed. Refer to FEIS Chapter IV for detail.

COMMENT: *The EIS should let the public know how the rate of harvest on Simpson lands was determined and include a summary of Simpson's involvement in that process.*

RESPONSE: Volume of harvest from Simpson land was established through FORPLAN analysis, as were volume of harvest from National Forest land and levels of output of other resources. In most alternatives, this optimization was conducted without input from Simpson Timber Company. In some alternatives, the level of harvest was based on input from Simpson (DEIS Alternative E, for example). The Simpson harvest level in the Preferred Alternative has been reviewed by the company. Refer to FEIS Appendix B for discussions covering the workings of FORPLAN ("The Forest Planning Model") and the role of Simpson in developing alternative harvest levels ("Development of Alternatives"). Refer to the Record of Decision for discussion of the relationship of the Shelton CSYU Cooperative Agreement to implementation of the Forest Plan.

COMMENT: *How many logs are canted and exported from the Shelton CSYU? Is this part of the 20 percent allowed for export?*

RESPONSE: We have no precise information on the proportion of logs that are canted. If a log is processed to the point that it meets the specifications for a standard cant, it is then considered to have received primary manufacturing and may be exported without affecting the 20 percent limitation.

COMMENT: *What commitments are Simpson and the Forest Service making to local areas? Any alternative other than possibly B would require modification of the agreement.*

RESPONSE: The principal commitment to local areas represented by the Shelton CSYU remains that specified in the Cooperative Agreement: local processing of at least 80 percent of volume harvested (see also FEIS Chapter III, "Sustained Yield Units"). This Forest Plan entails a change in the harvest volume itself, but not in the basic commitment. Whether or not implementation of this Plan will require modification of the Agreement will depend on the respective viewpoints of both the Forest Service and Simpson Timber Company. If modification is seen as necessary, mutually acceptable changes will be made.

OLD-GROWTH

COMMENT: *Comments received on the issue of old-growth forests and their management are listed below:*

- *No more cutting of old-growth should be allowed. Evidence indicates clearcutting old-growth destroys the gene pool a healthy forest is dependent upon.*

- *Use the definition of old-growth developed by Dr. Franklin.*

- *Maintain the most options for future use of lower elevation old-growth.*

- *Olympic National Park old-growth cannot be used in place of Olympic National Forest old-growth.*

- *Include a map in the FEIS displaying the inventory of all natural-evolved old-growth with placement of SOHAs and other old-growth species management areas. Show areas to be cut and those to be left uncut.*

- *Highly questionable material concerning the owl and its relationship with old-growth forest has been utilized in planning for both old-growth and wildlife habitat.*

- *There seems to be a discrepancy in the Draft Plan: page IV-9 says, "There are 40,000 fewer acres of old-growth today...", but table IV-12 shows 123,453 fewer acres.*

- *Appendices, page D-35, says trees greater than 32 inches is old-growth, but page E-3 shows trees greater then 21 inches, and page B-8 includes stands more like mature stands than old-growth. Please clarify.*

- *DEIS and Plan disagree: 258,000 and 217,000 acres of old-growth in 1983.*

RESPONSE: The old-growth issue has grown in significance since the release of the DEIS. The above comments are addressed in the discussions of old-growth throughout the FEIS. Many of the issues are discussed in Chapter III ("Affected Environment"). Maps of currently inventoried old-growth and management areas which prohibit old-growth are included with this document. Effects of the alternatives on the old-growth resource can be found in Chapter IV of the FEIS.

The acreage reported for old-growth in the DEIS was at times confusing and we acknowledge that occasional discrepancies did exist. We have hopefully clarified these points and presented the data more clearly in the FEIS. Our knowledge of old-growth ecosystems and dependent wildlife species is expanding. A new inventory of old-growth stands is currently ongoing but is not yet available. This FEIS and Final Plan reflect our best information at the time of preparation. As new information is developed and incorporated into the Regional Guide, the Plan will be amended as necessary to reflect the latest state of scientific knowledge on this issue.

COMMENT: *Old-growth needs protection from a cultural and traditional American Indian use standpoint. Forest Service was put on notice in 1981 that protection of old-growth as a cultural resource was needed. We have not seen a process instituted to protect old-growth.*

RESPONSE: Provisions for the retention and management of old-growth have been incorporated into the Forest Plan. Also included are specific provisions to retain old-growth western red cedar to assure its availability for cultural and traditional uses by American Indians. See Forest-wide Standards and Guidelines and discussions in Chapters III and IV of the FEIS regarding the recognized need and importance of this issue. The Forest Plan, Chapter IV also provides for monitoring of old-growth to assure its availability and viability as a resource.

WILDLIFE

NORTHERN SPOTTED OWL

Comments addressing the northern spotted owl covered a wide range of issues. Some of these pertain to the Final Supplement to the Environmental Impact Statement (FSEIS, December 1988) for an Amendment to the Pacific Northwest Regional Guide, while the remainder are Forest-specific and relate to application of Regional Direction. Comments are separated into these categories below:

FOREST-SPECIFIC

COMMENT: *Roughly one-third of the lands withdrawn for spotted owls are not available for timber harvest, so the actual withdrawal of lands from timber production to save spotted owls is less than 20,000 acres. This is not sufficient, especially in lands available for timber harvest.*

RESPONSE: Acreage of land withdrawn for the spotted owl is determined by Standards and Guidelines contained in the FSEIS (December 1988). The Standards and Guidelines set up a priority scheme for lands to be set aside as Spotted Owl Habitat Areas (SOHAs). Lands suitable for timber harvest have the lowest priority for being selected SOHAs. After applying the Record of Decision (ROD) Standards and Guidelines for Olympic National Forest, the new SOHA network contains over 70,000 acres of lands suitable for timber production (see Amendment No. 1 to the Regional Guide for the Pacific Northwest Region, May 1984, pages 2-8).

COMMENT: *There is disagreement over the extent of suitable spotted owl habitat within the Olympic National Park. Comments included:*

- *Current research in Olympic National Park shows that there is less suitable habitat in Olympic National Park than what is stated in the Draft.*

- *Research shows that Olympic National Park contains 516,800 acres of suitable owl habitat not the 323,000 that is shown in the Draft.*

RESPONSE: Acreage of land within Olympic National Park which is suitable spotted owl habitat was determined by the National Park Service. This is their best estimate of spotted owl habitat in Olympic National Park.

COMMENT: *The Draft needs to be revised to show how Olympic National Forest is fulfilling its legal requirements (The National Forest Management Act (NFMA)) to protect "viable populations" of spotted owls.*

RESPONSE: Maintenance of habitat needed to protect viable populations of spotted owls is assured by conformance to Standards and Guidelines contained in the FSEIS (December 1988) (see Amendment No. 1 to the Regional Guide for the Pacific Northwest Region, May 1984).

COMMENT: *Of the 29 SOHAs set aside for protection under the Draft Plan only 15 sites have confirmed use by spotted owls and five of the remaining sites exist in nonsuitable habitat.*

RESPONSE: The new SOHA network established by the FSEIS Standards and Guidelines contains 30 SOHAs, all of which are in suitable spotted owl habitat. Of these 30 SOHAs, all but two are occupied by spotted owls. These two were needed to meet the spacing criteria in the Standards and Guidelines.

COMMENT: *Spotted owl data is not included in the Plan. You need to provide an accurate count and location of owls in the parks and wilderness adjacent to the Forest. A more accurate count is also necessary on the Forest.*

RESPONSE: Because of the sensitive nature of this information, locations of spotted owls cannot be given. Numbers of owls located on Olympic National Forest can be found in Chapter III of the FEIS under "Wildlife."

COMMENT: *Management for the spotted owl is based more on timber economics than on biological knowledge.*

RESPONSE: Decisions on management of spotted owl habitat on the National Forests of Washington and Oregon are based strictly on the needs of the spotted owl for survival of the species.

COMMENT: *One thousand acres is not sufficient for spotted owls. Even the temporary allowance of 2,200 acres per pair is inadequate when one considers the "qualifiers" used in selecting suitable sites. Research suggests that the spotted owl needs 4,500 acres not the 1,000 shown in the Draft.*

RESPONSE: New research into the needs of the spotted owl has caused Olympic National Forest to increase the amount of suitable habitat set aside per SOHA from 2,200 acres to 3,000 acres.

COMMENT: *It is premature to dedicate areas for spotted owl habitat, given the lack of research and inventories within Olympic National Park and Wilderness in Olympic National Forest. Accuracy of data pertaining to spotted owls needs further checking and research before final decisions are made.*

RESPONSE: Management decisions were made for the spotted owl habitat network and amount of land dedicated to spotted owl habitat management was determined using the best information available at the time (see FSEIS for an Amendment to the Regional Guide for the Pacific Northwest Region, May 1984).

COMMENT: *Forest Plan wildlife sections are blatantly deficient in SOHA direction. Was Forest not aware of Region 6 SEIS direction? Regional direction and planning direction needs to be clarified.*

RESPONSE: The DEIS for Olympic National Forest was released before the Region 6 Draft SEIS was released. The current plan takes into account all direction given in the Region 6 Final SEIS (December 1988).

COMMENT: *It cannot be determined from the DEIS whether spotted owl habitats are in close enough proximity to each other to be of any value. How were the 29 SOHAs established? SOHAs need to be established in the lower elevation areas of the Forest to provide habitat for all old-growth-dependent species.*

RESPONSE: The new SOHA network established by this Plan was set up using Standards and Guidelines in the Region 6 FSEIS (December 1988). One of the criteria for establishment of SOHAs was that they be close enough to each other to provide linkages between the other SOHAs in the network. The new SOHA network established on Olympic National Forest covers a wide range of elevations. Many of the new SOHAs are at lower elevations where they are of high value to other wildlife species.

COMMENT: *Research indicates that the northwest forest mineral and nutrient cycle will not support more than two intensive cutting cycles--wildlife is critical to sustaining these cycles. There should be a five-year moratorium on the cutting of old-growth to allow the Forest Service to collect this vital information. A recent study indicated that the old-growth areas along or near the water were so scattered as to be of little or no use in protecting the propagation of this rare bird.*

RESPONSE: At projected harvest levels, the amount of old-growth remaining on Olympic National Forest will remain high for many years into the future. Refer to Chapter IV of the FEIS for a display of the old-growth acres remaining over time under each alternative.

COMMENT: *Spotted owl populations are isolated both on and within the Olympic Peninsula. West side populations are separated from east side populations which poses genetic problems and makes the likelihood of extinction much higher.*

RESPONSE: The spotted owl population on Olympic National Forest is believed to be isolated from other populations of spotted owls in the Cascades. It is unlikely that this problem will be solved in the near future. SOHAs on Olympic National Forest are connected throughout the Forest by linkages of suitable habitat within Olympic National Forest and Olympic National Park.

COMMENT: *The Fish and Wildlife Service considers the northern spotted owl to be a "sensitive" species: i.e., one whose status is vulnerable as a species and needs action to prevent further declines.*

RESPONSE: The U.S. Fish and Wildlife Service is currently considering whether to list the spotted owl as a threatened species. If this occurs, Olympic National Forest will conform to all management direction needed to keep the spotted owl from becoming extinct.

COMMENT: *The spotted owl is vulnerable because of 1) loss of habitat to logging, 2) the barred owl is expanding its range, 3) increased fragmentation is increasing risk to predation, and 4) continued decline in populations will increase risks from demographic, catastrophic and genetic causes. Additional land needs to be set aside to absorb impacts should catastrophes occur. Landownership or land use changes and management mistakes should be considered.*

RESPONSE: The FSEIS took all of these factors into consideration before coming up with a final recommendation for the management of spotted owl habitat on National Forests in Oregon and Washington.

COMMENT: *It is especially essential that the genetic, distributional, and demographic nature of the Olympic Peninsula populations be fully understood before final habitat formulae are implemented.*

RESPONSE: The FSEIS considered the Olympic Peninsula population of spotted owls to be an isolated population and gave it increased protection to compensate for its isolation.

COMMENT: *All dedicated SOHAs must be located in presently suitable habitat.*

RESPONSE: Within new Standards and Guidelines, all SOHAs on Olympic National Forest are in "currently suitable" habitat.

COMMENT: *A moratorium is needed on timber harvest of old-growth within 1.5 miles of any known spotted owl site (single adults and pairs of owls).*

RESPONSE: The FSEIS determined the level of protection needed for the spotted owl population on Olympic National Forest. The Standards and Guidelines in the FSEIS provide for enough habitat to maintain a viable population of spotted owls over time.

COMMENT: *Current minimum management requirement direction for spotted owls is insufficient to insure viability of the species on Olympic National Forest.*

RESPONSE: Management requirement direction has changed to reflect the new guidelines contained in the FSEIS (December 1988).

COMMENT: *For current management, the Washington Department of Wildlife recommends that the Forest declare a moratorium on further cutting of spotted owl old-growth forest habitat below an elevation of 3,000 feet on the west side of the Peninsula, and 4,000 feet on the east side, until an adequate Final SEIS is adopted and all legal challenges are resolved.*

RESPONSE: An exhaustive study of spotted owl requirements was conducted prior to the release of the FSEIS (December 1988). Its recommendations for spotted owl habitat management incorporate the best information currently available on the subject.

THREATENED, ENDANGERED, SENSITIVE WILDLIFE SPECIES

COMMENT: *The Forest needs to consider the status of the marbled murrelet. Its status should be elevated to the Sensitive category. This is due to continuing loss of habitat and the lack of knowledge of its life history.*

RESPONSE: The Olympic National Forest is aware of the potential for loss of habitat for the marbled murrelet. Marbled murrelets live most of their lives at the ocean. The riparian prescriptions developed for every timber sale on the Forest should take into consideration the needs of birds which nest in those areas. As more information becomes available on the nesting needs of the marbled murrelet, our riparian prescriptions will change to meet those needs.

COMMENT: *Specific habitat requirements for the bald eagle need to be explained in greater detail.*

RESPONSE: The Olympic National Forest will manage bald eagle habitat in accordance with all provisions in the Pacific Bald Eagle Recovery Plan. This plan should be referred to for specifics. Also see the Standards and Guidelines in Chapter IV of the Forest Plan.

COMMENT: *The DEIS does not adequately address how bald eagle and sensitive species management guidelines will be addressed and enforced on the National Forest portion of the SCSYU. There needs to be clarification on the intent of the SCSYU and wildlife management.*

RESPONSE: Bald eagles will be managed on the SCSYU using the same guidelines as those for the rest of the Forest. Other sensitive species will be evaluated on a case-by-case basis.

GENERAL WILDLIFE

COMMENT: *The Forest Plan shows monitoring only for the spotted owl and shows no research needs. This needs to be expanded to include all of the indicator species.*

RESPONSE: The Forest Plan shows monitoring needs for the northern spotted owl, pileated woodpecker, marten, primary cavity excavators, Columbian black-tailed deer, Roosevelt elk and bald eagles. These are all considered to be indicator species on Olympic National Forest. The research needs section under old-growth monitoring shows the following needs: Determination of home range of indicator species to determine adequacy of remaining old-growth acres.

COMMENT: *Mitigation of existing and potential future adverse impacts, from Forest activities, on fish and wildlife resources and their habitat needs to be fully considered.*

RESPONSE: This concern is addressed in Chapter II of the FEIS in the section entitled "Mitigation and Enhancement Common to All Alternatives". Also, the Standards and Guidelines are designed to mitigate existing and potential adverse impacts of Forest management activities. Also, mitigation of adverse impacts are addressed during the environmental assessment phase of a project.

COMMENT: *The Standard and Guideline relating to "control of excessive introduced or exotic plant and animal species populations..." is both confusing and misleading.*

RESPONSE: The Research Natural Areas (RNA J2) Standard and Guideline relating to control of exotic species has been rewritten to address your concerns.

COMMENT: *Clarification is necessary on steps that can or would be taken against wildlife species found to be altering the characteristics of the RNA in question.*

RESPONSE: If a problem is discovered with an exotic plant or animal species in an RNA, its resolution will be determined in a subsequent environmental assessment on a site-specific and species-specific basis.

COMMENT: *The isolation of the Olympic Peninsula needs to be addressed. This is an important factor when considering cumulative effects for wildlife species.*

RESPONSE: In evaluating the effects of the alternatives on wildlife species, the fact that the Peninsula is isolated habitat for many species was considered.

COMMENT: *How can WFUDs be tied to population numbers or habitat capability indices? WFUDs measure public use, not habitat suitability.*

RESPONSE: The habitat capability of the Forest can be estimated for most of the important species known to exist within its boundaries. This capability is expressed as total numbers of animals that the Forest is able to sustain. In order to compare the different outputs on the Forest, these population numbers are

converted to a more easily compared figure. It is appropriately assumed that public use of the wildlife resources are very much a function of the number of animals which in turn is a function of the habitat. The WFUD (wildlife and fish user day) is one index used to make the comparison among alternatives.

COMMENT: *Providing good quality habitat is necessary for wildlife survival. The best mix in terms of habitat availability and species diversity is what must be accomplished. Implying that harvest activities increase diversity without weighing the risks on impacted species is not acceptable.*

RESPONSE: Timber harvest activities change the landscape of the forest, and thus affect the vegetative diversity within the forest. This change in vegetative diversity has positive effects on some species and negative effects on others. Both the positive and negative impact of these changes on wildlife populations are addressed in the "Environmental Consequences" section Chapter IV of the FEIS.

COMMENT: *On page nine we learn of the importance of a "well-mixed mosaic of vegetative conditions ranging from new clearcuts to mature forest." The DEIS does not adequately describe the current population levels with those that occurred historically.*

RESPONSE: The historic, current and future trends in the vegetative community on the Forest are described in detail in Chapter III (Affected Environment) of the FEIS.

COMMENT: *Species not directly dependent on old-growth habitat will be reduced as a result of the reduction in old-growth habitat. Reduction in essential habitat for prey species will affect both cougar and lynx. There should be an analysis on the overall impacts of vegetative diversity on species diversity. Although cut-over areas may be more diverse initially they will lose this advantage after several decades. In addition, with more logging comes more road building and then more poaching. Coupled with increased snow levels in harvested areas, how can the Plan predict big game numbers will stabilize?*

RESPONSE: Species diversity is addressed in the FEIS. In part, it is addressed by assessing the impacts of forest management on key indicator species. These impacts are addressed in Chapter IV (Environmental Consequences) of the FEIS.

COMMENT: *Elk require low-elevation old-growth forests for winter range. Continued loss of this critical habitat will result in a steady decline in population numbers. Protection is essential for big game winter range.*

RESPONSE: The Standards and Guidelines in the Forest Plan (Chapter IV) are designed to provide for the winter range needs of deer and elk on the Forest. Also, there are many allocations in the Forest Plan which either prohibit or restrict timber harvest. These allocations will provide significant winter range habitat for big game.

COMMENT: *The deer and elk model needs to include the effects of roads, road density, and road closures. As road density increases, habitat capability decreases. The analysis on road effects needs to be expanded to include survival cover. New road construction should be minimized and open road density reduced to one square-mile on big game winter range and two square-miles elsewhere.*

***RESPONSE*:** The Forest Service recognizes the adverse impacts of high road densities. The Forest-wide Standards and Guidelines for fish and wildlife recommend that roads be managed to reduce the impacts on wildlife. Specific details will be determined on a project level, site-specific basis.

COMMENT: *Old-growth is not an important component of big game winter range. Need to clarify winter range concept vs. "optimal" cover concept for both deer and elk.*

RESPONSE: As specified in the Standards and Guidelines in the Forest Plan, a portion of the total winter range is considered to be "necessary for deer and/or elk survival". Within this critical portion, a minimum of twenty percent of the area should be maintained in a condition of optimal cover. Old-growth stands satisfy this criteria.

COMMENT: *Concerns for long-term, big game populations are heightened when population numbers displayed do not maintain elk populations over time and do not show increasing populations of deer.*

RESPONSE: Deer and elk populations have increased dramatically over the past 100 years due to the steadily increasing amounts of forage available through vegetative cutting practices. As clearcutting is reduced to protect other species of wildlife which are dependent on older seral stages of timber, deer and elk populations are expected to decline. Even with such declines, the populations of deer and elk on the Peninsula are in no danger of being eliminated.

COMMENT: *Wildlife protection areas must correspond with site-specific areas. The plan needs to detail careful, specific management guidelines for limiting logging in important wildlife areas. For example, a SOHA should be located in the Elk-Reade area of the Soleduck RD. On the Hood Canal RD protection should be given to the Cabin Creek, Lena Lake and Putvin Trail areas, as these are adjacent to Olympic National Park and provide excellent wildlife habitat. The entire Quinault District is being overharvested and management is already disruptive to wildlife. The DEIS needs to show, more closely, the impacts to wildlife.*

RESPONSE: All wildlife habitat management areas identified in the FEIS correspond to site-specific areas on the ground. Standards and Guidelines for managing these areas can be found in Chapter IV (Forest Management Direction) of the Final Land and Resource Management Plan. A site-specific management plan will be developed for every SOHA and Bald Eagle Management Area (BEMA) on the Forest. Effects of the alternatives on wildlife are displayed in Chapter IV of the FEIS.

COMMENT: *There needs to be more protection provided for wildlife in the Elk-Reade area of the Soleduck Ranger District. Eleven eagles have been counted simultaneously soaring over Reade Hill. Other observations include falcon, various owl species, hawks and other raptors in the area.*

RESPONSE: A SOHA has been established in the Elk-Reade area to provide habitat for species dependent on mature and old-growth vegetative communities. This SOHA contains most of the potential nesting habitat for bald eagles along Elk Creek and Bear Creek within the National Forest boundary. If other bald eagle nesting areas are located outside of the SOHA, they will be protected in accordance with the Standards and Guidelines.

COMMENT: *Dead and down (snag) data needs to be better displayed and tied back to the Appendices. This would allow more meaningful analysis of the snag information as it relates to primary cavity excavators.*

RESPONSE: The Forest-wide Standards and Guidelines have been rewritten to better address this and other concerns over the needs of primary cavity excavators. Also see Chapter IV of the FEIS for a discussion of dead and down material related to the alternatives.

COMMENT: *If compliance with Washington State safety regulations is as stated in the DEIS, it is imperative that Olympic National Forest implement changes in its timber harvest activities to include these concerns. This may require modification of timber harvest unit size.*

RESPONSE: The Standards and Guidelines recognize the potential conflict between the need for dead standing wildlife trees and State safety regulations. Calculation of the number of dead standing wildlife trees needed to maintain a 40 percent population level of primary cavity excavators was based on leaving live green trees and treating them at periodic intervals to provide the level of snags required over time.

MANAGEMENT REQUIREMENTS AND INDICATOR SPECIES

COMMENT: *The indicator species concept has both positive and negative aspects. The species selected as indicators for the Forest need to have more adequate documentation on the rationale for their selection.*

RESPONSE: A report on Management Requirements (MRs) for Forest planning dated June 1986 specified the required MR species to be addressed for each planning area in Region 6 of the USDA Forest Service. This report is available for review in the planning records of the Olympic National Forest.

COMMENT: *In most cases inappropriate indicator species have been selected. Particularly inappropriate is the selection of the bald eagle as an indicator for riparian vegetation.*

RESPONSE: The bald eagle was chosen as an indicator of riparian habitat because of its widespread use of these areas for nesting and roosting.

COMMENT: *The Forest did not recognize the importance of wildlife habitat as it relates to those species that are protected by the Migratory Bird Treaty Act, most noticeably the band-tailed pigeon.*

RESPONSE: The Forest has chosen 7 Management Indicator Species to represent the needs of wildlife on the Olympic National Forest. If the habitat needs are met for these 7 species, it is believed that the habitat needs of all other wildlife species on the Forest will be met. The Migratory Bird Treaty Act is one of the many laws which provide management direction to the Forest Service. When nest sites are found for migratory birds, such as the band-tailed pigeon, they will be protected in accordance with the law.

COMMENT: *Individual models for indicator species need to be updated and included, for review, in the Appendices.*

RESPONSE: All methods for evaluating indicator species have been updated since the DEIS and references to the new methodology is contained in the FEIS, Appendix B.

COMMENT: *Is the intent of NFMA to establish such rigid habitat requirements for indicator species as described in the Appendices?*

RESPONSE: The habitat requirements for indicator species on Olympic National Forest follow guidelines set forth in the report on Management Requirements for Forest planning dated June 1986 from Region 6 of the USDA, Forest Service.

COMMENT: *Management Requirements (MRs) are stated as fact, but should be treated as part of the variables they are.*

RESPONSE: Management Requirements come from the report for Forest planning dated June 1986 from Region 6, USDA Forest Service. They represent the requirements of law as expressed in 36 CFR 219.19 and 219.27 (a) (6). They are required to be addressed in all alternatives to the Forest Land and Resource Management Plan, except the "No Change Alternative".

COMMENT: *The MR guidelines used to develop this plan were not open for the public comment process. This is not in accordance with the law.*

RESPONSE: The MRs used in the Draft Land and Resource Management Plan for Olympic National Forest were open for public comment during the review period for the DEIS in 1986-1987. This opportunity was presented again during the comment period to the Supplement to the DEIS in 1988.

COMMENT: *The recently negotiated timber, fish, wildlife (TFW) agreement provides policies to protect fish, wildlife, and water quality and should serve as the basis for MRs on both Simpson and Forest Service ownerships.*

RESPONSE: The TFW agreement was reviewed during the establishment of MRs for Olympic National Forest. The basis for MRs, however, was the guidelines set forth in the report on Management Requirements for Forest planning dated June 1986 from Region 6 of the USDA Forest Service.

COMMENT: *The FEIS needs to include a more detailed description on how MRs will be applied to the SCSYU. Statements are made that it can be done and statements made that it can't be done. This must be cleared up.*

RESPONSE: The MRs will be applied to all Olympic National Forest land. This includes the portion of the SCSYU on National Forest land.

COMMENT: *The Forest must manage for habitat or species. If it is species, then other factors such as food supplies, predators, disease, overlapping ranges and a host of other concerns need to be addressed.*

RESPONSE: The National Forests manage fish and wildlife habitat only. The State of Washington Department of Wildlife regulates the game and nongame species on National Forest land.

COMMENT: *All MRs should be applied to National Forest land.*

RESPONSE: All of the MRs identified in the Draft Land and Resource Management Plan for Olympic National Forest are applied to National Forest land. Every National Forest has a different ecosystem and, therefore, the potential need for a slightly different set of indicator species.

COMMENT: *The MR for goshawks and other raptors is inadequate and inappropriate. There is a definite need to protect these raptors with an MR designation.*

RESPONSE: There is no MR for goshawks on Olympic National Forest per se. It is felt that goshawk habitat needs will be taken care of by the MRs for the northern spotted owl, pileated woodpecker and marten.

COMMENT: *Estimations of the ability of the Forest to support pileated woodpeckers are erroneous. Stands over 160 years old on the west side are questionable as far as providing the number of snags necessary for woodpecker use.*

RESPONSE: The Forest-wide Standards and Guidelines for primary cavity excavators provide for nesting and foraging habitat for pileated woodpeckers which is in excess of the 100 percent potential population

level for this species. This is accomplished by requiring a minimum of 179 dead standing trees to be left for every 100 acres of land which is managed for timber. Dead standing trees of sufficient size to support pileated woodpeckers are expected to start entering the new stand of trees at 145 years after initial treatment of a harvest unit.

COMMENT: *The sources on why mature timber provides habitat for the pileated woodpecker and marten need to be documented.*

RESPONSE: The report on Management Requirements for Forest planning dated June 1986 from Region 6, USDA Forest Service, gives references to habitat needs for the pileated woodpecker and marten.

COMMENT: *Maps need to display how many of the pileated woodpecker and marten sites are actually occupied.*

RESPONSE: The pileated woodpecker and marten sites on Olympic National Forest were set up according to guidelines in the report on Management Requirements for Forest planning dated June 1986 from Region 6, USDA Forest Service. Monitoring of these areas has not yet occurred to determine occupancy.

COMMENT: *Clarification of statement that "very little of the marten habitat is actually occupied" is needed. Statement now indicates a violation of NFMA and the viable species concept.*

RESPONSE: The marten's secretive and solitary ways make it very difficult to determine whether an area is occupied by this specie. None of Olympic National Forest has been inventoried for marten. Several marten have been sighted on the Soleduck Ranger District in the past five years, however, this is not enough evidence to establish the fact that we have full occupancy of our marten management areas.

COMMENT: *How were numbers of pileated woodpeckers and marten calculated in the Habitat Capability Indices? There seems to be an "overnight explosion" in populations.*

RESPONSE: The habitat capability indices indicate the potential number of pileated woodpeckers the National Forest can support. It is not an attempt to show how many pileated woodpeckers are actually out there. In order to show the actual numbers of pileated woodpeckers using the National Forest, we would have to conduct a population census of the Forest. This has not been done as of this time.

COMMENT: *Standards and Guidelines for marten and pileated woodpeckers need to include more specific direction, i.e., number of areas to be managed for, distribution specifics and elevation constraints.*

RESPONSE: The Standards and Guidelines have been rewritten to better reflect these concerns.

COMMENT: *How does "high numbers" level relate to population viability?*

RESPONSE: The population level of different species represents its ability to survive and reproduce. Therefore, the larger the population of a particular species, the better its chances of viability.

COMMENT: *The number of pileated woodpeckers and marten vary in all the alternatives at the 1986 starting point. Starting numbers should be the same.*

RESPONSE: Each alternative has a different effect on the habitat capability of marten and pileated woodpecker. Therefore, the habitat capability should be different at the end of the first decade

COMMENT: *According to the CHEC review, Olympic National Forest does not assure maintenance of minimum viable populations, such as the pileated woodpeckers, in spite of the Plan's statement that the Plan was to "assure maintenance of viable populations of all species."*

RESPONSE: The MRs for pileated woodpecker and marten have been reexamined and updated to meet the needs stated in the report on management requirements for forest planning dated June 1986 from Region 6, USDA Forest Service.

COMMENT: *With the solitary nature of the marten a "given," how will the Forest monitor this species?*

RESPONSE: Olympic National Forest is in the process of developing a plan to monitor marten. Specific details regarding the monitoring of marten will be developed during Plan implementation.

COMMENT: *The pileated woodpecker is inappropriately designated as an indicator for mature habitat. It is quite successful in utilizing the highly modified suburban environments throughout the Puget trough area.*

RESPONSE: The pileated woodpecker uses mature and old-growth stands of timber for nesting and feeding. These habitat uses were well documented by Bull and Meslow (1977), Guenther, et al. (1978), and Thomas (1979).

WATER

COMMENT: *Timber interests are given more weight than any others, such as watershed protection. Specific comments addressed included:*

Critical factors such as impact of roading on watershed areas should be included in the decisionmaking process.

The Plan needs to address the degradation of water quality and riparian areas caused by inadequate management of stream and water resources.

RESPONSE: The impact that roads have on watershed values are discussed throughout the FEIS. Information and data compiled in Chapters III and IV of the FEIS give specific analyses of impacts that roads have on watershed values. Major factors analyzed were: miles of newly constructed and reconstructed roads, traffic volume, road usage and closures, and sediment yield indices. As noted in FEIS Chapter IV, roads were recognized as the major source of sediment introduced to streams from timber harvest activities. This information was used in the decisionmaking process in evaluating the alternatives within Chapter IV of the FEIS. This chapter also addresses the environmental effects of timber harvest activities on water quality and riparian areas.

COMMENT: *The Forest Service needs to develop drainage-by-drainage water quality standards and give special protection to those most susceptible to damage from road building and logging. Comments included:*

The DEIS should be revamped to address sediment yields on an individual watershed basis, rather than a Forest-wide basis.

Drainage-by-drainage analyses would allow specific problem areas to be tracked, and appropriate action planned for mitigation of impacts on water quality and fish habitat.

RESPONSE: Development of water quality standards is the responsibility of the State of Washington (Washington Administrative Code, Chapter 173-201). The Forest Service does not have authority to establish water quality standards.

All streams on the Forest are classified (FSM 2526, Supp. 51) and mapped into four stream classes. The two criteria used to define these classes are: (1) the present and foreseeable uses made of the water, and (2) the potential effects of on-site changes on downstream uses (based on relative amounts of streamflow). Each stream has its own goals and objectives to protect beneficial uses. This map is available in the planning process record at the Supervisor's Office and in Chapter III of the FEIS. The Forest has developed Standards and Guidelines to protect the water quality of streams on the Forest.

The estimated sediment yield indices by drainage are shown in the FEIS in Chapter III for the current situation (1988). The estimated percent increase in sediment yield indices above natural levels for all the alternatives is shown for nineteen streams (Chapter IV of the FEIS). It must be remembered that the sediment yield indices are not absolute numbers and are estimates only. They were calculated from a sediment model which is considered to be reasonably accurate for use as indices rather than a precise measurement of sediment yields. One major 50 to 100-year storm event can cause extremely high sediment levels in the streams on the Forest. Depending on the frequency and magnitude of major storm events, sediment yields are highly variable for Forest streams. It is difficult to model sediment yields for major storms and modeled values tend to average out and mask the extremely high sediment yields during major

storm events. These storm events can have a major impact on the aquatic habitat of streams on the Olympic Peninsula.

As part of the cumulative effects analysis, a watershed condition class (see FEIS Chapter III & IV) was done for the nineteen major drainages on the Forest. This analysis assessed the risk that cumulative effects are occurring in the drainages. The drainages with a high risk of cumulative effects will have a cumulative effects analysis done as part of the Environmental Analysis Report for future projects in the drainage. Also, the drainages with a high risk of cumulative effects should have the highest priority for receiving funding for watershed and fisheries mitigation and improvement projects.

COMMENT: *The description of ground water resources is insufficient. Information concerning sources, problems, anticipated uses, and other similar information is needed.*

RESPONSE: Ground water is discussed in Chapter III of the FEIS. Research on effects of forest management on water resources does not indicate that ground water problems are likely to result. However, there have been occasional localized problems in developing adequate water sources for National Forest System purposes. These situations have resulted from unsuitable geologic conditions. Groundwater use on the Forest by the Forest Service or other users is very low and is anticipated to remain low in the near future. Few individuals or agencies have addressed the subject as either a concern or problem. Little input exists to suggest that further discussion is necessary.

COMMENT: *The applicability of the Sediment Yield Model used on Olympic National Forest needs to be explained in more detail. Specific comments included:*

Explain why different methodologies for sediment yield are being used by other National Forests in Washington State.

No explanation is provided to demonstrate that the Sediment Yield Model on the Olympic Peninsula is accurate.

No information is provided as to where this method was derived.

The sediment model is not actually described in Chapter III as stated and it does not appear to be described in any of the documents including the references.

RESPONSE: Different methodologies were used for calculating sediment yields for each National Forest in Washington State since they have different data bases to work from. Also, the Forests differ physically (geology and precipitation). This is particularly true of Forests on the west side vs. the east side of the Cascade Mountains. Sediment yield modeling is in its infancy with regard to upland forested areas. There is no acceptable methodology for upland forested areas as there is with agricultural land which uses the Universal Soil Loss Equation.

In Chapter III of the FEIS it is explained that sedimentation information from the Clearwater River drainage (Reid 1981) on the west side of the Olympic Peninsula and U.S. Geological Survey study (1967) at Wynoochee Dam site were used to calibrate the sediment yield model. Also, local factors from the Soil Resource Inventory update (1982 Jennings, et al.) were used to develop coefficients for the model's use on the Olympic Peninsula. The sediment yield indices were used to compare the alternatives.

The sediment yield model was derived from a process developed by the Forest Service in the Northern Rocky Mountain states. This process and coefficients were modified for conditions on Olympic National

Forest (see Chapter III of the FEIS). There are two references in the FEIS (Stephens 1984, and USDA Forest Service 1980) that describe the sediment yield model. Also refer to FEIS Appendix B for discussion of this procedure.

COMMENT: *The calculated sediment yield indices need to be explained in more detail. Specific comments addressed are:*

It is not clear why the sediment index drops about 15 percent, from 196,500 to 170,000 tons per year.

Possible sediment thresholds, such as percent fines in spawning gravels should be discussed.

Decade-long sediment averages estimate the localized impacts from sediment produced during the year that the road is built and the timber is cut.

The natural rate of sediment generated is not 112,500 tons per year since this level of sediment has been created by past logging practices.

While the sediment levels on the Forest will increase on the average 270 percent over natural levels the DEIS fails to indicate that this may be unacceptable or have serious consequences.

Both on-forest and off-forest (including the SCSYU) sediment yields should be shown.

There should be an explanation of how the forest-wide sediment indices were determined for the alternatives.

Sediment yields are considered natural at 189,000 tons per year but this is not natural level due to past logging practices.

RESPONSE: The sediment indices were modeled to be directly related to the intensity of timber harvest activities. Sediment indices will decrease in future decades during continuation of current management direction due to reduced timber harvest levels. On a Forest-wide basis, the decrease is primarily due to a substantial reduction in timber harvest from National Forest lands within the CSYU. Also, few new roads are to be constructed and existing roads have less soil loss over time.

Research by fisheries biologists have established levels of fine sediment (>15 percent) in gravels that are detrimental to fish. Gravel sampling in mid-1980's on the South Fork Skokomish River showed percent fines less than 15 percent. Stream systems on the Forest are too variable and complex to model the transport and deposition of fine sediment. Future monitoring will include determining spawning habitat quality (percent fines). The natural rate of sediment refers to sediment rates during pristine conditions with no roads or timber harvest activities. The sediment level increase over the natural rate was an error and should have been 172 percent instead of 270 percent.

In the FEIS Chapter IV, the cumulative effects analysis has been revised to include a drainage basin and Forest-wide risk assessment of increased sediment levels. How the Forest-wide sediment yield indices were determined is explained in the FEIS Chapter III and IV.

The sediment yield of 189,000 tons per year (Draft Plan, Chapter IV) is the amount of sediment from timber harvest activities for the current situation (1983) and is not the natural sediment yield level. The overall decrease in sediment is in comparison to the current situation.

COMMENT: *Further information on the impact of sedimentation needs to be provided. Specific comments addressed include:*

Estimates of the detrimental effect of sedimentation of the Wynoochee and Lake Cushman reservoirs should be provided.

The implication that a given stream or watershed would recover as soon as the sediment source is removed is misleading.

The DEIS fails to identify the potential long term-effects of certain kinds of sediment which can make spawning gravels impermeable.

RESPONSE: Forest Service activities should have little effect on Lake Cushman reservoir since very little Forest Service land drains into this reservoir. It is estimated that approximately 1,450 cubic yards (one dump-truck load equals approximately ten cubic yards) of sediment are transported to the reservoir from Forest Service lands.

The Forest Service administers almost all the land, approximately 39.6 square miles of land, above Wynoochee Reservoir. Increased sediment levels from timber harvest activities could affect the capacity of the reservoir. It is estimated that each year approximately 11,200 cubic yards of sediment which enters the reservoir has its source from timber harvest activities. The reservoir has a capacity of approximately 70,000 acre-feet (112,910,000 cubic yards). It is estimated that sedimentation from timber harvesting activities could reduce the reservoir capacity approximately .0001 percent per year.

It is well documented in research literature that sediment from timber harvest areas will recover in 15 to 20 years after completion of timber harvest in an area. This is true if there is no more timber harvested from the area. Normally, after 20 years a clearcut area will have vegetation well established and will be able to stabilize areas that had shown previous instability. Roads frequently act as chronic sources of sediment, particularly if they remain open for use and are not closed or rehabilitated.

Chapter III of the FEIS (Fisheries) has been expanded to include potential long-term effects of sediment which can make spawning gravels impermeable.

COMMENT: *The discussion of water quality monitoring and evaluation in the Plan should be expanded. Comments included:*

Acidity of water bodies, particularly high elevation lakes should be included as an inventory need.

How and when would projects be selected to receive monitoring and mitigation?

Reference should be made to the Federal Water Quality Act (formerly the Clean Water Act) and State Water Quality Standards.

Class I and II streams should be monitored.

Stronger commitments for implementation and effectiveness monitoring to verify that a particular activity is occurring consistent with Best Management Practices (BMPs), as prescribed, are needed.

RESPONSE: Acidity of high elevation lakes has been done by the Environmental Protection Agency as part of their long-term acid rain study. The Forest Service, U.S. Geological Survey, and Washington State

Department of Wildlife have collected acidity data of streams and lakes on the Forest during survey work. Periodic acidity samples will continue to be collected during future surveys.

The water quality monitoring section has been revised and expanded to include more intensive water quality and sediment sampling. A new cumulative effects section has been added to address the concern that nonpoint sources of sediment could have a significant effect on watershed and fisheries values when viewed from a whole watershed perspective.

Implementation and effective monitoring of Standards and Guidelines and BMPs have been added to the water quality and riparian sections. Effectiveness monitoring will be based upon meeting Federal and State water quality standards. Some class I and II streams will be monitored as part of this process. The actual projects to be monitored will be a cross section of activities that would have a significant risk of impacting water resource values. However, site specific information would need to be known about a project to determine its suitability to be monitored.

COMMENT: *The DEIS does not adequately address flooding. Specific comments included:*

A review of current flood conditions of streams issuing for the Forest should be included in Chapter III (EIS).

Chapter IV (EIS) should include a comprehensive analysis of the effects of proposed forest practices and Plan alternatives on flooding.

Past practices on the Olympic National Forest appear to have contributed to flooding in the lower Skokomish River valley and will likely continue to be a contributor.

Increased water quantity, which results from timber harvest and road construction, is an issue as is water quality.

Much greater flooding will occur than already has, if the upper and/or middle watershed area of the Dungeness River is logged.

The discussion on sediment is incomplete in that it does not evaluate the impact of increased flooding due to substantial and irreversible reduction of river channel capacity.

RESPONSE: The FEIS, Chapter III, has been revised to include a discussion of current flood conditions of streams draining from the Forest. There is no evidence that the size of peak flows on the South Fork of Skokomish River have been increased by logging and associated forest management activities in the South Fork of Skokomish watershed.

Maximum, annual peak flows which cause damaging floods are not expected to be noticeably changed between different alternatives or proposed forest practices.

There should not be an effect on flood occurrence from Forest Service activities in the upper or middle Dungeness drainage for the following reasons: (1) the majority of this part of the drainage is within Buckhorn Wilderness or Olympic National Park, (2) other parts of the area have restricted use such as protection for Wild and Scenic designation of the Dungeness River or for protection of spotted owl habitat. Thus, little timber harvest activities will occur in this portion of the drainage.

Increased sediment loads of streams draining from the Forest could increase flooding if there is reduction of channel capacity. The upland streams on the Forest have very steep gradients and have high enough energy to transport sediment through the river system. The lower sections of these streams and their

mouths could be prone to deposition of sediment loads which would reduce the capacity of the channel to pass flood flows. Chapter IV of the FEIS has been revised to include a discussion of increased flooding due to reduced channel capacity.

COMMENT: *There were several questions related to the adequacy of water quality information in the Draft Forest Plan. Specific comments address the following:*

Average water quality values are valuable, but peak readings should be included along with overall trends.

Discuss degree of the problem of nitrate levels in small streams; include how it gets into streams, how long it persists, how it leaves, where it goes, and what is being done to minimize its impact.

A general conclusion is made about dissolved oxygen without referencing any technical supporting data.

RESPONSE: Water quality values listed in Chapter III of the FEIS have been changed to include peak values and range.

The section concerning nitrate levels in small streams has been expanded.

In the late 1970s, Class I, II and III streams on the Forest were surveyed. Dissolved oxygen measurements were done as part of these surveys. Values were consistently near or at saturation levels for dissolved oxygen (at the temperature of the streams). In general, the values ranged from 11 to 12 mg/l. Water quality data collected by the U.S. Geological Survey at their stream gage site on the Olympic Peninsula had very high dissolved oxygen values; average values = 11.5mg/l, range of values = 8.0 to 13.9/mg/l.

COMMENT: *What is the basis for proposing significantly greater protection for water quality in municipal watersheds than is subsequently advocated for fish habitat?*

RESPONSE: Municipal water systems are sensitive to elevated turbidity or fine sediment levels since it is more difficult to remove bacteria by chlorination. The Health Department of the State of Washington has required municipal water supply systems that use surface water to install filtration systems if the water supplier cannot show that they have some control over activities in the watershed. This control can be through agreements or ownership. Also, water quality standards for drinking water supplies are more stringent than standards for fisheries. This is true for chemical and physical water quality parameters.

COMMENT: *The water temperature data for the South Fork Skokomish River is of questionable value for predicting the cumulative effects of timber harvest for the entire Olympic Peninsula.*

RESPONSE: Water temperature data from the South Fork of Skokomish River drainage was used as an example to analyze impact from timber harvest activities on water temperature increases since it should be the one most susceptible to adverse increases in water temperature due to past intensive timber harvesting.

However, in response to input from individuals and agencies, water temperature analyses in Chapter IV of the FEIS have been expanded to include water monitoring data and reports which have been conducted on the Forest in the past.

COMMENT: *Correct and amend document to reflect the Forest Service obligation under Federal and State antidegradation water policies regarding control and prevention of sediment pollution.*

RESPONSE: The Plan has been amended to reflect the use of Best Management Practices (BMPs) by the Forest Service to meet Federal and State water quality policies. (see Appendix J of the FEIS).

COMMENT: *Broad-level mitigation merits considerable expansion, possibly in a separate section. Specific comments addressed include:*

Scheduling and distribution may be valuable mitigation measures.

Is table III-5 a listing of needs for the whole Forest or just the northwest portion? Will future needs be inventoried and addressed?

RESPONSE: A cumulative effects analysis will be done as part of project-level planning when cumulative effects to soil or water quality values have been identified as an issue from a Forest Service activity. If the analysis shows there are significant cumulative effects, dispersion of the activities in time and space should be used to meet watershed requirements.

Appendix A of the Forest Plan provides a listing of needs for the whole Forest. The Ranger Districts have an annual ongoing program to identify watershed improvement projects. Also, existing soil and water rehabilitation and enhancement projects are identified in the Environmental Analysis to timber sales if these are within the sale area. Mitigation measures necessary to protect watershed values resulting from the timber sale are identified. Money is available from a timber sale to fund these two types of projects when they are justified.

AMERICAN INDIANS

COMMENT: *The Forest Service, during the Forest Planning process, has failed to consult with tribes who have a vested interest in water, fisheries, and wildlife resources and cultural/religious areas or products on the Olympic National Forest.*

RESPONSE: There have been many general public meetings and also many specific individualized meetings with Olympic Peninsula area Tribes. The Olympic National Forest received many excellent written responses from nearly all of these Tribes, and from many individuals, and others. We feel that the dialogue has been excellent and we have appreciated the participation and input that has led to improvement in identifying the Forest Plan issues, goal statements, and Standards and Guidelines. Please refer to Forest Plan and FEIS sections under these topics that reflect the result of this dialogue and consultation. As our standards and guidelines and monitoring sections indicate, it is our plan to continue and improve on the excellent dialogue and consultation that was part of this planning process.

COMMENT: *There is no specific plan that inventories and protects tribal archaeological and cultural resources.*

RESPONSE: We plan to survey and inventory all areas of the Forest and to continue dialogue with Peninsula Tribes to identify and protect cultural and archaeological resources. Please refer to sections on Cultural Resources and Human and Community Development in the Forest-wide Standards and Guidelines in Chapter IV of the Forest Plan. The Activity Schedules in Appendix A, and the Monitoring Plan in Chapter V of the Forest Plan also address the specific means to accomplish identified goals and objectives (see Resource Summaries and Goal Statements also in Chapter IV of the Forest Plan).

COMMENT: *The fisheries resource plays a vital role in the livelihood, heritage, and traditions of local tribes. As an agent for and extension of the U.S. Government, the Forest Service has a trust responsibility to manage fishery habitats to the extent that these fishery resources are protected, preserved, and maintained.*

RESPONSE: We agree. Chapter III and IV of the FEIS have been substantially expanded as have various sections of the Forest Plan to reflect these issues and concerns.

COMMENT: *The valuation of fisheries resources failed to take into account the economic benefits that accrue from tribal subsistence fishing.*

RESPONSE: Please refer to a similar comment/response under the Economic and Social section of this document.

COMMENT: *A management plan must be developed that clearly protects the habitat of animals the Tribes are entitled to hunt under established Treaty Rights.*

RESPONSE: The Forest Service has a primary mission and authorization to manage and maintain fish and wildlife habitat on National Forest land. This responsibility includes providing and managing habitats necessary to maintain viable fish and wildlife resources, as necessary to exercise the treaty rights held by American Indians.

COMMENT: *The Forest Service in its report fails to recognize the separate Treaty Rights of individual Tribes.*

RESPONSE: It certainly was not our intent to leave the reader with that impression. We hope that the expanded treatment of Cultural Resources, American Indians, and Human and Community Development, in various sections of the FEIS, Forest Plan, and related documents will remove any doubt that we consider this an important and key planning issue.

COMMENT: *Does the Forest Service consider Tribal Indian economic benefits derived from individual Treaty Protected Tribal resources to be justifiably subject to change under unilateral Forest Service actions? What does the Forest Service consider its responsibility to individual Tribal Treaty Rights?*

RESPONSE: We do not believe, nor do we presume to consider, "Treaty Protected Tribal Resources" to be subject to change or under unilateral Forest Service control or action. The Forest Service has a primary mission and authorization to manage and maintain proper fish and wildlife habitat on National Forest land. This responsibility includes managing and maintaining habitats necessary to provide and maintain viable fish and wildlife resources necessary to exercise the treaty rights held by American Indians. The management of these resources is not realistically a unilateral issue for any organization or entity. Considerable coordination and cooperation is essential between State agencies, affected Tribes, the Northwest Indian Fisheries Commission, and others, for effective and efficient management of these resources. Resources other than fish and wildlife pose similar management needs and concerns. The Forest Plan has made every effort to address the ICOs over which it might be considered to have a lead or primary responsibility, with recognition and provision for the needed cooperation and coordination with others, especially affected Indian Tribes.

COMMENT: *The harvesting of shellfish, elk, deer, other consumptive game species, and fish, by Native Americans is posing a serious threat to the viability and potential for sustained utilization of these resources.*

RESPONSE: We do not agree with this assessment, nor with the implications. Aside from the fact that Peninsula Indian Tribes have treaty rights, the legal standing of which has been affirmed repeatedly, there are many factors that have contributed significantly to the decline of fish and wildlife resources and many factors continue to pose a threat to their viability. The threat to fish and wildlife resources is well documented and due to degradation and loss of habitat, pollution, human use and encroachment, detrimental land use, just to name a few major factors among many. The commentor also must not be aware of the fine leadership and efforts that have been made by Tribes, individually and collectively, in fishery research, habitat protection and enhancement, hatchery operations, etc. Indian Tribes and Commissions are also cooperating and working closely with State agencies, and others to regulate seasons, limits, and catches, to insure that viable fish and game populations are maintained.

COMMENT: *The decline in fishery resources is not due to the utilization of this resource by Native Americans.*

RESPONSE: We agree, please refer to the previous comment and response.

CULTURAL RESOURCE MANAGEMENT

COMMENT: *The Forest Plan should show a summary of known and potential cultural resources and present a plan with priorities for systematic and comprehensive investigation/inventory, location, evaluation, protection, interpretation, and management of cultural resources.*

RESPONSE: We agree that the DEIS did not adequately address these concerns and planning documents have been updated and revised accordingly. Please refer to Chapter III of the FEIS under Historical and Cultural Resources for a perspective on known and potential resources, the need for comprehensive planning, and current practices employed in our cultural resource management program. For added insight, please refer also to the Forest Plan in Chapter IV for discussions on cultural resources under Goals for Resource Programs, Resource Summaries, and Standards and Guidelines. Chapter V of the Forest Plan includes a monitoring section and Appendix A, Activity Schedules, outlines specific plans for a systematic and comprehensive approach for accomplishing the various elements of our program.

COMMENT: *Cultural resources are not considered in the list of planning questions and not linked to management areas. There appears to be a general lack of integrating cultural resources in the planning process.*

RESPONSE: Please refer to Appendix A of the FEIS where cultural resources were identified in the analysis process as an important management concern that needed resolution in the Forest Plan. As a result, cultural resources was fully integrated into the planning process. Please refer to Chapter IV in the Forest Plan and the section on Forest-wide Standards and Guidelines that are linked to all management areas, and the Standards and Guidelines that are also linked to specific Management Area Prescriptions. The importance of these resources in the planning process is also reflected by the recognition and inclusion of American Indian concerns as a key planning issue following response and input to the DEIS. The integration of these cultural resource values into the overall planning process were the key items that helped mold responsive management alternatives and ultimately selection of the preferred alternative.

COMMENT: *Cultural resource management program activities should be conducted in a manner that provides appropriate professional supervision and review.*

RESPONSE: We agree. Our Cultural Resource Technician(CRT) training and certification programs are supervised and conducted by an interdisciplinary cadre of professional historians, anthropologists, architects, archaeologists, and others. Our instructors are in-service professionals, contractors, and many highly regarded consultants. Professional oversight and supervision of other program elements has been accomplished in a variety of ways over time. We have shared professional resources with other Forests, have employed our own archaeologist, have shared resources with the Olympic National Park, have looked to guidance and assistance from our Regional staff, sought professional advice and council from SHPO, and have contracted for professional services when needed. It is fair to say that contracted professional services have largely, but not exclusively, filled our need in many phases of cultural resource management, including training, resource evaluations, survey work, testing and recovery work, etc.

COMMENT: *The Forest Plan states that old-growth cedar is important to Native Americans for traditional uses and religious reasons. There is no plan for providing Native Americans with a perpetual supply as*

agreed by treaty. The significance of old-growth to Native Americans and their culture was completely ignored. Why?

RESPONSE: We agree that this issue was not adequately addressed in the DEIS. American Indian concerns were included as a key planning issue in the FEIS preparation process largely as a result of comments like these, and our dialogue with affected Tribes. Planning documents have been updated and revised accordingly. Please refer to Chapters III and IV of the FEIS and Chapter IV of the Forest Plan. Please take special note of the Forest-wide Standards and Guidelines in Plan Chapter IV. Human and Community Development, that speaks to the availability and use of western red cedar by American Indians.

COMMENT: *The DEIS addresses the old-growth cedar supply problem and the need of this material by Native American Tribes, but no standard or guideline protection is forthcoming from this document.*

RESPONSE: Please refer to preceding comment/response, and specific Forest-wide Standard and Guideline number 6 in section I. Human and Community Development.

COMMENT: *The Forest-wide Standards and Guidelines for ".....cultural resources are listed under Recreation rather than as separate resource with its own intrinsic value."*

RESPONSE: Cultural Resources was previously presented under Recreation as a matter of in-Service convenience for formatting program and budget elements. There was no intent to suggest or imply that cultural resources somehow have a subordinate value, concern, or standing. However, all planning documents have been revised to present cultural resources as a separate program element and we agree this is more meaningful and clear, especially to the general public. We appreciate the comment and suggestion.

COMMENT: *The inventory process on the Olympic National Forest has failed to identify a single prehistoric archaeological site. The Forest Plan should address why these sites are not being found and identify means for overcoming this situation.*

RESPONSE: Information and data on prehistoric archaeological sites are considered sensitive information and locations and data are generally not publicized or disclosed for obvious reasons. It is true that not many prehistoric archaeological sites have been discovered on the Olympic National Forest. However, one site has been placed on the National Register of Historic Places and another site is eligible and will be nominated. Inconclusive evidence has been found at several other locations on the Forest. Please refer to Chapter III of the FEIS and the section on Historical and Cultural Resources which gives a summary of our program, including perspectives on sites located to date; survey design, strategies, methodologies; and our efforts for improving effectiveness and efficiency.

COMMENT: *Timber harvesting provides opportunities for identification of previously unknown cultural resource properties by removing vegetation and exposing underlying materials. How has this been implemented in the inventory process and why has it not been working?*

RESPONSE: Please refer to Chapter III in the FEIS and the section on Historical and Cultural Resources. As but one element of our strategy, any available, exposed areas are carefully examined in advance of, and often during, project implementations. We believe our strategy is working, despite no sites being found. There may be any number of reasons why sites are not found and an implied correlation between

numbers of found sites and the validity of employed survey strategies/designs would seem premature and an oversimplification.

COMMENT: *There seems to be an implicit assumption that the density of vegetation has always been a factor limiting human use of the area.*

RESPONSE: It was not our intention to so imply or suggest. The referenced text in Chapter III has been modified and/or removed for clarity.

COMMENT: *Cumulative downstream impacts on archaeological resources, due to logging and associated watershed degradation, need to be considered in environmental and cultural resource management processes and procedures.*

RESPONSE: We agree that all cumulative downstream impacts need to be considered without limiting the assessments to logging impacts, however. Significant impacts can also be related to natural landslides, wildfires, blowdown from severe windstorms, and unusual weather events such as floods, etc.

COMMENT: *A competent, professional archaeologist should be employed to thoroughly survey, plot, and report on the archaeology of the Olympic National Forest. A supervised, systematic approach to cultural resource inventory is still not in place on the Olympic National Forest. This issue should be fully and adequately addressed in the EIS.*

RESPONSE: Our treatment of cultural resources in the DEIS may have left some with these impressions. All planning documents have been substantively revised and expanded to portray a more accurate situation. Please review especially the Forest-wide Standards and Guidelines in Chapter IV of the Forest Plan, Chapter III of the FEIS, and the Activity Schedules in Appendix A of the Forest Plan. There are several other areas in the DEIS and Forest Plan that also address important elements of our program such as Chapter IV of the FEIS; Goals, Resource Summaries, Research and Inventory Needs, in Chapter IV of the Forest Plan; and corresponding discussions on American Indian issues in these same references. As Chapter III points out, our professional overview study of the entire Forest was completed in 1978, and since then over 50,000 acres have also been professionally surveyed, including evaluations and documentation of any resources that were found. Additionally our Cultural Resource Technicians have performed reconnaissance surveys on two to five thousand acres each year for proposed project activities. Please refer to a preceding comment/response about professional supervision and review of our program.

COMMENT: *Cooperative cultural resource management efforts between the Olympic National Park and the Olympic National Forest should include signing and interpretation of the 1890 O'Neil Expedition, the Press Expedition, Spruce Railroad Division.*

RESPONSE: We wholeheartedly agree with the expressed philosophy, but not especially with the cited examples. Very little National Forest administered land is pertinent to the O'Neil and Press Expeditions, and only limited opportunities exist for cooperatively signing and interpreting the Spruce Railroad Division. The expressed view is well taken, however, and mirrors our sentiments and intent for fostering and promoting cooperative efforts whenever possible. Please refer to Chapter III of the FEIS, and our Goals for Resource Programs section in Chapter IV of the Forest Plan that speak specifically to this concern. We fully intend to build on and improve the fine cooperative relationship we have enjoyed with the Olympic National Park. We have shared training programs, information and data, and professional resources. Most recently, for example, the National Park Service shared a research design and plan for the Olympic Peninsula titled,

"The Evolution and Diversification of Native Land Use Systems on the Olympic Peninsula." We will cooperate with the National Park Service, and others, in all aspects and phases of cultural resource management, including signing and interpretive work.

COMMENT: *Why are cultural resources beyond the scope of the planning process? Please explain.*

RESPONSE: We agree that the statement was rather poorly worded, and it has been revised.

COMMENT: *The DEIS should explain the circumstances whereby a site may be considered to possess local significance and interpretive potential yet not qualify for Nomination to the National Register of Historic Places.*

RESPONSE: The DEIS made no reference to "local significance". The intent of the statement was to address "local interest" in resources that by any measure or criteria would be ineligible for the National Register. The statement has been removed to avoid any unnecessary confusion.

COMMENT: *What is being done to evaluate, protect, preserve and manage considerable remains of the historic "equipment, cabins, trails, ... and shelters" mentioned in the DEIS?*

RESPONSE: The referred to statement in Chapter III, page 100, of the DEIS was an attempt to provide an overview statement or a frame of reference. Please refer to the preceding Current Situation section in the FEIS for an answer to the question. There are also several sections in Chapter IV of the Forest Plan that address the means for accomplishment.

COMMENT: *How will the Forest be able to inventory all historic and cultural resources by the midpoint of the first decade after implementation of the Plan? Will it involve systematic survey of areas other than timber sales, and be based on a Forest or Peninsula-wide research design?*

RESPONSE: This statement was in error and it has been removed. Please refer to Chapter III of the FEIS and Chapter IV of the Forest Plan for an accurate perspective on the various elements presented in this comment. Appendix A, the Activity Schedules in the Forest Plan, provide considerable detail on the scheduling and applicable timeframes.

COMMENT: *The stated goal for cultural resources provides for all but their evaluation. It is important that discovered resources are evaluated in terms of their physical, historic, or research context, and that a data bank approach for comparing, evaluating, and making decisions about cultural resources is limited by the absence of historic and prehistoric contexts.*

RESPONSE: The referenced goal statement inadvertently excluded evaluation. We agree with this comment and have expanded all planning documents accordingly.

COMMENT: *A focused effort is needed for systematic identification, evaluation, treatment, and planning beyond the project level for the preservation, protection, and enhancement of cultural resources.*

RESPONSE: We agree, and the planning documents have been revised and expanded accordingly. Please refer especially to Chapter III of the FEIS, and Chapter IV of the Forest Plan. Some of the foregoing comments and responses also address these concerns.

COMMENT: *Does the referenced overview (a) provide a theoretical context, critically assessing the strengths and weaknesses of the regional data and interpretations, (b) predict the occurrence of various resource classes, and (c) offer a strategy and priorities for investigating logical geographic areas and themes beyond the project level?*

RESPONSE: To a degree. The Forest Overview formed the basis for our inventory program and serves as the foundation for our systematic forest-wide survey strategy. This strategy considers the various types of sites known or suspected in the area, the probable location of these prehistoric and historic sites, and those factors which control our ability to locate them. The strategy is designed to be applicable to the entire Olympic National Forest. It is implemented on a project specific basis, but also serves as a means to establish priorities for surveying logical geographic areas and themes beyond project levels. Evaluation, research, theoretical contexts, and assessments of data are best said to be still in a formative or developmental mode. We are constantly obtaining new and better information and our methodology is concurrently improving and becoming more effective and sophisticated with time.

Some of the data and information pertinent to these questions are being obtained on a local level and some of it on a Regional basis as well, as one might expect. Some research issues for inventory, evaluation, and data recovery are designed on a Regional basis under the Inventory Strategy, the Lithic Scatter Programmatic Memorandum of Agreement (PMOA), and other similar documents.

Questions relative to Regional research goals are taken from these Regional documents and focussed for sites on the Olympic National Forest. Besides our growing data base, and development of theoretical contexts, survey strategies/designs, and validity assessments of data and interpretations, we have shared and incorporated parallel and often complementary efforts by the Olympic National Park. Some of these shared endeavors serve our program well. One fine example is the recently completed report titled the "Evolution and Diversification of Native Land Use Systems on the Olympic Peninsula: A Research Design." Our survey strategy/design by nature needs to be a flexible tool that can incorporate and periodically update new findings, data, methodologies, etc. and build on successes, authenticated and verified research questions, with critical assessments of strengths and weaknesses. An update of our survey strategy/design is essential as noted in Chapter II of the Plan in the section on Research and Inventory Needs.

UNDEVELOPED RECREATION

COMMENT: *There were several comments concerned with areas allocated to certain types of recreation, including:*

Several of the alternatives have some A1A areas that are already roaded or have roads under construction. It's misleading to allocate these areas to non-motorized recreation use when roads and timber harvesting have already precluded it.

The proposed Plan would leave over 80 percent of the total unroaded areas in an unroaded condition by the end of the Plan period . This is contrary to the intent of the 1984 WA Wilderness Act and the direction of the RPA program pursuant to the Amended Resources Planning Act.

The Deer Ridge area has been designated A1B, admitting ORVs. The Deer Ridge trail accesses the Olympic National Park. This area should be designated A1A in order to remove temptation for ORV users to continue to ride into the Park, on this trail, and adjacent land.

There is some confusion with Undeveloped Recreation Motorized allocation, A1B. Some of these areas involve trails that are currently closed to motorized vehicles, yet they are classified to a Motorized allocation. Why give them a "motorized" allocation when motorized use is not permitted?

The Mt. Washington area is allocated to Undeveloped Recreation Non-Motorized, yet the trail is currently open to motorized vehicles. Will the trail be closed to motorized vehicles?

RESPONSE: A few of the A1B Undeveloped Motorized Recreation areas will have portions of the area that are not accessible to motorized vehicles due to steep topography and dense vegetation or they may even have trails that are closed to motorized vehicles. However, due to a road within the area, the major recreation emphasis and influence will be toward motorized recreation.

Several A1B areas in the Draft Plan have been changed to A1A Undeveloped Non-Motorized Recreation. These changes were made because there was no motorized use allowed on trails and cross-country travel by motorized vehicles was not possible due to steep terrain and dense vegetative cover within these areas.

Several trails that were open to a particular use such as motorized vehicles in the Draft Plan will be closed to that use in the Final Plan. Reference Forest-Wide Standards and Guidelines for reasons for trail closures. Table III-26 in Chapter III of the FEIS provides a detailed list of which trails are closed to a given use.

COMMENT: *A1A, A1B and A2 "buffer" allocations along Wilderness boundaries are in direct conflict with the spirit and intent of the 1984 Washington Wilderness Act.*

RESPONSE: Some of the unroaded areas which are adjacent to the National Park and Forest Wildernesses are allocated to Undeveloped Motorized and Undeveloped Non-Motorized recreation uses. These areas are intended to provide unroaded Primitive and Semi-Primitve recreation opportunities outside of Wilderness. These allocations are well within the "spirit and intent" of the Act which states that the purpose of the Act is to "insure that certain other National Forest System lands ... be available for non-Wilderness multiple uses." Both the DEIS and FEIS provide a range of management alternatives for a variety of non-Wilderness resource mixes. They may range from undeveloped recreation areas to highly developed and intensively managed areas. Refer to Appendix C for a display of the mix of uses each unroaded area

has been allocated to under each alternative. Additional information on unroaded areas can be found in Chapters II, III and IV of the FEIS and Appendix C.

COMMENT: *There were several comments concerning the supply and projected demand for recreation, including:*

Opportunities for non-motorized recreation is a critical issue because current use levels exceed levels that should provide for Primitive and Semi-Primitive social settings.

The planning assumption that the demand for Primitive and Semi-Primitive recreation will be met at a reduced level of quality is not valid.

It is inconsistent that the Plan acknowledges that while the overall opportunity for undeveloped roaded recreation will increase it is anticipated that the quality of undeveloped roaded recreation will decrease.

The Plan admits that recreation will become more important in the future. However, the importance will be reduced by the relative scarcity of roadless recreation.

Information is out-of-date. I strongly disagree that undeveloped recreation should be primarily concerned with unroaded areas.

RESPONSE: The Forest currently has over 2,000 miles of road providing motorized access to over 70 percent of the Forest. Additional roads will be constructed in the future accessing additional lands. In general, the Forest will continue to meet demand for developed and undeveloped roaded recreation. However, some types of recreational use within the roaded portion of the Forest will not be met until facilities are planned, funded, and developed. ORV use is an example. The Forest is currently unable to meet the demand for undeveloped unroaded recreation and as this demand increases and the unroaded acres decrease, the Forest will continue to be unable to meet the demand for undeveloped unroaded recreation. As a result, the visitor's Primitive and Semi-Primitive recreational experiences will continue to be impacted due to higher user densities; possible restrictions imposed by management to limit user density; and some visitors may want to seek these types of recreation experiences elsewhere. Refer to Table III-30 in Chapter III of the FEIS for a summary of existing and projected demand by ROS class.

COMMENT: *Use of the 1979 SCORP and 1980 use data does not provide an adequate basis for the analysis of recreation supply and demand. The 1985 SCORP is more relevant and should be used.*

RESPONSE: The FEIS recreation demand projections were updated using the latest edition of the State of Washington SCORP and using the Forest's 1986 RVD use figures. Refer to Table III-33 of the FEIS.

COMMENT: *Forest Service management activities have a tremendous impact on recreation use and needs. This needs to be discussed in the EIS.*

RESPONSE: Please see the recreation section of Chapter IV of the FEIS for a discussion of "Significant Interactions." Also see Chapter IV for a discussion of the effects of the alternatives on recreation.

COMMENT: *I urge the Forest to heavily publicize the prohibition of the taking of any product for commercial sale without a permit including brush and fungi.*

RESPONSE: A special use permit is required to take any Forest product from National Forest lands for commercial purposes. Publicity will be done through normal channels such as news releases and articles.

COMMENT: *I think it would be more useful to compare projected demand of recreation resources with theoretical supply. The Forest Service does not document this for P or SP recreation outside wilderness; this appears to be a significant omission. Using the percentage reductions of P and SP ROS calculated capacity of each alternative by subtracting the percentage reduction from the present unroaded areas' theoretical capacity of 51,400 RVDs. This assumes that theoretical capacity for each alternative will be proportional to the alternatives available acreage in the appropriate ROS class. These figures manifest substantial disregard for recreationists.*

RESPONSE: Refer to Chapter III, FEIS under "Recreation" for comparison of RVD capacity and projected demand by ROS class and by decade. Capacity has now been shown for all ROS classes outside of wilderness.

COMMENT: *I saw nothing in the draft EIS relating specifically to bicycles. Perhaps there are some trails that are amenable to bicycle use that wouldn't be amenable for ORVs or maybe some ORV trails could be scheduled for closure on certain days of the week to provide solitude for cyclists.*

RESPONSE: Mountain bicycles are a relatively new use occuring on National Forest lands. See Chapter III of the FEIS for a brief discussion about this new use. Mountain bicycles are prohibited on wilderness trails as they are considered a form of mechanical transportation. Refer to Table III-30 for a list of trails open to mountain bicycles.

COMMENT: *There are rockhound clubs in Port Angeles, Port Townsend, Gig Harbor, Aberdeen, Montesano, Shelton, and our own club. There is interest in this plan as to how it may affect our recreational hobby. You do not cover the recreational rockhound as such. Is it your intention to include such activity in your plans?*

RESPONSE: Rockhounding is a undeveloped recreation activity and is recognized as a legitimate use of National Forest lands and would be allowed to continue in each of the alternatives. Currently, there are no restrictions for rockhounding on the National Forest for personal use, however, a special use permit would need to be obtained if rockhounding is done for commercial purposes.

COMMENT: *Under the section "Affected Environment" III-165, the first full paragraph mentions that a citizen has a "statutory right to explore vacant unwithdrawn public land for locatable minerals", but the minerals named are not what we generally are interested in.*

RESPONSE: We do not have the latitude to administer these resources contrary to the applicable laws.

COMMENT: *Regarding the conclusion that Primitive and Semi-Primitive acres on the Forest will minimize and mitigate overuse in the Park, that is a nonsensical and false assumption, since it is widely recognized that Park "backcountry" use has been declining for a significant period of time.*

RESPONSE: The decline of backcountry use in the Olympic National Park may be the cause of any one or combination of factors (e.g. overcrowding or lack of solitude may cause people to seek unroaded recreational experiences elsewhere) and, therefore, does not necessarily indicate that there is an overall

decline in the demand for Primitive and Semi-Primitive recreation opportunities on the Forest or Peninsula. An area that is experiencing a decline in use does not indicate whether the current use of the area is under, at or above existing capacity. In several areas, the Park has had to require permits to limit use to an acceptable level.

COMMENT: *The need for primitive recreation experiences on the Olympic Peninsula are more than adequately preserved for even the future, considering the huge Olympic National Park and Olympic National Forest Wildernesses. We do not need to use anymore timberland for this kind of use.*

RESPONSE: Refer to Chapter III of the FEIS, Table III-33 for projected use.

COMMENT: *There were several comments concerning the lack of trail information in the Plan. These included:*

Trails are barely mentioned. List current and proposed trails.

Indicate how the chosen alternative will affect each trail.

List trails by user type and which uses are legally prohibited and which trails are subject to logging.

The Plan does not provide for any trail development on the Soleduck Ranger District.

The Plan doesn't give attention to recreational needs of an ever-increasing number of people who use trails.

RESPONSE: Management of existing trails and development of proposed trails remains the same in each alternative. However, the environment which existing and proposed trails, outside of Wilderness, pass through will vary according to the management emphasis of each given alternative. The environment could vary from heavily altered with noticeable management activities such as roads and timber harvest units to natural appearing where appropriate management activities blend with the surrounding area and are generally unnoticed. Detailed information for each trail has been added to the FEIS. A complete listing of existing trails can be found in Chapter III of the FEIS in Table III-28. A complete listing of proposed trails can be found in Table III-30. These Tables provide information concerning trail name, number, length, and reasons for trail closures. Refer to "Direct and Indirect Effects of Alternatives on Recreation" in Chapter IV to see how the different alternatives affect trails.

COMMENT: *The 6th edition of SCORPs Summary of Activity/Facility Needs ranks District 1 (Clallam and Jefferson) next highest in the State in terms of the least amount of unsatisfied need for backpacking (22 percent) and yet exhibits the greatest amount of unsatisfied need for day hiking. We believe this indicates a need for more roads penetrating close to the Park boundary with trailheads and campgrounds to accommodate the 90 percent greater numbers of day hikers.*

RESPONSE: More roads accessing the Park are not the solution to more opportunities for day hiking. The best way to meet demand for day hiking is to provide adequate trails that meet the needs of day hikers. Most day hikers can and do utilize "backpacking" trails or portions thereof. Refer to Table III-28 and 30 in the FEIS for miles of existing and proposed trails.

COMMENT: *Trail maintenance & upgrading should accommodate horse traffic. Bridges are needed over most larger streams (e.g., Dungeness) to allow safe crossing during runoff and high flows.*

RESPONSE: For those trails which have pack and saddle stock as a primary management objective, trail standards for construction and maintenance are implemented to meet the needs of this user group. Log stringer bridges are used only when there is no suitable place for a horse ford, the Gray Wolf bridge is an example. The Dungeness crossing does have a suitable horse ford,however, high water may prevent horses from crossing the stream at that time.

COMMENT: *There were many comments involving ORV use of trails and/or areas on the Forest. Specific comments included:*

The Upper So. Fk. Skokomish and Dry Creek trails should be closed to motorized vehicles as they access the Park or a trail already closed to MVs.

Concern with trail use by ORVs and the resulting conflict between users and resources. Also, the loss of trail miles due to road building.

The Plan needs to discuss 4-wheel drive vehicles.

The Plan doesn't address the Executive Order or Forest Service Manual involving minimizing user conflict and resource damage.

It is incomprehensible to transfer substantial acreage to use by ORVs due to lack of demand.

Keep ORVs out of the Dungeness Valley because of its instability of unconsolidated glacial deposits. ORVs would over time cause slides and slumps. ORVs have already damaged Mt. Townsend.

Concerned about opening up upper elevation areas, meadows, and such to motorized trail use.

How will ORV designated areas be affected in terms of deterioration of native plant communities?

The Upper So. Fk. Skokomish trail should be closed to ORVs because it accesses the Olympic National Park.

It appears motorized activity in the Upper So. Fk. Skokomish area will impact the surrounding "non-motorized" areas. Is this true? Has it been evaluated?

The Mt. Jupiter trail should be closed to ORVs because it accesses Wilderness.

Deer Ridge trail should be closed to ORVs because it accesses the Olympic National Park.

RESPONSE: ORV use is considered a legitimate use of the Olympic National Forest and opportunities for this type of use will be developed and managed in accordance with Title 36 Code of Federal Regulations and consistent with the Olympic Peninsula ORV Comprehensive Study. Criteria for trail closures to motorized vehicles can be found in the Forest-Wide Standards and Guidelines under Facilities. Trail closures and the reason for the closure can be found in Table III-28 in Chapter III of the FEIS. Existing trails that are open to motorized vehicles, pack and saddle stock and mountain bicycles will be monitored. If through the monitoring process it is determined that significant adverse impacts are affecting the resources or other forest visitors on a given trail, then that trail will be closed to the use that is causing the impacts. Individual site-specific decisions concerning ORV facilities and use will be analyzed in a project-specific environmental analysis. Such site-specific decisions are not within the scope of this Study.

COMMENT: *Concerns were expressed over development of horse camps. Specifically:*

The Slab Camp area was felt to be an appropriate area for a horse camp. The minimum facilities would include parking and turn around area for trailers, day use and pull thru campsites for approx. six rigs. Additionally, outhouses, picnic tables and a loading ramp for stock would be required.

The Silver Creek Shelter area is also believed to be a desirable area for a horse facility. A proper facility would include all items mentioned for Slab camp as well as hitching posts. The area could support approx. 15 pull thru camp sites.

Other areas that lend themselves to accommodating horse facilities could include: Dosewallips near Elkhorn campground, Tunnel Cr. area, Wynoochee area, Gray Wolf area, and the Bogachiel area. It is felt that these areas should at least contain a stock ramp and turn around for horse trailers.

RESPONSE: There are a couple of areas on the Forest that are providing excellent opportunities for pack and saddle stock. The Forest Plan has identified a couple of areas that will provide for camping with pack and saddle stock. One site currently exists in the Brown Creek area on the Hood Canal Ranger District. There is also a potential site identified in the northeastern corner of the Quilcene Ranger District. The Slab Camp site is not currently identified as a proposed developed site. There are also over 155 miles of existing trail that are currently open to pack and saddle stock and additional trails are proposed for future development. Refer to Tables III-28-30 for sites and trails for pack and saddle stock. Facilities, such as unloading ramps and hitching posts, will be considered on an individual basis and where warranted will be developed. Facilities are currently being developed at the Duckabush trailhead and Brown Creek horsecamp.

DEVELOPED RECREATION

COMMENT: *Provide a list of open, closed, and proposed campgrounds.*

RESPONSE: Reference Tables III-26 and III-27 in Chapter III of the FEIS for a complete listing of existing and proposed developed recreation sites. Existing recreation sites on the Forest may at any time be closed to public use for such reasons as contamination of water system, tempory hazards, sanitation problems, or lack of appropriated funds to operate and maintain the site. These types of closures are generally short term and the site will be opened to public use as soon as the problem has been corrected or sufficient funds allocated to operate the site.

COMMENT: *Standards and Guidelines for protection of potential developed recreation sites should be added.*

RESPONSE: A new Standard and Guideline has been added to the A3 Developed Recreation Site management prescription that will call for all potential sites to be retained in their natural character. Reference A3 management prescription H. Protection, #5. See Table III-26 in Chapter III of the FEIS for a complete listing of Proposed Developed Recreation Sites.

WILDERNESS

COMMENT: *Many and varied opinions were expressed on the Wilderness issue, including:*

There is enough Wilderness now.

More protection is needed for Wilderness.

More areas should be recommended for Wilderness.

The Forest should develop Limits of Acceptable Change (L.A.C.) criteria and use them in Wilderness management.

Need to develop an inventory and monitoring program for Wilderness.

Discussion of Wilderness ROS has flawed logic in units used:

Buffers for Wilderness areas should be maintained.

There is no need for Forest Service Wilderness, the Park provides enough.

Return current Wilderness to "Multiple-use" management.

The Washington Wilderness Act of 1984 deemed that the remaining roadless areas need not be managed to preserve any Wilderness characteristics for subsequent classification under revised or second generation plans. This Congressional direction is in conflict with the disposition of roadless areas as proposed in the Plan. The map of the proposed alternative exhibits a majority of boundary miles classified in management areas A1A, A1B and A2 situated as Wilderness buffers in direct conflict with the spirit and intent of Sec. 9, P.L. 98-339.

RESPONSE: The Washington State Wilderness Act of 1984 created five Wildernesses on the Olympic National Forest from the available roadless areas. Refer to Chapter III of the FEIS for a description of these Wildernesses. The Act also stated that the purpose of the Act was to "insure that certain other National Forest System lands in the State of Washington be available for non-Wilderness multiple uses." The DEIS and FEIS have examined a range of possible multiple uses of the current unroaded areas that were not classified as Wilderness in 1984 and the allocations in the Preferred Alternative represent a wide range of public interest concerning how the remaining unroaded areas should be managed. Refer to Appendix C for a complete review of each unroaded area and the environmental consequences of the various alternatives on these unroaded areas.

As part of the implementation schedules for each Wilderness, the Limits of Acceptable Change process will be implemented. The process will be coordinated with the Olympic National Park to provide consistency between the two agencies where practical and possible.

The Wilderness Resource Spectrum (WRS) has been updated in the FEIS for the purposes of providing a better estimate of Wilderness capacity. The WRS classification discussed in Chapter III of the FEIS was used only to develop an estimate for Wilderness capacity. The actual Wilderness WRS classes are described in the Wilderness Standards and Guidelines under the heading management intensities. These WRS classes will be further refined during the implementation of the LAC program.

The unroaded areas that are allocated to uses that will retain their unroaded condition will be available to be considered for Wilderness during the next generation of Forest Planning.

COMMENT: *What would be the advantages/disadvantages of transferring management of Wildernesses to the Park Service?*

RESPONSE: There would be very few advantages/disadvantages of transferring management of Wilderness to the Park. Both agencies are directed to manage Wilderness in accordance with the Wilderness Act of 1964. Some major differences between Forest and Park Wilderness are hunting would not be allowed within the Park Wilderness while it would be allowed in Forest Wilderness, dogs and firearms are not allowed in the Park Wilderness; overnight permits are required for backpacking in the Park Wilderness but are not currently required in the Forest Wildernesses. The Park is currently using chainsaws to perform trail maintenance while the Forest is utilizing primitive type tools such as cross-cut saws. There were some areas that were transferred from the Forest to Park and Park to Forest in a Forest/Park boundary adjustment in 1986. Some of the Wildernesses were involved with this boundary adjustment. The objective was to get Forest/Park boundaries, where practical, on topographic or hydrographic boundaries. Refer to FEIS Chapter III, "Wilderness, Historic Trends," for information about the Forest/Park boundary adjustment.

GENERAL PLANNING

COMMENT: *Widely differing viewpoints over the definition of multiple use and the success of the Olympic National Forest in achieving multiple use have been offerred. The following two comments summarize the two commonly expressed positions on this issue:*

NFMA, the Wilderness Act, and the multiple-use sustained yield act provide that land uses such as recreation, watershed, wildlife, fish, and wilderness are EQUAL uses of the National Forests with timber, they are not subordinate to timber. The Forest Plan clearly shows that the Forest is being overcut relative to the maintenance of a full range of multiple-use values.

We wish to suggest that you reconsider your proposed Forest Plan with emphasis on a more balanced multiple-use management concept of your land and timber resources. Your proposed plan has virtually destroyed timber harvesting and is grossly slanted to the recreation and preservation needs. The Forest Service, along with protecting the fish, wildlife, water, recreation, and other resources, must protect the jobs, taxes, and nationally needed wood products it produces.

RESPONSE: Obviously there is no single, universally accepted definition of multiple use management. The Olympic National Forest Plan attempts to achieve a balance among the many and sometimes competing uses of the Forest. The Plan is consistent with applicable laws and regulations and strives to maximize the net public benefits from the Forest.

COMMENT: *A departure alternative to meet RPA targets is not appropriate unless a separate nondeparture RPA alternative is also presented for public review. Failing to do so denies reviewers the opportunity to evaluate a feasible alternative with strong commodity value outputs in concert with a balanced program of high value, accessible recreation benefits and practicable road management options.*

RESPONSE: Our analysis has determined that a severe departure was the only means possible to achieve the timber targets specified in the 1980 RPA high bound alternative. Given the additional constraints of spotted owl habitat areas in the FEIS, this volume level has become unachievable even with the departure philosophy modeled in the DEIS.

COMMENT: *People seem to have gotten the mistaken notion that it is the responsibility of our National Forests to provide for the local economy. Perhaps the general public should be educated that the Forest Service is mandated to manage watersheds, wildlife and developed and undeveloped recreation for the entire nation.*

RESPONSE: The national forests were established to provide a variety of values. Among the many benefits of forest management is the stabilizing effect on the economies of small resource dependent communities. Although not the primary goal of the national forests, concern for local, regional, and national economic growth are legitimate aspects of national forest management.

COMMENT: *Planning issues should not have been reduced to "planning questions". The process of boiling down the issues has become a hindrance to informed public comment on the alternatives. The issues are out of balance because eight out of ten planning questions infer that reductions in timber harvest would be necessary.*

RESPONSE: The planning "questions" are nothing more than the primary issues phrased in the form of questions. We do not see how this would in any way pose a "hindrance to informed public comment on the alternatives". Many of the planning questions address the relationship between timber and other forest resources. This does not infer that "reductions in timber harvest would be necessary", only that various levels of timber harvest will have associated effects on the other forest outputs. Display of these expected relationships, as in Chapter IV of the FEIS is key to providing information for the evaluation of alternatives.

COMMENT: *I don't think the study represents a very honest attempt to present an objective basis for decisionmaking. The plan continues a long term bias toward consumptive use of forest resources. The public should have more of an influence on how the national forests are managed.*

RESPONSE: An extensive public involvement process was followed in the development of this Plan. This process provided ample opportunity for concerned citizens to become active in the formulation of the Plan and to influence the final outcome. The public involvement process on the Olympic NF was consistent with the guidelines and requirements of NEPA and NFMA. Please refer to Chapters II and IV of the FEIS for display of the alternatives considered and their effects.

COMMENT: *If it is true that both the Preferred Alternative and the "Community Stability Plan" are below the optimum sustained yield level, we need to better understand why the Forest Service recommends Plan C and what the tradeoffs are.*

RESPONSE: If by "optimum sustained yield level" it is meant *maximum* sustained yield level, it must be understood that the selected Plan alternative is not designed to maximize timber production or any other forest output. The mandate of the NFMA regulations is to maximize "net public benefits" considering all priced and non-priced outputs. The selected alternative is felt to have the highest net public benefits even though it may not produce the greatest possible level of any single resource.

COMMENT: *If you are really going to base forest planning on public opinion, then let's ensure the majority opinion guides the planning process. Place the alternatives on a ballot for public vote (statewide at a minimum).*

RESPONSE: The National Forest Management Act specified that the forest planning process provide an opportunity for public involvement in plan development and review. It was not the intent of Congress to have this involvement take the form of a public ballot with a "majority rule". The Olympic NF process is consistent with NFMA and NEPA requirements and guidelines.

COMMENT: *The Olympic National Forest Plan had a lack of public involvement, particularly in the development and use of the Management Requirements. This is in violation of the intent of the National Forest Management Act.*

RESPONSE: The Olympic NF actually had an extensive public involvement process. Concern over development and use of the management requirements (MRs) led to the issuance of a Supplement to the DEIS which further addressed MRs. A 90 day public review and comment period followed the release of this Supplement. All public involvement procedures on the Forest were consistent with NEPA and NFMA. Please see Chapter I of the FEIS for a detailed review of the public involvement activities associated with the Forest Plan.

COMMENT: *The Plan does not meet the requirements of law. Relevant legislation mandates that forest plans should not be independent documents prepared by local forest supervisors. Each forest plan must meet the management objectives mandated by Congress. This "top-down" process is essential to provide continuity to all Forest Service programs. Congressional intent indicates the objective of pursuing, nurturing, and developing the nation's forest resources and local dependent communities.*

RESPONSE: The Olympic NF followed all applicable laws and regulations including NEPA and NFMA in the development of the Forest Plan.

COMMENT: *I see the long term profit from fisheries and recreationists outweighing the short term gain from harvesting the lower Dungeness trail (Middle Dungeness River). Logging is not advisable according to your 1979 record of decision on the Canal Front Land Management Plan. There is natural instability of unconsolidated glacial deposits, slumps, slides, and mass failure resulting from these activities and/or natural occurrences resulting in water quality degradation, and loss of valuable fisheries resource. Upon cutting the trees, reforestation would be impossible and there would be a complete loss for fisheries and recreationists.*

RESPONSE: Under the Final Plan there will be no timber harvesting along the lower Dungeness River trail. This area of the river is being recommended for Congressional designation under the Wild and Scenic Rivers Act and there will be no harvesting in the river corridor (1/4 mile on each side of the river). Areas above the corridor will be managed for scenic quality and watershed values. Some timber harvesting may take place but it will be only be permitted where it is consistent with visual and water quality considerations.

COMMENT: *It seems that the people who live and work here don't have much say in the decision-making process. The population of Quilcene or other local communities cannot match in power and numbers the influence of the Sierra Club and other large environmental organizations. The local people should have more say in what happens to the land they live next to and depend on for their living rather than out of state interests who care nothing and/or know nothing about the area's complex uses and economic effects for neighboring communities.*

RESPONSE: The Olympic NF is a *national* forest. All citizens of the United States therefore have a stake in the management of the Forest. We recognize that the effects of this Plan have greater direct impact on local residents. We therefore have made an effort to involve local communities and interests directly in the Plan formulation and review process. Many meetings have been held with a wide variety of local interest groups and residents. The feedback we have received from these meetings and from the public responses to the Draft Plan has had a direct influence on the decision-making process.

COMMENT: *How will information and resource needs be prioritized, since funding constraints may be anticipated?*

RESPONSE: Although we cannot guarantee that Congress will fund the Forest at the level necessary to fully implement the Plan as designed, every effort will be made to distribute the available funds in a manner commensurate with the goals and objectives of the Plan. The monitoring provisions of the Plan will identify those areas where objectives are not being met. It must be recognized however, that Congress may allocate funds to specific resource areas with associated prescribed output levels. The Forest would be obligated to adhere to such a Congressional mandate. As necessary, the Plan will be amended and/or revised accordingly.

COMMENT: *What is needed is a cooperative planning process, including both timber producers and the management interests affected by harvest, designed to carefully balance economic, fishery, wildlife, and timber issues. The relationship of this plan to the State Timber/Fish/Wildlife Agreement should be discussed.*

RESPONSE: We do coordinate and communicate with other agencies, the State of Washington and interest groups in the development of the Plan. The TFW Agreement has been considered and discussed in the FEIS.

COMMENT: *The data provided to permit the reader of the DEIS to compare the alternatives are largely numeric. In order to permit the reader to draw conclusions about the differences between alternatives, some indication of the precision of the numeric values should have been provided in the DEIS. Since no confidence intervals or other measures of precision are provided, the reader has no way of knowing whether or not the difference is significant.*

RESPONSE: Much of the information presented in the EIS and Plan is not numeric. Many verbal, qualitative discussions are included to allow review and evaluation of the alternatives. The differences among the alternatives are readily identifiable from the text discussions. It should also be remembered that the numeric values are most often reflective of *relative* differences among alternatives. As such, they can be thought of as indices, not necessarily precise measurements for which confidence intervals would be meaningful. Detailed discussions of quantitative methodologies used in the Plan can be found in the Planning Records.

COMMENT: *The process for managing forest activities is not clear enough to assure that adverse environmental effects, particularly to water quality and fisheries, will be prevented. It is suggested that the ONF more fully describe the proposed management processes.*

RESPONSE: The FEIS and Plan are programmatic in nature. The specific "management processes" requested are applicable to the project planning level of analysis, not the Forest Plan level. As the Plan is implemented, project analyses will be done which will provide adequate detail to assess site-specific environmental effects. The Forest Plan provides information for broad environmental assessment through the Standards and Guidelines, the management area allocations and direction, and the evaluation of the Plan alternatives. Also, see the Best Management Practices Appendix (Appendix J) which has been added to the FEIS in response to this concern.

COMMENT: *Clarify whether the $209,000 per year for fish habitat enhancement is available or would require additional appropriation.*

RESPONSE: There are many recommendations in the Plan, including the expenditures for fish habitat enhancement. The key to Plan success is not the "how to" related to expenditure of a specific sum of money, but the meeting of Plan goals and objectives. The Plan will monitor the extent to which the goals are met rather than whether or not money has been spent. It must be remembered that Congress appropriates funds to the Forest Service on a year by year basis. Therefore we can not be assured of receiving a specific sum for fisheries or any other resource.

COMMENT: *Worst case analysis needs to be prepared for a variety of resource areas, including effects on native plants and animals, and effects on water quality and fisheries.*

RESPONSE: A "worst case" analysis is not required by NEPA or NFMA. Recent court decisions have affirmed the Forest Service position regarding worst case analyses. The rulings have been that such analyses are not required in environmental disclosure documents such as EISs.

COMMENT: *The 90-day period for responding to Forest draft plans is far too little. It takes at least 60 days to analyze these plans, leaving much too little time to educate the public on what is involved. The FS spends years preparing these highly detailed, complex plans, then they expect an instant analysis by the citizens. The public deserves much more time in which to study the impact of these important plans.*

RESPONSE: The 90 day review and comment period is the amount of time prescribed by the National Environmental Policy Act regulations. In order to allow additional time due to the overlap with the Holiday season, the Olympic NF extended the comment period by almost three weeks. It is felt that this was adequate time for public review and comment.

COMMENT: *It's a mistake to say that the social importance of the ONF diminishes beyond the borders of the peninsula. Since Olympic National Forest is a National Forest it seems reasonable that planners at least look at regional impacts. The Puget Sound Basin, not just the Peninsula, is served by Olympic National Forest and the societal value increases as you leave the Peninsula and look at the recreational and scenic importance the Forest has to the larger metropolitan areas.*

RESPONSE: This statement was not meant to imply that the social importance of the Forest is insignificant beyond the borders of the Olympic Peninsula, only that the significance is somewhat less than on the Peninsula itself.

COMMENT: *Your graphics are biased and hard to read. In the bar graphs on each of the maps for the alternatives, not only is the 0 to 1 percent area expanded as you note, but the 1 to 0 percent is also expanded, with no footnote. The result is to visually downplay the amount of Forest to be managed for timber production (E1), and the mysterious J1).*

RESPONSE: No bias was intended by the bar charts. Space limitations did not permit inclusion of the complete bar. The final charts were designed to more clearly present the information. For further clarity please see the data upon which the graphs and charts were based.

COMMENT: *Inclusion of a quick reference for the numerous acronyms listed in the report would be helpful. For those of us that are not accustomed to dealing with CSYU, ROS, MMRs, SOHAs, PNVs, and IDTs, confusion sets in very rapidly. After awhile it becomes irritating and defeats the time-saving goals of an acronym to have to turn back several pages after every few lines of reading in order to remind oneself of what the letters stand for.*

RESPONSE: Thank you for the suggestion. You will note that a Glossary of Acronyms has been included in the final documents.

COMMENT: *When the SOHA numbers and acreages are settled I'd like to see the new alternatives in the FEIS reflect them, plus any other significant changes that come out of the comments.*

RESPONSE: All alternatives other than NC are designed to include the most recent national direction on spotted owl habitat requirements. The alternatives have also been modified in the FEIS to reflect many of

the comments received to the DEIS. Please see Chapter II of the FEIS for a complete description of the alternatives.

COMMENT: *There was no discussion of the laws governing the Forest Service and its actions.*

RESPONSE: In Chapter I of the FEIS you will find a brief discussion of the applicable laws associated with the development of this Plan. Many other laws govern the actions of the Forest Service. It is not appropriate to include a discussion of each of these laws in the planning documents.

COMMENT: *It would be helpful to have some district-specific data such as acres in suitability classes, volumes, sites, annual cuts, etc.*

RESPONSE: The Forest Plan is not designed to be disaggregated by internal administrative boundaries such as districts. The information presented for the Forest can be further disaggregated by review of the planning process records found within the Land Management Planning office of the Olympic NF supervisor's office. It should be remembered that district output data is subject to change during Plan implementation. The goals and objectives of the Plan are tied to Forest totals, not to district boundaries. Appendix A of the Forest Plan does display expected management activities by ranger district.

COMMENT: *There were several comments related to the adequacy of the monitoring plan displayed in the Draft Forest Plan. Specific comments addressed:*

The effects of ORV use on soil, water, vegetation, wildlife, visual quality, and cultural and historic resources.

The actions to be taken if actual resource budgets and outputs differ from those proposed.

Comprehensive wildlife monitoring with requirements for immediate cut-backs in development activities if such activities are adversely impacting wildlife species.

Quantitative estimates of precision and reliability rather than qualitative terms such as "high, medium, and low".

How the monitoring information will be used to trigger changes in forest management if assumptions are shown to be invalid, i.e. the need for an "adaptive forest management strategy".

The use of two methodologies developed by the US Fish and Wildlife Service, Habitat Evaluation Procedures (HEP) and Instream Flow Incremental Methodology.

Referencing the Federal Water Quality Act and the State Water Quality Standards in the Monitoring Plan.

Acidity of water bodies, particularly high elevation lakes.

The question of why water quality incidents are not included for Class I and II waters as well as municipal watersheds.

A monitoring item for botanical area which would address whether prescriptions, standards, and guidelines are being met on established botanical areas.

Monitoring the success of fish habitat improvement projects.

Monitoring of wilderness resource conditions to assure that the policy of non-degradation is being adhered to.

The need for coordinating with other agencies and private landowners in implementing and monitoring the Plan.

RESPONSE: Issues associated with the monitoring aspects of the Forest Plan are addressed in Chapter V of the Forest Plan. Funding limitations prohibit the detailed monitoring of all resource interactions and potential impacts. Priority items have been included in the Monitoring Plan, including those items most directly related to the Forest's issues and concerns.

COMMENT: *The preferred plan does not contain the broad level mitigation suggested as necessary in the EIS.*

RESPONSE: The Plan will be monitored to determine if the objectives are being met. Mitigation is not a target to be achieved but rather an action to be taken if necessary to meet Plan objectives. If monitoring reveals the need to implement mitigation measures, action will be taken at the appropriate time.

COMMENT: *Some readers felt that the Standards and Guidelines were in need of some improvement. Specifically:*

The Standards and Guidelines need to provide adequate protection for the Cabin Creek drainage.

Standards and Guidelines need to be redone. Many of these seem to be very poorly written. Seems that you should have this done by people who actually work in on the ground, not "Planners".

In the Standards and Guidelines, the "helping verbs" sometimes imply that an action is "optional". It would be better to eliminate these verbs and allow specific, qualified deviations from the "mandatory" definition of "must" and "shall".

Terminology of Standard is in conflict with NEPA. Considering the legal requirements for environmental analysis (not necessarily documentation) how can the word "should" be used in the Standards and Guidelines?

Equating guidelines with standards is nonsensical and contradictory with the glossary. By equating these terms, the ONF would thus be under no obligation to comply with Federal and State water quality standards for the protection of aquatic habitats.

RESPONSE: Standards and Guidelines:

> are not designed to be site specific down to the geographic scale of a drainage such as Cabin Creek. The management area standards and guidelines are expected to provide adequate level of detail to describe the management direction for specific geographic areas. Additional detail will be included in the analyses completed when specific projects are proposed within Cabin Creek and other areas.
>
> were developed with full coordination and review of district and supervisor's office staff. The people "on the ground" were an integral part of this development and review. You will note that many

changes have taken place in the Standards and Guidelines in the Final Plan, largely as a result of public comments and internal staff review.

use the "helping verbs" in an effort to clarify the Forest's position with regard to each S & G. We feel that the terms are adequately defined and there should not be confusion as to when an action is "optional".

have been assumed to be synonomous for the purposes of this Plan. The contradictions in the Glossary have been corrected. Equating standards with guidelines is not inconsistent with agency direction. The Forest is still obligated to meet all applicable laws and regulations.

COMMENT: *Information in the planning documents is insufficient for analyzing, comparing, and selecting alternative forest management strategies as they relate to threatened, endangered, and sensitive species.*

RESPONSE: The documents have been strengthened in this area. Please refer to Chapters II and IV for comparison of alternatives and environmental consequences.

COMMENT: *The planning process on the ONF: 1) assumed from the beginning that irreconcilable conflicts exist between timber and various other uses; 2) made inadequate effort to coordinate, reconcile, and harmonize those uses; 3) considered no alternatives which adequately coordinate the various multiple-use goals. Each area of the Forest is zoned for a particular use and other uses are prohibited or severely restricted in that zone. The assumed conflict between timber and other uses has resulted in a flawed analysis.*

RESPONSE: The best available information on physical production relationships was utilized in the development of this Plan. In some cases these relationships indicate a competitive situation between timber production and other resources such as fisheries production. In other cases, complementary relationships between timber and other resources are present. There was no "assumed conflict" between timber and other resources. The relationships among resources and the associated environmental consequences are displayed in Chapter IV of the EIS.

As reflected in the management area prescriptions displayed in Chapter II of the EIS and in the Standards and Guidelines of the Plan, each area of the Forest is managed for a multiple of uses, not "zoned for a particular use". Although each area has a certain resource emphasis, this does not imply that the area is not well suited to a variety of other resource outputs. The degree to which each other resource is compatible with the primary emphasis varies by resource and by management area objectives.

COMMENT: *The Olympic National Forest Plan does not include the required "No Action" Alternative as required by NEPA. Using information which is not part of the approved plans the Forest is currently operating under is not the required No Action Alternative.*

RESPONSE: The Supplement to the Draft Environmental Impact Statement addressed these concerns. The information from the Supplement has been incorporated into the appropriate portions of the Final documents. Note that there is now a "no change" and a "no action" alternative; the requested information is included in the "no change" alternative.

COMMENT: *The Plan lacks a comprehensive range of alternatives, i.e. an alternative that maximizes fish and wildlife resources was not included.*

RESPONSE: The alternatives included in the EIS present an adequate range of options for management of the Forest. Obviously, there are an infinite number of possible resource combinations, including maximizing the output of each resource independent of the others. Alternatives such as maximizing fish and/or wildlife outputs are not required by law, regulation, or direction, and are not considered viable management options. They do not represent a multiple use approach to national forest management.

COMMENT: *My greatest concern is that this plan will take the place of common sense. If a new idea or request comes in, there will be those that look into the plan, and say "It's not in here, we can't do it."*

RESPONSE: The Forest Plan is designed to be a very flexible working document which allows considerable discretion for site-specific management decisions. Furthermore, the Plans may be continually amended to reflect new information and on-the-ground conditions.

COMMENT: *We would like to see the following incorporated into the report: geologic time periods should be defined (e.g., mesozoic - 65 to 225 million years before present, etc.) next to the term or in the glossary.*

RESPONSE: We have included the definitions of the geologic time periods in the "Geology" section of Chapter III of the FEIS.

COMMENT: *In a general sense the reviewer's guide is inadequate. It does not provide a comprehensive review of the issues salient to the selection of alternatives, nor does it even mention some resources (e.g. cultural resources). The authors of this document did not, evidently, feel it necessary to review the process nor the criteria by which the preferred alternative was selected. The reviewers guide appears to have been an afterthought that was hastily put together late in the plan preparation process.*

RESPONSE: The reviewer's guide was not intended to provide complete information, nor was it intended to display the rationale for the selection of the draft preferred alternative. Detailed information is available in the body of the FEIS and Final Plan. Please refer to the Record of Decision included with the Final documents for the display of the decision rationale.

COMMENT: *I am concerned that the implementation of the direction will fall short of the mark. For instance in the Quinault Ranger District a regular practice has been to change logging plans or boundaries after the preparation of an EA with no regard for the provisions of the EA and with no attempt to amend the EA after the changes have been made.*

RESPONSE: The Forest Plan will be monitored to assure implementation is in line with the Plan direction and objectives. Concerns associated with specific projects should be directed to the appropriate ranger districts or staff group. It is desirable for the public to review project proposals and to question their consistency with Forest Plan direction.

COMMENT: *Since this planning process provides for public input, detailed data and assumptions (e.g. computer runs and supporting documentation) should be available to all interested parties.*

RESPONSE: Detailed information such as computer runs and supporting documentation are available for public review. They are located in the Land Management Planning office at the Forest Supervisor's headquarters in Olympia.

COMMENT: *There is a definite void in this plan as it relates to the significance of Olympic National Park. The current management of that 900,000 acres--a major portion of the entire Olympic Peninsula--is dedicated to Wilderness. Another 15 percent of the Olympic National Forest is likewise already committed to similar management by congressional action. With over 1,000,000 acres already planned, it would seem that the implications of such would deserve considerable treatment as to coordination with the Forests planning.*

RESPONSE: The Olympic National Park, within the Department of Interior, and the Olympic National Forest, within the Department of Agriculture, are each managed under very different mandates and management philosophies. Despite this fact, there is considerable coordination between the Park and the Forest in managing federal lands on the Olympic Peninsula. This coordination played a key role in the development of the Forest Plan. However, the development of a balanced multiple use program within the Olympic National Forest remained a primary focus of the Plan.

COMMENT: *We would expect the Plan to ensure operations are conducted to equal or exceed the requirements in the Forest practice, Forest fire protection, surface mining, and Forest insect and disease control state statutes and subsequent regulations. We would expect the transportation system management program not to interfere with the access for State managed lands.*

RESPONSE: The relevant provisions of all applicable laws, regulations, and agreements will be met. Site-specific details will need to be coordinated at the appropriate project level.

COMMENT: *Impacts to other landowners need to be clearly identified, evaluated, and mitigated. There needs to be though coordination with other landowners, including Native Americans, before plans are made final.*

RESPONSE: There has been ongoing coordination with other landowners, including American Indians, throughout the development of the Draft and Final Plan. The cumulative effects analysis in the Final EIS assesses impacts resulting from on-National Forest and off-Forest activities. Appropriate action will be taken if the cumulative effects threshold is exceeded during Plan implementation.

COMMENT: *The issue of how the Forest handled cumulative effects of management activities was raised by numerous respondents. Specific comments included:*

NEPA does not limit the consideration of environmental effects to those which are within the Forest boundaries. Off-Forest activities and effects must also be assessed and the cumulative effects of all activities should be considered.

In developing the preferred alternative for each forest, were the potential cumulative impacts of implementing other Forest plans on the state or region given any considerations?

The cumulative effects analysis presented in the DEIS appears to be incomplete. A discussion should be included in the documents on how timber harvest plans will be modified when cumulative impacts of logging and other activities threaten fish and wildlife resources and their habitat.

RESPONSE: The Forest has projected and considered off-Forest activities in the assessment of cumulative effects. Details of this analysis are available in the planning records at the Forest Headquarters.

Given the relative isolation of the Olympic Peninsula, the cumulative effects of other National Forest Plans are not expected to be significant in the Peninsula region. At the State and Pacific Northwest regional level,

the cumulative economic effects could be substantial. This fact was given consideration in the development of the preferred alternative. However, output levels still must be tied to the physical capability of each Forest to produce a balanced multiple use program.

The Plan will be monitored during implementation to assure that standards and guidelines and resource management goals are being met. In many cases a project level analysis will be necessary to determine the action needed to avoid exceeding a threshold level for cumulative effects. It would be inappropriate to specify in the Forest Plan that in all cases timber harvest will be halted, when in fact some modification of harvesting or roading practices may be the desirable action. The degree of activity modification and/or mitigation must be determined on a case by case basis, with the Forest Plan standards, guidelines, and goals providing the overall direction.

COMMENT: *An area analysis would be appropriate for all watersheds in which development is planned near important aquatic resources, such as domestic supply watersheds and anadromous fishery watersheds. Such analysis should generally receive public review as Draft EAs or EISs, depending upon the source conflict potential of the projects.*

RESPONSE: Such site-specific analyses are inappropriate at the Forest Plan level. As the Plan is implemented, project analyses will be done to evaluate the effects of specific project proposals. The project analyses will tier to the Forest Plan direction. These analyses will be available for public review as environmental assessments or environmental impact statements. The Olympic National Forest is using an Integrated Resource Analysis process during Plan implementation which will address the concerns reflected in this comment.

ECONOMIC AND SOCIAL

SALES BELOW COST

COMMENT: *No timber sales should be transacted at a loss. Costs which must be considered include: road building, reclamation, long run logging impacts (water cleanup, stream management), increased spotted owl management cost, increased regulatory cost, tourist revenues lost, and forest economic productivity decrease due to old-growth harvest. The cost and benefit figures should include all non-commodity costs and benefits.*

RESPONSE: The costs and benefits used in FORPLAN analysis are described in full in FEIS Appendix B ("Economic Analysis"). Most of the costs listed above are directly linked to timber harvest in the analysis. Tourist revenues and other nontimber benefits are linked to harvest through yield functions associating changes in these outputs with timber management activity. Two of the above "costs" (increased spotted owl management and productivity decrease) are not expected to result from timber harvest, and are therefore not included in the Forest's analysis.

COMMENT: *Application of PNV to areas in which timber management may involve costs in excess of returns is hazy. It seems that positive PNV would be critical in choosing to manage a given area, yet it seems we are leaning toward managing areas for timber, despite losses in revenue, to enhance employment.*

RESPONSE: Harvesting timber from areas in which total management costs exceed revenues ("sales below cost") is often a legitimate management option. Such management is designed to either provide employment and other social benefits (see also FEIS Chapter I) or enhance the output of nontimber benefits (or both). 36 CFR 219.27(b) provides that harvest prescriptions are not to be selected on the basis of economic return or timber output alone, but on consideration of all goals and objectives. As a result, some of the Forest Plan alternatives emphasize timber production to provide social benefits, while others (including the Preferred) focus on contribution to PNV in establishing harvest levels. Refer to "Alternatives Considered in Detail" (FEIS Chapter II) for more information. Also note that "sales below cost" have not historically been a problem on the Olympic National Forest ("Local Economy", FEIS Chapter III).

COMMENT: *There are already areas adjacent to Moonlight Dome unroaded area that are economically unloggable. How can the plan add another 2300 acres of this area to the timber base and still claim responsiveness to PNV?*

RESPONSE: Actually, the area involved (approximately 1900 acres) is currently in the timber base. The Preferred Alternative continues this allocation. The area was selected for harvest through FORPLAN analysis (with "maximize PNV" as the objective function). Thus, on the basis of this analysis at least, harvest is cost-efficient in the context of the objectives of the Final Plan.

COMMENT: *The Forest Service has overstated the amount of land that is economic to harvest.*

RESPONSE: Refer to FEIS Appendix B discussions of "The Forest Planning Model" and "Economic Analysis" to gain understanding of how land was determined to be economically viable for harvest and the costs, benefits, and economic assumptions that went into this determination. The information and analysis

tools used in the assessment of economic viability were the best available, and resulted in as accurate a portrayal of economic parameters as was reasonably possible.

COMMENT: *Timber harvest prescriptions should emphasize volume output, not contribution to PNV.*

RESPONSE: The harvest prescriptions available for selection by the FORPLAN model included treatment regimes based on both cost-efficiency and high timber production potential (see "Development of Timber Options", FEIS Appendix B). In selecting timber prescriptions for a given alternative, the model responded to the objectives of that alternative. In some cases, these objectives included maximization of timber output. Refer to "Alternatives Considered in Detail" (FEIS Chapter II) for further discussion.

COMMUNITY STABILITY

COMMENT: *A true long run sustained yield system is necessary for long term economic and community stability. Under the preferred alternative, communities that rely on old-growth will be in shambles in 50 years. The social costs of harvest should include damage to local economies when sustained yield practices are ignored.*

RESPONSE: It is true that the volume of old-growth available for harvest will be greatly reduced in fifty years. The Preferred Alternative includes a nondeclining flow of timber (from both old-growth and younger stands), based on long-term sustained yield capacity, to provide for the stability of communities dependent upon timber. See "Vegetation", FEIS Chapter IV, for discussion of the effects of alternatives on old-growth.

COMMENT: *You have inflated the importance of timber harvest. Only 10 percent of timber-related jobs depend on Olympic National Forest. In addition, the Forest provided only 10 percent of the Peninsula log flow from 1976-84. Even if the Forest Service quit selling timber entirely, there would be very little impact to the Peninsula economy. Many of the plan's economic arguments may be overstated.*

RESPONSE: In actuality, close to 25 percent of timber-related jobs depend on National Forest harvest ("Local Economy", FEIS Chapter III). The Forest's proportion of total Peninsula log flow (1970-1988) has been about 22 percent ("Vegetation", FEIS Chapter III).

COMMENT: *There should be no rush to harvest the last old-growth forests in the name of community economic stability. The mandate of the Forest Service does not require it to provide for the economic needs of nearby communities.*

RESPONSE: While it is true that providing for local economic needs is not "required", the economic needs of local communities are an important and legitimate consideration in the planning process. Refer to "Local Economy" and "Local Communities" in FEIS Chapter III for detail regarding the role of Olympic National Forest timber harvest in the economies and social structures of Peninsula communities.

COMMENT: *The Forest Service has a moral and legal obligation to manage the Forest so as to maintain a sustainable harvest level, provide full employment opportunities, and contribute to healthy local economies. The Forest is violating its sustained yield requirement by proposing harvest levels significantly below experienced sell levels. Community stability is almost completely ignored in the plan.*

RESPONSE: While it is true that the harvest level included in the Preferred Alternative is below historic levels, this is not a violation of the sustained yield requirement. Please see the discussion in FEIS Chapter II ("Alternatives Considered in Detail") for detail regarding this subject. Community stability has been an important consideration in the development of the Preferred Alternative. Please refer to FEIS sections covering "Issues, Concerns, and Opportunities" (Chapter I), "Local Economy" (Chapter III), and "Local Communities" (Chapter III) for clarification.

COMMENT: *In direction dated 1/12/87, the Chief of the US Forest Service directed his Regional Foresters to include alternatives that would deal with the stability of communities dependent on timber. There was no*

discussion of such alternatives for the local region. We will be watching to see if the Chief's direction is followed.

RESPONSE: The direction in question does not mandate "alternatives that would deal with the stability of communities dependent on timber", but it does specify that opportunities to be responsive to changes in demand for timber be identified and incorporated in the Plan *where such opportunities are consistent with Plan objectives.* Alternative B-Departure (Modified) was developed in response to public comment, and is directed primarily at maintaining community stability.

TIMBER VALUES AND COSTS

COMMENT: *The Forest Service has used inflated timber prices. Prices used in FORPLAN runs were three times recent bids for Forest timber. The difference between FORPLAN values and prices of timber sold on the Shelton CSYU is even greater.*

RESPONSE: It is true that the values used in FORPLAN exceeded 1985 bid prices by a considerable margin. These values were based on a long-term average which included periods of both strong timber demand and slack demand (as in 1985). Recent bids have been much higher than those of 1985, and have in many cases exceeded FORPLAN values. Such fluctuations indicate that use of a long-term average is necessary to reflect a "normal" set of timber price conditions. The approach to modeling mill values for timber from the Shelton CSYU has been modified. Refer to FEIS Appendix B ("Economic Analysis") for discussion of timber values.

COMMENT: *We believe the plan overestimates the value of timber. If the value of timber can only be estimated by using an analysis of the last ten years, then both a high estimate and a low estimate should be used. This would give a more believable range of possibilities.*

RESPONSE: While a high-low range of values was not used in the analysis (this would have been extremely cumbersome), sensitivity analysis was conducted with respect to timber values in the Forest's benchmark analysis. Refer to FEIS Appendix B ("Analysis Prior to Development of Alternatives") for detail.

COMMENT: *The planning process reflects a bias toward providing forest products. The assumption that the future worth of the remaining forests can be estimated using past values (i.e. timber prices) is questionable. It is likely that future values will be much greater if forests are managed for recreation.*

RESPONSE: Values and assumptions used in the analysis of timber and other resource outputs were derived from the best available information. See FEIS Appendix B for discussions of the resource values used ("Economic Analysis") and the tradeoff analysis conducted in the FORPLAN model ("The Forest Planning Model").

COMMENT: *Costs used for logging, reforestation, sale preparation and administration, road construction, and precommercial thinning are unreasonably high and are inconsistent with reported research results and actual practice.*

RESPONSE: There are many reasons for timber management costs on the Olympic National Forest to be greater than those experienced on "typical" timberland ownerships. Rugged terrain and difficult access are two examples. Refer to "Economic Analysis" (FEIS Appendix B) for complete discussion of cost differences. Also note that costs are included as a monitoring item in this Plan (Plan Appendix B).

COMMENT: *The preponderance of negative soil expectation values from DP-DFSIM analysis calls the validity of all cost and price information into question.*

RESPONSE: Costs and values used in DP-DFSIM analysis (the same as those used in FORPLAN) were based on the best available information (see FEIS Appendix B, "Economic Analysis"). Negative SEVs,

where they occur, are the result of high reforestation costs, long rotations (relative to those generally found on forest industry land), and the interest rate used to discount future returns. Because SEV is not a major factor affecting land allocation (see FEIS Appendix B, "Economic Stratification of Timberland"), the presence of negative values is not a concern in this respect. The primary usefulness of SEVs in this planning process has been to provide an index by which to compare the relative efficiencies of alternative timber management regimes (as part of the process of selecting those to be included in FORPLAN analysis). See FEIS Appendix B, "Development of Timber Options", for detail.

COMMENT: *As a result of your outdated method of financial assessment, large areas of commercial timberland which can be logged by helicopter are being excluded. An updated system of costing would place some or all of these lands in the timber base.*

RESPONSE: In actuality, the timber base of the Plan does include some areas for which helicopter logging is specified. Based on the cost information the Forest has, however, much the timberland for which helicopter logging is the most cost-efficient system does not provide revenues in excess of total management cost. Refer to FEIS Appendix B ("Economic Analysis") for detail.

COMMENT: *The methodology used to combine market and nonmarket values is incorrect, thus casting doubt about all of the economic conclusions in the Draft Forest Plan. Stumpage values are used for timber, while the RPA values used for nonmarket outputs are "finished product" values.*

RESPONSE: The nonmarket values used in the Forest's analysis are as close to stumpage values in concept as is possible for derived or imputed values. "Willingness to pay", as calculated, is designed to reflect the residual value of the resource where it exists on the ground. The same principle applies in the case of stumpage value. Refer to the discussion of "Recreation and Commercial Fish Harvest" values in the "Economic Analysis" section of FEIS Appendix B.

COMMENT: *Timber values are biased by use of 1977-83 harvested sales for stumpage value and 1973-82 sold sales for logging costs. This approach leads to understated values for timber.*

RESPONSE: While it may be less than ideal to use different data sets in determining mill values, the nature of the data available made this necessary. The procedures needed to derive data from precisely matched sales and time periods would have been exceedingly cumbersome, and the fact that the information that was used generated reliable long-term averages made such an undertaking unnecessary. The information used was, therefore, the best that was reasonably available. Sensitivity analyses performed using benchmark runs (see FEIS Appendix B, "Analysis Prior to Development of Alternatives") indicate that the ASQ effect of a slight understatement or overstatement of mill value would be minimal.

NONTIMBER RESOURCE VALUES AND COSTS

COMMENT: *Social goods have a significant value and those who believe that have to have the guts to say how much they're valued. A "NON-PRICED BENEFIT" is malarkey. We should be clear about costs and benefits, and especially forthright when we contemplate variables that are hard to quantify.*

RESPONSE: Social goods for which there is no reasonable base of market transaction data cannot be assigned a monetary value with any degree of reliability. The relative value of these goods is assessed subjectively in the decisionmaker's consideration of net public benefits. Attempting to assign values that have no sound basis in transactions evidence would be equivalent to this subjective assessment of relative value, but would have the disadvantage of being less straightforward. Refer to FEIS Appendix B, "Economic Analysis", for further discussion.

COMMENT: *The FEIS should include cost/benefit analysis of both existing fisheries and the potential fisheries yields if all Forest waters were in full production. Such an analysis should address both anadromous and resident fish.*

RESPONSE: This is essentially what was done within the FORPLAN model. Full production potential served as the background value for on-Forest fishery outputs, with effects of management activity on fisheries subtracted from output potential to yield net outputs. Refer to FEIS Appendix B, "Development of Yield Coefficients", for further discussion.

COMMENT: *Was the value of elk hunting included in the analysis?*

RESPONSE: Yes. Refer to "Development of Yield Coefficients", FEIS Appendix B.

COMMENT: *The arbitrary reduction of 37.5 percent in fish, wildlife, and recreational values is incomprehensible, and biases your PNV analysis. The understatement of non-commercial fisheries values could be especially significant. The Contingent Valuation Method is suggested as an alternative to the methodology used.*

RESPONSE: The adjustment to recreational values is considered necessary to make these values compatible with the values used for other resource outputs. The procedure used was designed to capture average willingness to pay.

COMMENT: *No attempt is made to incorporate fish and wildlife losses as costs in PNV calculations. The proper measure for assessing these losses is net willingness to accept payment to do without the resource. Losses should be measured from current conditions, not current direction.*

RESPONSE: Changes in both fish and wildlife populations were directly included in the PNV analysis of each alternative. Although the modeling approach varied from output to output, the basic philosophy was to treat variations in populations due to management activities as economic losses (or gains). Refer to FEIS Appendix B ("The Forest Planning Model") for full discussion.

COMMENT: *Economic values for commercial and recreational fisheries lack recognized economic methodology. How will the cost efficiency of fish habitat management be measured -- in terms of fish produced or timber production foregone?*

RESPONSE: The procedures used to establish commercial and recreational fisheries values (dockside value and travel cost method respectively) are standard economic practices and are widely accepted (see also FEIS Appendix B, "Economic Analysis"). Fish habitat management cost-efficiency is measured in two ways, depending upon the nature of the management. The habitat enhancement projects discussed in FEIS Chapter IV ("Fisheries") are evaluated by comparing fisheries outputs produced with enhancement project costs. Changes in fish population that could result from foregoing harvest (see also "Development of Yield Coefficients", FEIS Appendix B) are assessed in terms of timber production foregone.

COMMENT: *Commercial salmon value per pound varies considerably by species, which makes the uniform value of $1.05 per pound questionable. If reductions in fisheries outputs are concentrated in drainages having high-value salmon species, estimates of value loss may be inaccurate.*

RESPONSE: The data needed to develop a complete set of drainage-specific commercial salmon values are not readily available. In addition, it is unlikely that using other than the average value would result in any significant difference in overall value estimates or land allocation patterns. The pattern of harvest distribution among drainages has changed considerably in the final Preferred Alternative (see also FEIS Appendix B, "Formulation of Alternatives").

COMMENT: *The value of tribal subsistence fishing is understated in the plan, since the commercial value of $1.05 per pound does not reflect the full value of such consumption. This biases the analysis in favor of selecting more timber-intensive alternatives.*

RESPONSE: It is true that the use $1.05 per pound does not fully capture the value of tribal subsistence fishing in the strict PNV analysis. The importance of subsistence fishing, however, is recognized in the discussion of the American Indian community (FEIS Chapter III, "Local Communities"). The qualitative analysis of all outputs and effects (upon which selection of the Preferred Alternative is based) includes consideration of all American Indian values (see also FEIS Chapter IV, "Local Communities").

COMMENT: *The American Indian tribes rely on the fishery for a substantial part of their income and a major part of their culture. Many coastal communities rely almost entirely on the fishery. The importance of this resource cannot be minimized as is done in the plan (DEIS page III-77).*

RESPONSE: The discussion mentioned above has been modified to better reflect the importance of the fishery to coastal communities and American Indians (see FEIS Chapter III, "Fisheries").

COMMENT: *Is $1.05 per pound really the value of salmon caught for sport? You should use $5-$50 per pound.*

RESPONSE: $1.05 per pound is the value used for commercially caught salmon. $33 per user day is used for anadromous sport fishing.

COMMENT: *The rationale for using "prices at the dock" should be explained. Using the ex-vessel price as the value of fish is like saying the value of timber is limited to the stumpage price (which you certainly did not do).*

RESPONSE: Dockside value is used for salmon caught commercially because it is the value that most closely parallels timber stumpage value. As explained in FEIS Appendix B ("Benefits Considered in Economic Analysis"), stumpage value *is* the value used to represent the benefit associated with timber harvest in FORPLAN optimization and economic analysis. Use of dockside value for commercial salmon catch, therefore, is necessary to bring consistency to the analytical process.

COMMENT: *The plan underestimates the economic importance of, and monetary values associated with, commercial and sport fisheries. These could be drastically affected by intense clearcutting and roadbuilding, especially in steep, unstable areas. The fisheries industry contributes a great deal to the local economy.*

RESPONSE: Monetary values associated with commercial and sport fisheries are based on the most reliable information available (FEIS Appendix B, "Economic Analysis"). The role of the fisheries industry in the local economy is recognized in FEIS Chapter III ("Local Economy").

COMMENT: *It is unclear from Appendix B (pgs 62 and 72) whether off-Forest fish user days were included in the value calculations. Were they?*

RESPONSE: Yes. As stated in FEIS Appendix B ("Benefits Considered in Economic Analysis"), fish user days are "valued at the point of consumption, *regardless of location*".

COMMENT: *The economic values of fisheries, wildlife, watersheds, and recreation and tourism should be more carefully defined and weighed.*

RESPONSE: Economic values used in the planning process have been defined using the best information available (see FEIS Appendix B, "Benefits Considered in Economic Analysis"). The weighing process is necessarily subjective, since resources, outputs, and effects which cannot be valued monetarily must be included in the evaluation. Refer to FEIS Appendix B ("Basic Concepts Related to Economic Analysis") and the FEIS Record of Decision for discussions of the factors involved in the decisionmaking process.

COMMENT: *The value of fish and wildlife was seriously underestimated. The intrinsic value of knowing it is there for you and your children should be considered.*

RESPONSE: The intrinsic values associated with fish and wildlife are nonquantifiable, but have been considered in the overall evaluation of net public benefits. These values were recognized as important in the development of the planning questions that served as the basis of this planning process (see FEIS Chapter I).

COMMENT: *The Forest Service did not include its own predicted 80 percent increase in recreation values in the cost-benefit analysis.*

RESPONSE: The predicted changes in recreation patterns presented in FEIS Chapter III ("Recreation") reflect expected changes in use, not value. These projected use increases were incorporated in the FORPLAN analysis of alternatives (see "Development of Yield Coefficients", FEIS Appendix B).

COMMENT: *The plan seriously underestimates the value of and demand for recreation. There is no evidence in the plan that current studies of recreation have been used -- the "President's Commission on Americans Outdoors" report is suggested. Dollar values for recreation can be found in other studies.*

RESPONSE: Recreation values (see FEIS Appendix B, "Economic Analysis") and demand projections (FEIS Chapter III, "Recreation") are based on the best and most recent information available. Other sources of information have been checked and found less desirable than those used.

COMMENT: *A recent paper by Farnsworth & Soejarto (Univ. of Illinois) places the economic value (for medicinal purposes) of a single species of endangered plant at $203 million. Such values should be considered when dealing with the Olympic Mountains, which are refuge to many unique plants.*

RESPONSE: The Forest is not aware of any plants of such value within its boundaries. Rare and unique plant species and associations will, however, receive protection in two principal ways. The first of these is Management Area J3 (Botanical Areas), which designates protection of plant communities as the primary goal in several areas (see Forest Plan Map). The second consists of the standards and guidelines designed to deal with management of rare, unique, or sensitive plants (see Forest Plan Chapter IV).

COMMENT: *The Draft Forest Plan excludes vital information from the planning process: the values and volumes of nontimber resources. These data are not presented in the planning documents, and the planning team made highly important decisions without fully informing the public of the alternative choices and their values.*

RESPONSE: The values used for nontimber resources are described in FEIS Appendix B, "Benefits Considered in Economic Analysis". Nontimber resources which could not be assigned monetary value are evaluated in the planning process as discussed in FEIS Appendix B, "Basic Concepts Related to Economic Analysis". The volumes of nontimber resource outputs associated with the Plan and alternatives thereto are presented throughout the planning documents. The most comprehensive summary of these outputs may be found in FEIS Chapter II, Table II-14.

COMMENT: *The likelihood that the nonmarket values used in the plan reflect real market values is remote. Recreational and other amenity values should be excluded from the calculation of PNV. This would make assessment of quantitative and qualitative values and the determination of net public benefits easier.*

RESPONSE: The nonmarket values used in the planning process are all based on accepted economic methodology, and are considered reasonable estimates of the values that would prevail under market conditions (see also FEIS Appendix B, "Benefits Considered in Economic Analysis"). Use of these values does a great deal to simplify the overall evaluation process, especially in the realm of site-specific tradeoff analysis. To forego use of reasonable estimates of value in this process would be to ignore important and useful information.

COMMENT: *The value of employment should be included in PNV analysis as a value added, rather than just an expense involved in timber harvest.*

RESPONSE: Treating labor expense as a cost in cost-efficiency analysis is standard economic practice. Benefits derived from the employment generated by management activity are assessed subjectively, as a component of net public benefit evaluation, in the broader process of selecting the Preferred Alternative. Refer to FEIS Chapter IV ("Local Economy") for discussion of employment benefits by alternative.

COMMENT: *The analysis and selection of management practices that would increase yields from the land remaining for timber production should be based on consideration of economic benefits to local communities in addition to dollar returns to the Treasury. Such practices could also be considered as a measure needed to mitigate the effects of removing potential timberland from the harvest base.*

RESPONSE: Economic benefits associated with timber harvest are a definite consideration in identifying a Preferred Alternative, and have been recognized as a component of the timber management issue from the outset of the planning process. Effects of the alternatives on local communities has been added as a separate issue in this FEIS (see also FEIS Chapter I, "Issues, Concerns, and Opportunities"). Alternatives B-Departure (Modified) includes the "maximize timber production" objective function, which assures realization of the maximum possible level of timber-related social and economic benefits from areas within the harvest base (see FEIS Chapter II, "Alternatives Considered in Detail").

TIMBER SUPPLY AND DEMAND

COMMENT: *Regional supply and demand analysis is limited by an imprecise geographic definition. For example, all of Grays Harbor and Thurston Counties are included in the SUFS Forest survey definition of the Olympic Peninsula, but the definition used in tables III-10A, B and 11 of the DEIS appears to delineate a smaller area. In addition, at a minimum Kitsap County should be included in the supply and demand considerations of the Final Plan.*

RESPONSE: The analysis of regional timber supply and demand includes the four counties that form the principal components of the Olympic Peninsula economy and the Forest's zone of influence. While it is true that the total effect of Forest activities extends beyond this four-county area, the vast majority of the Forest's influence occurs within this zone. See FEIS Chapter III ("Local Economy") for further discussion.

COMMENT: *The Forest Service has overstated timber demand. Use of current fluctuations in demand and supply to predict future harvest levels and prices is wrong, and does not reflect the decline in demand predicted by market economists. In addition, the Forest Service based its timber demand estimates on sold volumes rather than what was actually cut. Only 70 percent of sold timber was harvested in the 1970's; speculative bidding and the subsequent buyback accounted for much of the "sold" volume.*

RESPONSE: In actuality, demand projections presented in the FEIS are based on analysis of trends in wood products markets, not "current fluctuations" (see FEIS Chapter III, "Vegetation"). The figures that serve as the basis for Olympic Peninsula demand projections are derived from actual harvest volumes rather than sold volumes (see footnote 2, FEIS Table III-14, FEIS Chapter III).

COMMENT: *Most of the decline in non-Forest harvest projected in the plan will come on ownerships from which most of the harvest is exported. Since National Forest logs cannot be exported, the Forest can do nothing to compensate for this drop in exportable supply. Therefore, the projected increase in demand for Olympic timber is unrealistic.*

RESPONSE: This argument holds only if output from non-National Forest sources drops below the demand for exportable logs. If export demand remains at roughly 35 to 45 percent of total demand (see FEIS Chapter III, "Vegetation"), it can readily be filled by the projected volumes from non-National Forest sources. It is assumed that if total demand (as shown in Table III-15, FEIS Chapter III) could be met, the export component of this demand would be met by non-Forest harvest and the local mill component met by a combination of Forest and non-Forest harvest.

COMMENT: *The Northwest Power Planning Council's 1985 draft "Technical Analysis for the Northwest Conservation and Electric Power Plan" forecast substantial reductions in demand for northwest wood products between 1985 and 2005. This analysis should be considered.*

RESPONSE: This analysis was conducted in the context of a serious slump in the northwest timber industry. More recent assessments project moderate to strong demand levels in the future (see also FEIS Chapter III, "Vegetation").

COMMENT: *Demand for National Forest timber is expected to be determined by reduced availability of non-Forest timber and increased demand for western Washington wood products. This is a flawed planning approach, based on highly uncertain information. The DEIS does not detail the factors considered in the demand analysis, but it is likely that projections for non-Forest timber are too pessimistic while the estimates of demand for Northwest timber are too optimistic. Actually, timber industry demand for Forest timber will never be satisfied. Any increase in harvest will increase profits to industry, so more will be demanded.*

RESPONSE: The demand analysis reflects use of the best information and assumptions available. While it is true that any projections of future demand patterns are highly uncertain, it is necessary to develop the most reasonable estimate possible to serve as a basis for assessing alternative output levels. The demand projections presented in FEIS Chapter III ("Vegetation") reflect estimates of the maximum volumes of timber that would be purchased if available. These estimates are based on current capacities and market conditions. It is unlikely that volume in excess of these demand projections would be purchased under current conditions.

COMMENT: *The possibility that other forms of building materials (other than wood products) will be developed in the future, thus reducing the demand for timber, should be considered.*

RESPONSE: The potential replacement of forest products with wood substitutes has been considered in the demand analysis. Please refer to "Short-Term and Long-Term Demand Trends" in the "Vegetation" section of FEIS Chapter III.

COMMENT: *Use of horizontal demand curves is illogical and arbitrary, and violates 36 CFR 219.12(e)(3). Use of such curves has led to severe underestimation of the value of timber, and disregards the reality of current and future situations.*

RESPONSE: 36 CFR 219.12(e)(3) specifies that..."to the extent practical, demand will be assessed as price-quantity relationships". As explained in FEIS Appendix B ("Parameters and Assumptions Used for Economic Analysis"), the assumption of horizontal demand was the most practical approach to use in Forest Plan analysis. It is unlikely that this assumption led to any serious consequences with regard to either resource output mix or marginal timber prices.

COMMENT: *The draft plan indicates with implicit approval that the proposed ASQ is equal to what has been cut in the past. To suggest that there is no reason to increase the ASQ because past levels did not exceed the ASQ is fallacious and irrelevant and completely disregards any relationship with changing supply and demand.*

RESPONSE: There is no intention to suggest that increasing ASQ would be pointless. It was merely pointed out that the ASQ of the Preferred Alternative in the DEIS was close to past levels of actual harvest. The ASQ levels associated with both the DEIS Preferred and the FEIS Preferred result from the interactions of all the objectives the preferred allocation pattern is intended to meet, and are not geared toward meeting some predetermined level of harvest.

COMMENT: *The Olympic's DEIS does not adequately evaluate alternatives that will help meet future timber demand on the Peninsula.*

RESPONSE: Three of the alternatives presented in the DEIS were designed to provide harvest flows responsive to Peninsula timber demand/supply conditions: Alternatives B-departure (RPA), C-departure,

and D-departure. Alternative B-departure was modified in the FEIS analysis to be more realistic in its response to demand conditions and timber industry needs, and Alternative NC was added (via DEIS Supplement) to provide another demand-responsive alternative. Refer to "Alternatives Considered in Detail", FEIS Chapter II, for more detail.

COMMENT: *The Olympic failed to conduct a sound market analysis for Forest Service stumpage and all other resources. Without this, no reasonable demand estimates can be derived. The Forest's explanation of supply and demand conditions indicates that no actual estimate of demand for any resource was considered. Demand was merely assumed to be at some output level.*

RESPONSE: The demand projections presented in Forest Plan Chapter II ("Summary of the Analysis of the Management Situation") are based on the best information and projection techniques available. They represent estimates of the future output levels of each resource that would be needed to satisfy anticipated demands. As such, these estimates provide a barometer against which to measure both the Forest's capacity to provide each resource and the effectiveness of each alternative in satisfying future demand. They are, therefore, adequate in serving their purpose as an aid to decisionmaking.

COMMENT: *Because of the major flaws in the Olympic plan, it should be pulled and redone. The plan does not assess the amount of timber available from outside sources (private and state lands, adjoining National Forests, Indian Nation lands). The data supporting predictions for jobs and economy are meaningless without a more comprehensive study of other sources of timber supply.*

RESPONSE: Availability of timber from non-Forest sources has been extensively evaluated in the planning process. Please see "Local Timber Supply and Projections" (in the "Vegetation" section of FEIS Chapter III) for discussion of timber supplies from other ownerships.

COMMENT: *The Olympic's analysis of the timber supply and demand situation is based on outdated information. Independent confidential studies in the Olympic Peninsula area show the future timber supply situation to be overestimated in the DEIS. The Forest Service may have misinterpreted 1982-86 markets for the Olympic's timber to be an indicator of excessive supply. Actually, a major decline in timber production, beginning about 1992, is anticipated. The Forest must work with DNR and forest industry experts to update its timber supply overview. The proposed harvest level will accentuate the decline of the forest industry and local communities. The Forest is the only supplier capable of offsetting the upcoming timber shortage. We believe a more in-depth review of the demand for timber on the Olympic Peninsula in conjunction with the rest of the Region, U.S. and Canada is necessary. This analysis should evaluate the relative cost of producing timber outputs and not just the physical availability of the resource. Narrowly defined physical supply trends, as presented in the DEIS, does not accurately forecast the total setting for N.F. timber outputs.*

RESPONSE: The Forest's timber supply projections have been updated, and do indicate future declines in timber availability from non-Forest sources (as they did in the DEIS). Please refer to "Local Timber Supply and Projections" in the "Vegetation" section of FEIS Chapter III.

COMMENT: *The draft plan and EIS do not adequately consider current regional and national timber supply and demand. Studies showing lower projected supply from the South and current harvest above long-run sustained yield in the Pacific Northwest private sector were completely ignored. Reports of declining timber supplies in the southern states referenced on page III-53 of the DEIS should be revised to reflect the latest projections of the South's fourth forest, which now projects a 21 percent increase in softwood timber supplies over the projection period.*

RESPONSE: It is correct that a long-term increase in softwood supply from the South is expected (see the discussion on "Softwoods" in the Vegetation section of FEIS Chapter III). The wording in the discussion on DEIS page III-53 has been modified. This was an oversight on our part in the original document. The current assessment of harvest from private lands is discussed in "Local Timber Supply and Projections" (FEIS Chapter III, "Vegetation"), and does show harvest above the long-term sustained yield level.

COMMENT: *The US-Canadian situation, because of its recent occurrence, has not been given any consideration. This should be evaluated.*

RESPONSE: The relationship between Pacific Northwest timber supply and demand and the situation with respect to Canadian timber is discussed in FEIS Chapter III ("Vegetation").

COMMENT: *Your evaluating team has not had the opportunity to measure the importance in the change of the tax laws, beginning the year of 1987. For 43 years, the economics of the industry has been based on artificial values. Production has been based on the amount of capital gain that could be generated. Precipitously, the changes in the tax laws are bound to have far-reaching effects. The excess production that came into being for gains will shrink gradually until production and markets are once again in balance.*

RESPONSE: It will probably take several years for the effects of changes in capital gains taxation (if any) to be recognized. If it is true that these changes will result in relatively lower timber harvest levels, then this is consistent with the projected lowering of overall supply from non-Forest sources discussed in FEIS Chapter III ("Vegetation").

FORPLAN MODEL

COMMENT: *FORPLAN cannot be used to develop a forest plan that can be implemented and monitored. Sale volumes and management practices indicated in the timber sale schedule bear little or no resemblance to the FORPLAN results.*

RESPONSE: The FORPLAN modeling of timber harvest distribution has been modified for the FEIS analysis. As a result, FORPLAN schedules by geographic area are more reliable than was the case in the DEIS analysis. Refer to FEIS Appendix B ("Formulation of Alternatives") for further discussion.

COMMENT: *Appendix B says that the results yielded by FORPLAN were not acceptable to the ID team, and the team manipulated and modified the alternatives until there was a satisfactory outcome. To what extent did these modifications affect the statistical reliability of the model? How was the reliability tested?*

RESPONSE: In cases in which the FORPLAN results of a particular alternative formulation indicated a mix of outputs and effects that did not effectively meet the objectives of that alternative, the entire formulation was restructured and a new FORPLAN analysis conducted. The purpose of this procedure was to assure that the final form of each alternative accurately reflected both the intent envisioned by the ID Team and the most efficient means of accomplishing that intent. Revising model parameters (objective function and constraints) to better reflect management goals in no way compromises the reliability of the results. It merely assures a more realistic and/or effective alternative formulation. Please refer to FEIS Appendix B ("The Forest Planning Model") for further detail.

COMMENT: *The Draft Plan and Draft EIS fail completely to set forth a coherent resource plan that maximizes long-term net public benefits. Such a maximization is a goal that simply cannot be achieved using the FORPLAN model.*

RESPONSE: It is true that FORPLAN cannot, by itself, identify the mix of outputs, effects, and allocations that maximizes net public benefits. The purpose of FORPLAN analysis is to identify the most cost-efficient means of meeting a given set of management goals (i.e. objective function and constraints) and to provide estimates of the outputs and effects that would be associated with those goals. The selection of the Preferred Alternative, based on quantitative *and qualitative* evaluation of alternatives by the responsible official, is the mechanism by which the attempt to maximize net public benefits is made. Refer to FEIS Appendix B ("Basic Concepts Related to Economic Analysis") for detail.

COMMENT: *FORPLAN cannot compute the marginal cost of producing nonmarket resources, and so cannot calculate the level where supply and demand for these resources meet. It cannot analyze (as required by 36 CFR 219.12(f)(2)) the supply and demand of each resource and how they interrelate.*

RESPONSE: Demand for nonmarket resources was assessed outside of FORPLAN (see Forest Plan Chapter II, "Summary of the Analysis of the Management Situation"). In no case does the output level of a given resource in any alternative exceed the demand projected for that output. Therefore, the output levels associated with each alternative include no "surplus" (undemanded) components and can be expected to be consumed. In addition, FORPLAN does in effect evaluate the marginal cost of providing an additional unit of output in its optimization process. This is accomplished by comparing the objective function solutions (i.e. PNVs) of the run in question with and without the incremental unit of output. The

added unit will be supplied only if needed to a) meet constraints, or b) increase PNV. Refer to FEIS Appendix B ("The Forest Planning Model") for discussion of FORPLAN.

COMMENT: *FORPLAN cannot represent the dynamic relationship of nontimber resources from period to period. Thus, FORPLAN cannot consider in ensuing periods the effect of actions taken in preceding periods. This violates 36 CFR 219.1, which requires that forest planning be based on the principle that the Forest Plan can respond to changing conditions of land and other resources.*

RESPONSE: The FORPLAN model has many mechanisms for dealing with period-to-period relationships among resources. Examples are yield table structure through time and time-dependent yield relationships. While it is true that nonlinear resource interdependencies cannot always be modeled directly in FORPLAN, it is often possible to anticipate these and approximate them in the construction of model data. More to the point is the fact that the planning process anticipates the need to respond to changing conditions by 1) specifying that the Plan be redone in no more than 15 years, and 2) requiring that outputs and effects be monitored and the Plan amended or revised if Plan expectations are not being met (see also Forest Plan Chapter V, "Monitoring and Evaluation").

COMMENT: *It is very difficult to evaluate your economic predictions, since your FORPLAN model was not published. The variables and values used to reach economic conclusions are hidden within the FORPLAN model and not laid out clearly. Why is there no explanation of FORPLAN and how it arrives at its predictions of future harvest levels and resource effects? Since FORPLAN cannot be understood without access to supporting data, the DEIS and Plan do not meet the public review requirements of NEPA.*

RESPONSE: The variables and values used in FORPLAN analysis are laid out throughout FEIS Appendix B. Refer to "Development of Analysis Areas", "Development of Prescriptions", "Development of Timber Options", "Development of Yield Coefficients", "Economic Analysis", and, finally, "Formulation of Alternatives" for detail regarding the various parameters that went into the FORPLAN model. For an overview of the workings of FORPLAN, refer to "The Analysis Process and Analytical Tools". Complete documentation regarding the FORPLAN model and its supporting data would be far too bulky to include in the FEIS Appendices, and is available in the Forest's process records. The practice of making underlying documentation available upon request is a standard procedure under NEPA.

ECONOMIC PARAMETERS/MODELING

COMMENT: *Use of a 0 percent real value trend for nontimber resources for which demand is expected to grow is inappropriate, especially when a 1 percent growth rate is applied to timber prices. Timber values are unjustly favored.*

RESPONSE: Comparison of Benchmark 7-0 percent with Benchmark 7 (see FEIS Appendix B, "Benchmark Analysis") indicates that the 1 percent real price trend for timber has very little effect on land allocations or resource outputs. While there is indeed a great deal of uncertainty regarding the relative rates at which resource values will grow, the sensitivity analysis of price trends indicates that the projections used did not result in resource allocation distortions.

COMMENT: *What is the justification for using 1982 dollars to project returns in decades 1 through 5?*

RESPONSE: Use of constant dollars to compare economic variables through time is standard economic practice, and facilitates comparison of costs and benefits by removing the effects of inflation from the analysis. Refer to FEIS Appendix B ("Parameters and Assumptions Used for Economic Analysis") for an explanation of the concept.

COMMENT: *The discount rate used in PNV analysis is far too high. Real interest rates favored by well-informed economists are at the very most 3 percent. Use of 4 percent makes the value of immediate consumption of resources for a fast return artificially high.*

RESPONSE: There is considerable disagreement among economists as to the appropriate real discount rate to use in long-term analysis. Because 4 percent approximates the average return on long-range corporate investments, it was selected as the appropriate rate for use in Forest Planning (see FEIS Appendix B, "Parameters and Assumptions Used for Economic Analysis"). It should be noted that the CMAI constraint (see FEIS Appendix B, "Formulation of Alternatives") and the nondeclining flow constraint (where it is used) serve to limit the rate at which timber is scheduled for harvest.

COMMENT: *The cursory economic analysis of the fisheries enhancement program is puzzling. If the program does have a high benefit/cost ratio, why isn't it expanded?*

RESPONSE: The individual enhancement opportunities associated with this program have not as yet been fully identified, and it is expected that project identification will occur regularly throughout the first decade. A 10-year program at the proposed annual investment level is expected to bring habitat conditions as close to optimum as is reasonably possible. In order to maintain the improved condition through time, it is expected that a continued program at roughly the same level of investment will be needed. Therefore, expansion of either the initial program or the long-term program would not result in more effective optimization of habitat. See also FEIS Chapter IV, "Direct and Indirect Effects of Alternatives on Fisheries".

COMMENT: *Because a mid-decade discounting procedure is used, PNV is underestimated by 2 to 3 percent. This could result in misallocation of acres to management prescriptions and may affect LTSYC.*

RESPONSE: The effect of the mid-decade discounting procedure (vs. annualized discounting) depends on the assumption used in developing annualized discount coefficients. If costs and benefits are assumed to occur at the beginning of each year, mid-decade discounting leads to a PNV 2.6 percent below annualized discounting. The difference if mid-year costs and benefits are assumed is 0.6 percent, while an end-year assumption yields PNV 1.3 percent *below* mid-decade discounting. None of these differences is significant enough to cause concern regarding substantial misallocation problems.

COMMENT: *Regeneration lag is not accounted for in the discounting of timber management costs. Therefore, these costs are overstated.*

RESPONSE: Many of the costs associated with timber harvest can occur up to five years before or after the actual harvest. Reforestation cost is but one of several post-harvest costs that are balanced in timing and magnitude by pre-harvest costs. The net effect of this balancing is that using actual costs directly provides a very good approximation of the relationships that would occur if all costs were adjusted to time of harvest. Therefore, the lack of discounting for regeneration lag does not lead to overstatement of timber management costs. See FEIS Appendix B ("Costs Used in Economic Analysis") for further detail.

COMMENT: *Real increases in logging, fuel treatment, and road construction costs should not have been included in the economic analysis, since doing so nullifies any real price increase.*

RESPONSE: Increasing these costs by 1 percent per year for the first fifty years was needed to achieve the desired net effect of a 1 percent real price trend for stumpage. Please refer to FEIS Appendix B ("Costs Used in Economic Analysis").

COMMENT: *By using a constrained benchmark in its analysis of varying real value trends for timber, the Forest made the results of this analysis invalid. The analysis should be done in compliance with Regional direction to use Benchmark 3 (Max PNV).*

RESPONSE: The Regional direction letter of September 25, 1984 *suggested* use of Benchmark 3 in conducting sensitivity analysis of timber price trends. The Forest used Benchmark 7 for two reasons. First, most of the Forest's remaining sensitivity analyses were conducted using this benchmark, thus making use of Benchmark 7 for trend analysis desirable from the standpoint of comparing effects. Second, the addition of Management Requirement constraints to Benchmark 7 (the only difference between it and Benchmark 3) make this benchmark more comparable to the alternatives considered for implementation. As a result, use of Benchmark 7 for trend analysis provides a better indication of actual effects than would Benchmark 3. Comparison of Benchmarks 3, 7, 7-0 percent, and 7-2 percent (see FEIS Appendix B, "Benchmark Analysis") indicates that there would be little difference between Benchmarks 3 and 7 with respect to the effects of trend variation.

COMMENT: *Tradeoffs are mistakenly estimated by "extrapolating the sensitivity analysis done on certain benchmarks and alternatives" (as is openly admitted on page B-181). This yields erroneous conclusions, since benchmarks represent the response of the Forest at the "edge" of the economically feasible decision space.*

RESPONSE: The quotation from DEIS Appendix B which is cited in this comment does not appear anywhere in the Appendix in question. Nonetheless, the estimation of tradeoffs and opportunity costs is an important aspect of analysis and should be addressed here.

Complete isolation of the opportunity costs associated with all constraints individually would be a costly and time-consuming task. Although FORPLAN output does provide information on the shadow price associated with each constraint, the value of this is limited because it a) represents only the incremental value of the last unit needed to satisfy the constraint in question, and b) is determined in the context of the complex interactions of all modeling parameters simultaneously. It is therefore difficult to generalize shadow price information into a broader notion of the tradeoffs associated with a given constraint, i.e. a notion that is exclusive of the effects of its interactions with all other constraints in effect in a given run.

Because shadow price information provides only an incomplete estimate of opportunity costs, other means of tradeoff estimation are necessary. The most precise method, adding constraints incrementally to each FORPLAN run to identify the costs associated with each, would be prohibitive in cost. There are, however, many techniques for using the information generated in comparable runs to zero in on tradeoffs. These are discussed throughout FEIS Appendix B, in particular in "Analysis Prior to Development of Alternatives", "Formulation of Alternatives", and "Estimation of Effects of Alternatives".

SHELTON CSYU MODELING

COMMENT: *The use of the maximum PNV objective function does not apply to the Shelton CSYU. In addition, the Forest has improperly imposed several harvest model constraints which, to the extent they limit the sustained yield capacity of the CSYU, are in violation of the Shelton CSYU Agreement. The Agreement intends that the cooperators maximize the production of timber.*

RESPONSE: The intent of the Agreement is that the Shelton CSYU be managed for "continuous and sustained forest production". This does not necessarily imply maximization of timber production. Section 16 of the Agreement makes ample provision for removal of land from the Unit timber harvest base when economic, environmental, or recreational considerations make use of the land for other than timber production preferable. Therefore, use of both the "maximize PNV" objective function and the constraints designed to achieve the management goals of each alternative is not inconsistent with the Agreement. See FEIS Chapter III ("Sustained Yield Units") for further discussion of the Agreement, and FEIS Chapter II ("Alternatives Considered in Detail") for detail regarding the use of different objective functions and constraints in alternative formulations.

COMMENT: *The basic structure of the Forest's FORPLAN model is invalid, since it included two separate entities (the Shelton CSYU and the rest of the Forest) in one formulation. This precludes full optimization in arriving at a FORPLAN solution.*

RESPONSE: The nature of the Shelton CSYU makes it necessary to treat it and non-Unit National Forest land as separate entities in developing the Forest Plan (see also "Development of the Alternatives", FEIS Chapter II). Because of this necessary separation, full optimization across all areas covered by the FORPLAN model is indeed precluded. What occurs instead is a solution involving two optima, one for the Shelton CSYU as a distinct entity and the other for all remaining National Forest land. The combination of these represents the "optimum" solution for the planning area as a whole, in that this solution cannot be improved upon without compromising separation of the two management entities. This applies to all alternatives except DEIS Alternative F (not considered in detail in the FEIS), in which the separation is made between Simpson Timber Company land and National Forest land as a whole.

COMMENT: *The Forest failed to include in its analysis the eventual return of National Forest land within the Shelton CSYU to the full Forest harvest base when the Agreement terminates in 60 years. To do so would have increased harvest from non-CSYU lands.*

RESPONSE: The Forest has revised its modeling to include the eventual recombination of all National Forest lands. In the FEIS analysis, recombination was included in all alternatives except Alternative A-Current Direction and Alternative B-Departure (Modified) (refer to FEIS Appendix B, "Formulation of Alternatives", for further discussion). The recombination did not affect early decade harvest levels from non-SCSYU land.

COMMENT: *The nondeclining yield harvest constraint should not apply to the CSYU.*

RESPONSE: It is true that nondeclining (NDF) flow is not a requirement on the Shelton CSYU. However, given the objective of the Unit (long-term community stability) and the stand structure within it (clearly "deficit" with respect to volume available for harvest), NDF is certainly a reasonable objective. DEIS

Alternative E includes a departure from NDF on the Shelton CSYU. The Preferred Alternative includes the nondeclining flow constraint. Refer to FEIS Appendix B ("Formulation of Alternatives") for further discussion.

GENERAL MODELING CONCERNS

COMMENT: *The timing constraints in FORPLAN for existing managed stands and future stands do not correspond to the actual relationships that maximize present net worth. The constraints on harvest age do not reflect the prescriptions and guidelines indicated. For example, existing managed timber on site 92 has (in FORPLAN) rotation age choices ranging from 70 to 110 years, while the rotation age that maximizes PNV is 70 years. Rotation age ranges and thinning ranges should be specified exactly as the management prescription indicated. Failure to do so results in a suboptimal allocation of resources at the forest level.*

RESPONSE: While it is true that each land type has one specific rotation age which maximizes PNV on a per-acre basis, it is highly desirable to provide FORPLAN with a range of harvest age choices. This allows the model flexibility to schedule harvest so as to meet constraints and objectives in the most cost-efficient manner and thus attain the *Forest-wide* optimum solution. For example, achieving an efficient nondeclining flow harvest schedule would be virtually impossible if each land area were restricted to a single harvest age option. Please see FEIS Appendix B ("Development of Timber Options") for detail.

COMMENT: *Projections of a 15 percent growth gain due to genetic improvement are completely speculative and should be eliminated.*

RESPONSE: The projected gain resulting from use of genetically improved stock has been reduced to 5 percent. Refer to FEIS Appendix B ("Development of Timber Options") for discussion.

COMMENT: *The value of the first cut of old-growth is allowed to influence economic analysis to a greater degree than long term productivity. This is improper -- timber analysis should be based on soil expectation value. Investments in management of new stands (reforestation, precommercial thinning, etc.) are generally not justified by anticipated future harvest values. Therefore, some of these investments (upon which the proposed harvest level is based) will not be made, and harvest levels will decline. The plan should be revised so as to avoid deceptively claiming nondeclining flows are possible when they are not. It is likely that properly analyzed PNV would be higher for lower harvest alternatives.*

RESPONSE: In Forest Plan analysis, the appropriate decision point for allocation of land to timber production is the time at which the existing stand becomes available for harvest. The decision to harvest entails, as a necessary consequence, the continued management of the stand for sustained timber yield. Therefore, it can be assumed that the flow of investments included in the total prescription selected for a given stand will occur. To disregard existing conditions and base allocation decisions on SEV alone would be to ignore a significant resource and the economic value it represents. Please see FEIS Appendix B ("Development of Timber Options") for more detail.

COMMENT: *The Olympic's analysis does not consider productivity of the forest by site. Therefore, the DEIS and Plan violate NFMA. Site-specific analysis is needed to determine the "...most cost-efficient combination of management prescriptions..." (36 CFR 219.12(f)(8)).*

RESPONSE: The analysis areas used in FORPLAN analysis have been restratified (see FEIS Appendix B, "The Forest Planning Model", for detail). The new stratification includes both site productivity and species. It should be noted that the DEIS analysis also included productivity as a FORPLAN stratification (DEIS Appendix B, "Development of Analysis Areas").

COMMENT: *Using a constant BF/CF ratio in converting $/MBF to $/MCF for costs and prices made the distinctions in value derived for differing diameters meaningless. In addition, use of an excessively low BF/CF ratio in deriving all $/MCF values understates both costs and prices considerably.*

RESPONSE: The board foot/cubic foot conversion factors use in analysis have been modified, and are now varied by both species and diameter. Refer to FEIS Appendix B ("Economic Analysis") for detail.

COMMENT: *The use of constraints to force the production of nonpriced outputs precludes any "optimal solution" to maximizing net public benefits. In addition, the DEIS fails to identify the opportunity costs of these constraints. The public must have these tradeoff values presented to them.*

RESPONSE: The array of benefits to be considered in maximization of "net public benefits" includes nonpriced outputs. Therefore, any *failure* to produce such outputs (through use of modeling constraints, if necessary) is more likely to preclude an "optimal solution" than is use of such constraints. This is why assessment of net public benefits and the selection of the Preferred Alternative is a quantitative and *qualitative* process (see also FEIS Appendix B, "Basic Concepts Related to Economic Analysis"). The tradeoffs associated with each constraint used in FORPLAN modeling are described in FEIS Appendix B (see "Development of Alternatives").

COMMENT: *FORPLAN has been so tightly constrained in its selection of allocation choices that it is impossible for the model to elect the optimal solution. In addition, use of equality constraints for defining allocation zone accessibility forced FORPLAN to construct roads and cut timber in economically suboptimal time periods, thus precluding an optimal solution.*

RESPONSE: The Forest's modeling of the areas previously covered by allocation zones has been completely revamped (see FEIS Appendix B, "The Forest Planning Model"). The above concerns associated with the use of allocation choices have been addressed with this restructuring.

COMMENT: *The selection of allocation choices for allocation zones is biased towards unroaded management options. The road component of each choice belongs to a road network shared with other areas; no mention is made of the network linkages that must be established when managing the Forest in its entirety. Therefore, the Forest's analysis includes multiple accounting of the same road cost items.*

RESPONSE: Although the original modeling did not include duplication of road costs, the allocation zone structure included therein has been revamped for other reasons. Refer to FEIS Appendix B ("The Forest Planning Model") for discussion.

PRESENT NET VALUE

COMMENT: *Does the calculation of PNV factor in a massive change in public perceptions, something like the environmental movement of the late 60's?*

RESPONSE: To the extent that public perceptions influence the costs and values used in economic analysis, changed perceptions have been incorporated in PNV. The most direct consideration of public perceptions included in this planning process, however, is in the identification of the public issues which drive the entire effort. Please refer to FEIS Chapter I ("Issues, Concerns, and Opportunities") for detail.

COMMENT: *Use of PNV has led to conclusions which are not consistent with the objectives of National Forest management. The parameters employed do not recognize the long-term nature of the Forest, and bias the plan in favor of immediate fiscal gain. Use of discounting is inappropriate, since the value of forest products is likely to be higher in the future. In using PNV, the Forest has pre-selected plans which call for high early harvest.*

RESPONSE: PNV is but one of many factors considered in the selection of the Preferred Alternative. Its principal functions are to assure that allocations and schedules are established which meet management goals in a cost-efficient manner, and to provide a quantitative expression of the net value of the total priced output of the alternatives (see also FEIS Appendix B, "Basic Concepts Related to Economic Analysis"). In developing its planning model, the Forest accounted for the expected increases in forest product values by using a 1 percent per year real price trend for stumpage (see "Parameters and Assumptions Used for Economic Analysis", FEIS Appendix B). Use of the nondeclining flow constraint in the development of the Preferred Alternative (and many of the other alternatives) counteracts the tendency toward high early harvest which often occurs when PNV alone drives the scheduling process.

COMMENT: *An explanation of the concept of present net value is needed.*

RESPONSE: PNV is, in essence, a means of comparing the overall economic values (expressed in monetary terms) associated with the alternatives under consideration. It is a standardized method for aggregating a vast array of individual benefits and costs, all of which occur at different times, into one quantitative expression of value. It is, therefore, a very useful tool in comparing and assessing the relative merits of alternative courses of action. Please see FEIS Appendix B ("Basic Concepts Related to Economic Analysis") for detail regarding the concept of PNV.

EMPLOYMENT AND INCOME EFFECTS

COMMENT: *The export of logs to Japan is a much bigger problem for the local economy than changes in Olympic National Forest harvest. If 10 percent of the exported volume were kept on the Peninsula, it would equal the total ONF harvest.*

RESPONSE: In actuality, almost half of the Peninsula harvest that has been exported in recent years would have had to be processed locally in order to equal ONF harvest (ONF harvest 410 MMBF per year, Peninsula harvest exported 860 MMBF per year). More to the point, however, is the fact that the fluctuations in employment and income which are expected to result from changes in Forest harvest level will occur regardless of the export situation. Since these gains or losses are a result of the Forest's actions, it is appropriate and necessary that they be considered and evaluated in the process of selecting a Preferred Alternative.

COMMENT: *Assuming that all volume sold is being harvested overstates the employment dependent on National Forest timber. Actual cut is historically no more than 80 percent of sold and was as low as 40-50 percent in the 1980-82 period. An estimate of 3000 jobs would be more realisitic than the 5000 shown in the DEIS. The assumption that all timber offered in the future will be harvested is also questionable.*

RESPONSE: The estimated level of employment dependent on National Forest harvest (see FEIS Chapter III, Table III-44) is based on actual harvest figures, not sold volume alone. The assumption that all future offerings will be harvested does entail the risk of overestimating employment to some extent. However, in view of future demand projections and the expected decline in non-Forest harvest on the Peninsula (see "Local Timber Supply and Projections" in the "Vegetation" section of FEIS Chapter III), this assumption is not unreasonable. Keep in mind that the projected changes in employment associated with the alternatives (see FEIS Chapter IV, Table IV-39) are intended to be an index for use in the comparison of alternatives rather than a prediction of absolute quantitative effects.

COMMENT: *The projected employment and personal income changes presented in the reviewer's guide do not represent anticipated net change as they should, because recreation employment gains that would mitigate declines in timber industry employment have not been included. Peninsula recreation is projected to increase 45 percent by 2030, while no increases are shown for National Forest-based recreation employment. According to the DEIS, this is to "avoid masking the effects of those outputs that do vary by alternative". This was only noticed by chance. It leaves the reader wondering what other surprises are buried in the EIS, and undermines the credibility of the planning analysis.*

RESPONSE: In the DEIS analysis, inclusion of outputs that were constant across all alternatives in the computation of employment effects was felt to be unnecessary. We have, however, revised both the modeling of recreation outputs (see FEIS Appendix B, "The Forest Planning Model") and the estimation of employment variations (see FEIS Chapter IV, "Local Economy"). The new procedures provide more comprehensive treatment of recreation-related employment.

COMMENT: *The assumption that recreation employment would not vary among alternatives is not supported.*

RESPONSE: The modeling of recreation outputs and the analysis of employment effects have been modified. Refer to FEIS Appendix B ("The Forest Planning Model") and FEIS Chapter IV ("Local Economy") respectively.

COMMENT: *This plan overemphasizes the dependence of the economy on timber and underemphasizes the role of tourism and recreation. This is especially true when calculations for timber employment include full discussion of secondary benefits (which are not covered for other outputs).*

RESPONSE: In analyzing potential employment changes associated with changes in resource output levels, the estimated effects of variations in all resources were handled in a similar manner. All of the employment figures associated with employment-generating resources include estimates of direct, indirect, and induced effects of changes in output levels. Please refer to FEIS Chapter III ("Local Economy"), FEIS Chapter IV ("Local Economy"), and FEIS Appendix B ("The Economic Impact Analysis Model") for detail regarding the estimation of employment and income effects.

COMMENT: *Employment and personal income calculations should reflect more than just the price paid to commercial fishermen. It is incorrect to assume that there will be no additional income to the community due to transportation, processing, and other activities. Since secondary employment associated with timber harvesting is included in the plan, the same should also be done for fisheries (both commercial and recreational).*

RESPONSE: The basic assumptions regarding fishery-generated employment have been revised to better estimate the total effect of the fishing industry on the local economy. Please refer to FEIS Chapter III ("Local Economy") for detail.

COMMENT: *In assessing timber-related employment, it should be recognized that there will be continuing attrition in mill jobs due to automation. Fluctuating markets will also take their toll. It is misleading to attribute job decline solely to removal of old-growth from the harvest base or other reductions in timber supply.*

RESPONSE: It is true that variables other than the supply of timber available to mills play a role in determining overall employment levels. The analysis of employment effects described in FEIS Chapter IV ("Local Economy") deals solely with the relationship between timber availability and employment, and thus presents the relative changes in employment projected to result from outputs which vary among alternatives.

COMMENT: *Has the Forest Service considered the potential economic impact of reductions in fish habitat potential resulting in reduced ocean fishing harvest limits? Have fisheries management entities been consulted to determine the correct risks and impact factors to analyze? Fisheries impacts could extend far beyond their apparent relationship to the Forest.*

RESPONSE: The analysis of the effects of alternatives on fisheries encompasses effects on commercial catch of anadromous fish, which are primarily taken from the ocean. Please refer to FEIS Chapter III ("Fisheries" and "Local Economy") for discussion of the analysis process.

COMMENT: *Use of 1973-82 income figures does not take into account the recent substantial wage cuts in timber and related industries.*

RESPONSE: The principal concern in analyzing economic effects is to identify relative differences among the alternatives. See FEIS Chapter IV ("Local Economy") for further detail.

COMMENT: *The plan treats off-Forest fisheries impacts as changes in costs rather than benefits. Since IMPLAN relies on benefit values to estimate employment effects, it is not clear that the Forest Service methodology adequately incorporates off-Forest effects in its analysis.*

RESPONSE: The treatment of off-Forest fisheries in the economic impact analysis has been modified since publication of the DEIS. Please refer to FEIS Appendix B ("Economic Analysis" and "Social and Economic Impact Analysis") for discussion of the current methodology.

COMMENT: *The role of Native Americans as market participants in the recreational fishery was not addressed.*

RESPONSE: The discussion of the American Indian community group (see FEIS Chapter III, "Local Communities") has been updated to better address this concern.

COMMENT: *The Preferred Alternative's increased timber harvest in the Soleduck and Calawah drainages will increase fisheries impacts to the detriment of the Quileute Tribe's economy. What will be done to prevent or remedy such losses?*

RESPONSE: The Preferred Alternative's harvest levels by drainage have been modified to avoid excessive effects in any one area. Please refer to FEIS Appendix B ("Formulation of Alternatives") for detail.

COMMENT: *The plan does not assess the effect of the proposed harvest decrease on dependent communities and timber-dependent employment. The degree of economic impact on local economies, including specific mills, needs to be more finely defined. A county-specific or community-specific economic analysis is warranted. Differences in value between timber and recreation jobs should be discussed.*

RESPONSE: The overall effects of changes in harvest level on the Olympic Peninsula economy are fully discussed in FEIS Chapter IV ("Local Economy"), including effects on income (which reflects the difference between recreation and timber jobs). More localized analysis would be beyond the validity of the data used in the analysis.

COMMENT: *Alternative C projects a loss of 200 logging jobs. This is a severe understatement of the actual impact. Our economic development council predicts a job loss of 1498 (including all jobs supported by the timber industry).*

RESPONSE: The projections of employment effects associated with the Preferred Alternative have changed considerably. Please see FEIS Chapter IV ("Local Economy").

COMMENT: *Your DEIS completely ignores many of the effects your plan will have on people. Where will the out of work people go? What about the stress of forced lifestyle changes? What will be used to build houses when the mills are gone?*

RESPONSE: We recognize that reductions in employment can generate many undesirable secondary effects. An in-depth analysis of such consequences, however, is beyond the scope of this planning process. The discussion of employment, income, and community effects found in FEIS Chapter IV ("Local Economy" and "Local Communities") provides an adequate basis for comparison of the effects of the alternatives.

COMMENT: *The Olympic must revise the DEIS to display current timber management plans as the base-case, no-action alternative. At least one estimate of economic effects should be based on a comparison between the ASQ of the preferred alternative and the potential yield of existing plans.*

RESPONSE: The addition of Alternative NC to the set of alternatives presented in the FEIS accomplishes this. See FEIS Chapter II ("Alternatives Considered in Detail") for discussion.

COMMENT: *A worst-case analysis is in order, since the DEIS fails to address foreseeable impacts to the timber industry. The Forest is using the "best data available" to assess timber outputs, but the inaccuracies of this data are well known. This uncertainty is not addressed, although it could lead to significant impacts on the solvency of timber companies on the Peninsula. The public has a right to know all possible consequences of the Forest's proposal.*

RESPONSE: The uncertainty of demand and supply projections, economic impact assessments, and social effects analyses is acknowledged throughout the discussions of these factors. What we are presenting is our best professional judgment regarding the effects of alternative courses of action. Refer to FEIS Chapter IV for detail.

COMMENT: *The DEIS does not include consideration of the potential major impacts of harvest level changes on the pulp and paper industry. Shifting harvest from eastside to westside on the Peninsula reduces the supply of Douglas-fir chip material required for our Tacoma kraft facility.*

RESPONSE: The distribution of harvest has been revised in the FEIS Preferred Alternative. Refer to Forest Plan Appendix A ("Project Schedules") for detail.

OTHER ECONOMIC ISSUES

COMMENT: *How can a drop of 30-40 MMBF cause such a large decline in Returns to the Treasury, from $14.6 to $7.5 million? A drop of 15 percent in harvest should not cut returns to the treasury in half (see DEIS page II-104).*

RESPONSE: The drop in harvest from Alternative A-Current Direction to Alternative H (Modified) was actually about 90 MMBF (see DEIS page II-94), or 37.5 percent. This is consistent with the above decline in returns to Treasury. The relationship of Alternative A-Current Direction harvest to Alternative H (Modified) harvest has now changed (see FEIS Chapter II, Table II-14).

COMMENT: *How can the Forest justify not entering operations and capital investment costs in FORPLAN runs for benchmarks? This results in highly inflated dollar estimates (see DEIS page II-105).*

RESPONSE: Total costs are included in the FORPLAN analysis of benchmark runs (see FEIS Appendix B, "Benchmark Analysis"). The calculations necessary to disaggregate these costs into operational and capital investment costs, however, were not performed for benchmark runs. This does nothing to bias benchmark analysis, since benchmark PNV calculation procedures are identical to those used for alternatives.

COMMENT: *How could net receipts for Alternative I be negative (Table 15, DEIS Summary) when there are no below-cost sales?*

RESPONSE: Because of Alternative I's low harvest level, the total operating budget for the Forest exceeds timber revenues and results in negative net receipts in the first decade. The same conditions now apply for Alternative H (Modified). See FEIS Chapter II, "Major Tradeoffs Among Alternatives".

COMMENT: *The DEIS should present the proportion of total county income represented by payments to county governments.*

RESPONSE: Consistent information on county budgets in the 1980's was not obtained. It is likely that National Forest payments to counties form a substantial component of the Jefferson County budget and a minor component of the Grays Harbor, Mason, and Clallam County budgets.

COMMENT: *An important side effect of cheap timber is overbuilding, which results in loss of open space and an overabundance of single family homes. This is not covered in the DEIS.*

RESPONSE: The focus of Forest Plan analysis is assessment of public demand for the various outputs and benefits the Forest can provide, in conjunction with the costs and effects associated with providing said benefits. Lumber produced is considered as one of these benefits, as there is significant demand for this product. The secondary consequences (good, bad, or indifferent) of the use of this product, or any other output of the Forest, are beyond the scope of this analysis process.

AIR

COMMENT: *Cumulative and synergistic effects of Forest Service prescribed burning and confinement fire policies need to be examined in conjunction with the State Department of Natural Resources and others burning.*

RESPONSE: Cumulative and synergistic effects of Forest Service and prescribed burning and confinement fire policies are addressed in the compliance of the Forest's burning program with the State's Implementation Plan, developed to comply with the Federal Clean Air Act. Where confinement fire suppression is being considered, the effects of applying that strategy on air quality is one of the factors considered in the development of the fire suppression plan.

COMMENT: *The State Implementation Plan and Memorandum of Understanding (S.I.P. and M.O.U.) referred to in the Forest's informational presentation to the Department of Ecology were not included in the list of documents to be affected by the Plan.*

RESPONSE: The State Implementation Plan and our compliance with it will not be altered by the implementation of this Forest Plan. To assure compliance with those standards they are specified in the Forest Plan Standards and Guidelines as direction in the conduct of National Forest prescribed burning on the Olympic National Forest.

COMMENT: *You should establish a value for air quality deterioration due to Total Suspended Particulates (TSP) similar to that established for sediment.*

RESPONSE: We do not have the capability to provide such an estimate, nor do we feel such an estimate is possible given the largely non-quantifiable nature of relatively minor and temporary air quality differentials associated with the amount of burning undertaken by the Olympic National Forest.

FIRE

COMMENT: *RNA Protection Guideline 4 should be deleted or more precisely defined. Burning to protect "adjacent values" must be approved by the Regional RNA Committee prior to implementation.*

RESPONSE: The Standards and Guidelines have been modified to address this concern.

COMMENT: *Permitting fires in Wildernesses where spotted owls occur may cause severe problems for the birds by disrupting the SOHA network.*

RESPONSE: The environmental effects of Wilderness fires to be utilized as management fires and wildfires occurring in Widernesses are evaluated in the development of prescriptions for the Management Fires and appropriate fire suppression strategies for suppression of the wildfires. In both of these cases the potential effect of the fires on spotted owl and/or other habitats is a basic factor in the design of the burning or fire suppression project.

COMMENT: *Operations and prescribed fires have escaped into the National Park in the past. A protective buffer of uncut or partial cutting area should be provided to protect the Park from this happening.*

RESPONSE: Current legislation does not require that a management buffer be maintained on National Forests adjacent to National Parks. However, the problem identified in the response to the DEIS was recognized by both the Forest Service and the Park Service and was one of the elements considered when boundary adjustments were proposed by the agencies in 1985. The current relocation of the boundaries along largely drainage divide topographic features should eliminate, or at least greatly reduce the problems cited.

COMMENT: *There should be a section on the beneficial role of natural fire in wilderness, possibly in Chapter III. There should also be a discussion of the positive effects of prescribed fire in wilderness or other unroaded land classifications.*

RESPONSE: This is adequately discussed under the Wilderness component" in Chapter IV of the FEIS.

COMMENT: *Escaped slash fires account for a significant portion of the area of wildfires. What would be alternative costs of leaving the slash in place and/or removing it by means other than fire?*

RESPONSE: Development of alternatives to disposal of slash and debris by burning are being actively pursued. The greatest promise seems to be in the areas of using currently excess biomass materials for energy production fuels or for industrial raw materials. However, until markets can be developed for these alternative uses of these materials they must either be removed from sites where they interfere with management of the area or otherwise reduced in bulk or rearranged. At present, despite the relatively high cost and risk of disposal of the material by burning, it is still the most economical means of accomplishing it at our disposal. However, the degree of burning on the Forest has decreased in recent years and is expected to do so in the future. Please see Chapter III for more details on the slash reduction program on the Forest.

HYDROPOWER

COMMENT: *There appeared to be few policies or guidelines that the Forest Service would follow to evaluate whether or not hydropower is an appropriate use or whether other resources would be protected. Specific comments included:*

Fish and wildlife sections of the Standards and Guidelines should include management direction for potential hydropower projects.

Hydropower is not compatible with fisheries and should be deleted where appropriate from consideration.

The Plan should address the obligation of the Forest Service to comment on FERC proposals.

RESPONSE: Management direction for hydropower projects is found in Forest-wide Standards and Guidelines of the Forest Plan (Energy section) and in the Riparian area management prescription. Site-specific recommendations will be made through the Federal Energy Regulatory Commission (FERC) for protection of fish and wildlife values. The Forest Service manages the Forest for multiple uses. These uses must be compatible with the purposes of laws, regulations, and policies which provide direction for management of National Forests. Hydropower projects are a possible use of the Forest resources if it is economically and environmentally acceptable.

A hydropower project needs to be compatible with fisheries values before the Forest Service would recommend approval of the project to FERC. The Forest Service normally supports the recommendations concerning fisheries requirements which the U.S. Fish and Wildlife Service and Washington State Departments of Fisheries and Wildlife make concerning a project.

As part of the FERC licensing process, the Forest Service is required to submit a 4(e) report to them. This report states whether the Forest Service approves or does not approve the project. If the Forest Service approves the project, the 4(e) report establishes the conditions (i.e.: minimum flows, erosion control, etc.) to mitigate impacts of the project. These conditions become terms of the license if FERC grants the project a license.

COMMENT: *In Plan and DEIS hydropower is included under Energy. In the Standards and Guidelines it is under Water, Soil, and Air. The document should be consistent throughout.*

RESPONSE: Hydropower has been included under Energy sections so that there is consistency throughout the documents.

COMMENT: *Dams and other water diversions are omitted from the discussion on structures. There needs to be discussion on how the various alternatives would be impacted by hydropower (and how hydropower development would impact the alternatives) since there are several hydropower projects which may be licensed on National Forest lands.*

RESPONSE: Dams and other diversions are discussed in FEIS in Chapter III in water section. How the various alternatives would impact hydropower projects is described in FEIS in Chapter IV in energy section.

COMMENT: *A description of the current status of the Elkhorn hydropower project is warranted in the section on the Dosewallips River.*

RESPONSE: Wild and Scenic River Evaluation of the Dosewallips River in Appendix F of the FEIS has been updated to include the current status of the proposed Elkhorn hydroelectric project.

COMMENT: *There appear to be few policies or guidelines that the Forest Service would follow to evaluate whether or not hydropower is an appropriate use or whether other resources such as fisheries, wildlife, scenic values, wilderness values, and others would be protected.*

The Plan does not spell out how the Forest Service is to respond to proposed dams. The management designation should be made clearer and more site specific.

The F.S. needs a comprehensive plan to deal with hydropower projects to protect other forest uses.

RESPONSE: In the Plan, there are Standards and Guidelines (Chapter IV: Forest-wide, Wild and Scenic, River Corridor, and Riparian Area) which address suitability of hydroelectric projects on streams on the Forest. In the Forest Service Manual (2770) and Handbook (2709.15) there is specific direction which addresses policies and guidelines that are needed to evaluate whether or not hydropower is an appropriate use. The objective of these policies is to ensure that a proposed hydroelectric project would be compatible with the National Forest purposes. Also, it is to ensure that planning, construction, and operation of hydroelectric projects are performed in a manner to protect or effectively utilize National Forest lands and resources.

How the Forest Service will respond to proposed dams is also established in Manual (2770) and Handbook (2709.15). Site specific determinations will be made during evaluation of a proposed project.

It is the Federal Energy Regulatory Commission or Power Commission's responsibility to do Comprehensive Planning of hydropower projects. They are responsible for looking at cumulative effects of multiple hydroelectric projects and over-all planning for a drainage basin of hydroelectric projects. The Forest Service is responsible for determining whether the project would be compatible with the best use of Forest Service administered lands and assessing environmental effects.

COMMENT: *The phrase "minimizing the impact" should be modified to "fully compensating for the impact." Partial replacement of resource losses is not sufficient for hydropower uses.*

RESPONSE: Hydropower is an appropriate use of Forest resources if the project would have an acceptable impact on other resources of the Forest. Any hydropower project is expected to have ground disturbance and subsequent effects on the stream reach in the project area. These impacts need to be minimized to an acceptable level for it to be a viable project. It may not be necessary to "fully compensate for the impact" of the project. For example, erosion control measures will be required for all projects. However, there will still be some erosion from the construction site even if successful erosion control measures are used on all ground disturbed areas.

COMMENT: *The Forest Service should take a position against hydro-electric projects wherever necessary to protect other resources.*

RESPONSE: National Forest lands are to be managed under the multiple use concept. Hydropower development of sites on National Forest land is an appropriate use of these lands under Federal laws (see

FEIS Chapter III: Energy section). However, the environmental consequences of the project must be acceptable after evaluation by the Forest Service, FERC, and other governmental agencies.

COMMENT: *The Plan should address the obligation of the Forest Service to comment on FERC proposals. Sites withdrawn under the Federal Power Act should be identified and addressed as to whether they should be managed for power generation or Multiple-Use values.*

RESPONSE: As part of the Federal Energy Regulatory Commission (FERC) licensing process for hydropower projects, the Forest Service is required to submit to FERC a 4(e) report. The report states whether the Forest Service approves or disapproves of the project. The 4(e) report includes terms and conditions for the project which are included as requirements if the project is licensed by FERC. The terms and conditions are requirements which are necessary to minimize environmental impacts. The 4(e) report determines whether a hydropower project is an appropriate use for a site and assesses whether the environmental impact of the project is acceptable.

See FEIS Chapter III (Energy section) for a discussion of sites that were withdrawn under the Federal Power Act.

COMMENT: *Do not preclude W&S recommendation of rivers because of potential hydropower development.*

RESPONSE: When a license application for a hydroelectric project is submitted to FERC, the Forest Service must submit a 4(e) report to FERC. The 4(e) report determines whether the project is a suitable and appropriate use of the area (see FEIS Chapter III: Energy section). Designation of a stream as a Wild and Scenic River is appropriate if it meets the eligibility and suitability criteria. Potential hydropower development would not influence this evaluation. Please see Appendix F of the FEIS for detailed discussion of the Wild and Scenic River evaluation conducted on the Forest.

COMMENT: *Presenting energy potential in BTUs masks where it comes from. If any of this potential comes from hydropower, the projects should be identified.*

RESPONSE: The hydropower development potential is available in process records in the Supervisor's Office. The extent to which this energy source is likely to be developed is questionable due to prohibitive costs, environmental impacts, and economic infeasibility. In the past ten years, approximately 60 preliminary permits were filed with FERC for hydropower sites. At present, there are only three active hydropower projects: Wynoochee Dam Project (FERC granted license for construction in 1988), Elkhorn Project (in license application process with FERC) and Lena Creek Project (FERC license denial was appealed and is in license application process again). In the future, there is expected to be renewed interest in hydropower projects as electricity prices increase and demand is greater.

MINERALS

COMMENT: *Plan should include the requirement for water quality monitoring for locatable mineral sites with the potential to affect water quality and benefical uses. Water quality monitoring data may be needed to ensure compliance with operating plans.*

RESPONSE: Several Chapters in the FEIS and Forest Plan speak to this concern. Please refer to sections Direct and Indirect Effects, and Mitigation Measures, in Chapter IV of the FEIS, and in the Forest Plan please review the Standards and Guidelines in Chapter IV and the Monitoring section in Chapter V.

COMMENT: *Potential for environmental impacts as a result of energy or mineral activities should be discussed in Chapter IV of the DEIS.*

RESPONSE: Please refer to Chapter IV of the FEIS, and the sections on Direct, Indirect, and Cumulative Effects. The limited amount of minerals activity on the Forest at this time does not result in significant environmental impacts.

COMMENT: *No mineral development or exploration should be allowed.*

RESPONSE: This would be contrary to long-standing, existing statutory rights and Forest Service policy.

COMMENT: *Discussion of landownership planning should include FS policy on securing all mineral rights on land to be acquired. Federal ownership of mineral rights will insure FS has full range of options to protect fish and wildlife habitat on acquired lands.*

RESPONSE: It is Forest Service policy in all land acquisitions to obtain title in fee whenever possible. This includes acquisition of the mineral estate.

COMMENT: *It would be helpful if DEIS Chapter III contained a more complete historical account of past and present mineral activity.*

RESPONSE: We believe that Chapter III is adequately descriptive and commensurate with the mining activity and potential on the Forest.

COMMENT: *Should be acknowledged and noted in Chapter II as it is in Ch IV that 1) Mining claimants have a right of reasonable access and 2) Stipulations can be placed on leasing actions. It should then be possible to view mineral development as less of an undesirable impact and reduce the amount of land under high to moderate restrictions to mineral activity.*

RESPONSE: The purposes and objectives for the various Chapters differ, and is not intended nor desirable to cover all aspects of a planning question in every Chapter. As pointed out, Chapter IV adequately covers the noted points of concern. All aspects of mineral development have been incorporated into the resolution/design of final resource allocations.

COMMENT: *Chapters I or IV should include land availability status for mineral entry, leasing, restrictions, such as tabulated on p IV-34. Map should also include mineral terrains, mining districts, classification boundaries, etc.*

RESPONSE: In Chapter IV of the Forest Plan, please refer to Table IV-1, Resource Output Summaries. In that same Chapter please also review the section titled Resource Summaries. For other limitations or restrictions please be guided by the Forest-wide and Special Management Unit Standards and Guidelines also found in Chapter IV of the Forest Plan.

COMMENT: *Continue coop effort with BLM to compile mineral information for western Washington, preferably in GIS format.*

RESPONSE: We are continuing in these efforts.

COMMENT: *The FEIS does not fully explain how the management goals will be accomplished or deal specifically with areas of moderate or high mineral potential as part of the Mgt Area Prescriptions.*

RESPONSE: We believe the Resources Summary section and the Forest-wide Standards and Guidelines found in Chapter IV in the Forest Plan adequately describe how our goals can be attained. Please refer to the expanded goal statement section in Chapter IV as well. The Standards and Guidelines for Special Management Units are also found in Chapter IV and most of these include the areas of moderate mineral and gas and oil potential.

COMMENT: *Plan says in part "FS would...challenge the validity of any claim...that could impact the wilderness or special area." Respondents note that this is not in keeping with policy nor consistent with statements of claimants rights described elsewhere.*

RESPONSE: We agree that the statement was rather poorly written and this Standard and Guideline has been removed.

COMMENT: *Would like to see the following incorporated in the report:*

The Crescent Mine production of 47,000 tons of manganese, over $1,000,000 in 1981 dollars.

Mineral Potential Map - same scale as alternative maps and in color. Kootenai and Okanagan maps are best examples.

Table showing potential classification, availability, etc. by percent of acres. The Beaverhead NF DEIS is an excellent example. We suggest a modification as shown. This would provide an excellent statistical representation of minerals availability.

Provide evaluation criteria for nonenergy minerals such as that from the Wallowa Whitman NF.

Provide a definition of access categories such as that from the Beaverhead NF.

RESPONSE: We do not feel that the offered statistics will materially or effectively contribute to the essence of potential values that have been estimated. The mineralization and mineral potentials for development

do not compare with those for some other Forests. We feel that our presentation on mineral potential, availability, records, and statistics is adequate for the circumstances on the Olympic National Forest.

COMMENT: *In Appendix C, South Quinault Ridge Unroaded Area, availability should have subheading "Minerals" under Resource Potential to be consistent with the other sections.*

RESPONSE: Appendix C has been corrected accordingly.

COMMENT: *DNR supports opportunities for mineral exploration when consistent with protection of other resources. Would expect plan to insure operations are conducted to equal or exceed the requirements in the Forest Practice,...Surface Mining,...state statutes and subsequent regulations.*

RESPONSE: The general intent and policy under which the Forest Service and other agencies comply with State and local laws is well documented. Resource management activities will be conducted in compliance with standards and regulations that are equal to or greater than requirements of state statutes such as the Forest Practices Act.

LANDS

COMMENT: *All privately owned areas within ONF should revert to public upon death of owner.*

RESPONSE: Fundamental laws and regulations governing the management of the Olympic National Forest do not permit such consideration.

COMMENT: *Purchase (condemn if necessary) corporate land to expand ONF.*

RESPONSE: It is contrary to our mission statements, direction, and policy to acquire lands outside of the National Forest boundary for the sole purpose of enlarging or expanding the National Forest.

COMMENT: *Maps - Should provide maps showing 1986 change in ONF/ONP boundary.*

RESPONSE: Current, state of the art maps have be provided whenever possible.

COMMENT: *The FEIS fails to mention that two SOHAs near Baldy Mt. and McDonald Mt. are currently being discussed for trading with Washington DNR. State would not be obligated to manage for spotted owls.*

RESPONSE: This comment made specific reference to Goals for Resource Programs. Please refer to the introductory remarks at the beginning of this section that give perspective on the intent of goal statements. Landownership adjustment will be conducted to facilitate accomplishment of Forest Plan objectives, that may very well in some cases include a primary objective of SOHA acquisition. Any unacceptable adverse effects will have to be mitigated or resolved prior to implementation of any land exchanges. Each land exchange that is considered under the Landownership Adjustment Plan will be tested for its appropriateness through the NEPA process.

COMMENT: *Suggest exchange to acquire trail and river corridors. If exchange for other reasons, do not dispose of trail and river corridors. Suggest use land in NW corner of Forest as trading stock.*

RESPONSE: Please refer to the Forest-wide Standards and Guidelines in Chapter IV of the Forest Plan. Make particular note of the standards and guidelines that apply to Special Management Units such as those for Wilderness and Wild and Scenic Rivers. The Olympic National Forest Landownership Adjustment Plan has identified land suitable for exchange. Acquisition of lands that will contribute to the resource management objectives of the Forest Plan, may be acquired by exchange, purchase, or donation. Acquisition of lands in special management units such as Wild and Scenic Rivers, will be considered on a "willing seller" basis only. Please refer to Chapter IV of the Forest Plan and the landownership discussion under Resource Summaries.

COMMENT: *We request that you consider formal designation of existing and proposed transportation and utility corridors in the EIS and Forest Plan.*

RESPONSE: Please refer to Chapter IV of the Forest Plan and the structures and utility corridor discussion under Resource Summaries.

COMMENT: *Planned utility corridors associated with proposed hydroelectric sites should be identified and designated in order that they may be fully integrated into a comprehensive utility corridor system.*

RESPONSE: We agree. However, no firm proposals or plans for new utility corridors have been submitted to the Olympic National Forest.

COMMENT: *It would be desirable to delineate "avoidance" and "exclusion" areas for energy and utility transmission corridors with relevant information summaries.*

RESPONSE: These concerns are covered by Forest-wide and Special Management Area Standards and Guidelines. Please refer to Chapter IV of the Forest Plan.

COMMENT: *The Forest needs to examine the possibility and ramifications of "land-locking" intermingled ownership. A scenario could be the designation of an area to be unroaded thus possibly precluding an adjacent landowner from obtaining right-of-way to cross the Forest to gain access to their own land.*

RESPONSE: Existing laws and regulations are in place that assure private landowners means for acquiring appropriate access to their land.

SOIL

COMMENT: *The Plan should reduce or eliminate forestry activities in areas which are sensitive to compaction, erosion, and/or mass failure.*

RESPONSE: The substance of your comment centers in a value judgment. In fact, our forest practices can be designed to avoid or minimize impacts to the soil resource by provisions stated in the Standards and Guidelines of the Forest Plan (See FEIS, Appendix D/Plan, Chapter IV). The Land Suitability classification, used in the Plan, also identifies some areas that may not be feasible for current forestry practices. The Forest Plan has provisions and constraints that can be used to protect the soil resource. The Region 6 Best Management Practices Provisions are incorporated in Appendix J of the Plan.

COMMENT: *The Plan states that no more than 20 percent of an area should be compacted, but the DEIS states that large winter peak flows can be increased when soil compaction occupies more than 10 to 12 percent of a total watershed. How do these two statements relate?*

RESPONSE: The area of consideration is what separates these two criteria statements. The statement within the Plan (no more than 20 percent), refers to compaction within a specific treatment area. The statement within the DEIS, (no more than 10 to 12 percent) refers to a whole watershed. It is the difference in view between a small analysis area and the view in total for a whole drainage.

COMMENT: *Realistic cost estimates should be made to repair past and future soil impacts from logging on steep terrain or near streams.*

RESPONSE: Soils are not static, but are dynamic multi-dimensional bodies. They are quite complex and at times unpredictable. At times soils become damaged. The best approach to correct soil related problems is to set up program provisions to allow for funding and correction of degraded soil areas. Program provisions will exist to plan and fund rehabilitation work when the need is known. (See the Plan Appendix A).

COMMENT: *The 65 percent slope definition could lead to major future problems if there are any significant risks associated with slopes less than 65 percent. There is undoubtedly a gradually declining degree of risk that varies by slope and other factors over some range of values. A more detailed treatment of this relationship is needed.*

RESPONSE: The use of 65 percent in the DEIS is used because most of our sensitive soil areas exceed 65 percent slope. There are a few areas having slopes less than 65 percent that were included with the sensitive soil classification because of known mass failure processes. Project environmental analysis will also address the sensitivity of the land to specific management practices, regardless of slope, whenever appropriate.

COMMENT: *The analysis area delineators eliminated (riparian character, slope class, and erosion hazard) are cause for concern due to several assumptions or conclusions that are largely unexplained. It is impossible to determine if the factors are really as unimportant as stated or if one or more of the assumptions are likely to be flawed. A more detailed treatment is needed for this section.*

RESPONSE: We believe this issue is treated with adequate detail in Appendix B. The important points are (1) an ID team evaluated the model and variables to reach their conclusion, (2) there were limitations to FORPLAN's modeling size capabilities, (3) the ID team concluded that riparian character, slope class, and erosion hazard were not sensitive delineators to address the major ICOs modeled in FORPLAN, and therefore were not needed. Please refer to Appendix B for additional detail.

COMMENT: *The Canal Front Plan placed special constraints on management of the Middle Dungeness River drainage. Steep, highly unstable soils, poor regeneration, and likelihood of major slope failures caused much of the area to be taken out of the timber base and managed in such a way as to insure its future integrity. The present plan fails to retain special restraints for this area in its Preferred Alternative; it fails to adequately discuss the decision to drop current management directives, or present any specific resource information that would lead to such a decision.*

Also, the Silver Creek Road (2825) was directed to be closed in the Canal Front Plan of 1979, not only has the road remained open but the preferred alternative removes this former decision.

RESPONSE: Many of the constraints of the Canal Front Plan are incorporated in the Final Forest Plan. The allocations, Standards and Guidelines, and BMPs are designed to provide ample protection for the resources of the Middle Dungeness River drainage, including the Silver Creek drainage, and other sensitive areas of the Forest. Specific road closures are project decisions addressed by the Ranger Districts during Plan implementation.

COMMENT: *The DEIS presents a general discussion of high hazard soil and slope conditions on the Olympic National Forest, stating that these areas with a known high risk of mass wasting and soil erosion potential have been removed (through the suitability stratification process) from the inventory of lands suitable for timber harvest. The Forest's soil inventory provided the basis for this determination, but no details are given in the discussion as to the criteria for "high risk." This should be summarized in the FEIS in such a manner that comparisons can be made of the soils information and relative risk of mass slope failure with information on harvest rates and rearing areas for anadromous fish and other species of concern.*

RESPONSE: This level of detail is not generally included in the FEIS. The Planning Records in the Supervisor's Office of the Olympic National Forest are available for review on the technical details of the timber/soil suitability analysis.

COMMENT: *It should be clear that the extensive strategy of soil conservation - soil first, timber cutting second, is preferable over the intensive strategies, which are based on expensive artificial inputs.*

RESPONSE: The Olympic National Forest recognizes the need to follow both extensive and intensive forest management practices. Our site specific analysis of areas are used to separate resource values and sensitivity, and guide us into appropriate management practices.

UNROADED AREAS

COMMENT: *A major concern regards timber management proposed for areas otherwise not targeted for timber production. Logging is allowed under certain circumstances in A1A (Roadless Non-Motorized), A1B (Roadless Motorized), C1 (old-growth), and J2 (RNAs). Any timber management is in such areas are completely contrary to their intended functions.*

RESPONSE: Timber is not available for programmed harvest in any of these allocations, however, the Standards and Guidelines do allow for timber harvesting to take place under certain circumstances but only when timber harvesting is consistent with the Desired Future Condition of that particular Management Prescription. Refer to Standards and Guidelines for each Management Prescription (A1A, A1B, C1, J2).

COMMENT: *There were several comments concerned with how unroaded areas would be allocated and managed. The comments involved a range from leaving them all unroaded to making them available for timber harvesting.*

It is important to note here that demand for Wilderness areas and other unroaded resources cannot be met by any substitute. Once these areas are lost they are essentially irreplaceable and it is therefore much easier to shift demand for the commodity resources to other areas than to try to mitigate for loss of such lands.

The information on which this Plan is based is out of date or unreliable. I strongly disagree with comments that undeveloped recreation should be primarily concerned with unroaded areas. This is simply not true. Even according to your own RIM statistics, more people drive the roads than walk the trails.

It is true that there is an expressed interest in total preservation of unroaded area among some "segments of the public" but there are also many more publics that demand some degree of full development to the extent that is feasible?

The Committee report also recognized that the Forest Service has the authority to manage lands in an undeveloped condition, if and when appropriate. We believe that "appropriate" use of this authority specifically applies to cases of well-defined areas of undeveloped lands where the FS can clearly demonstrate that such limited use management is in fact the highest and best use with the attendant opportunity costs well documented. In the case of the proposed ONF Land and Resource Management Plan, this necessary justification and documentation is not presented and, in our opinion, could not be done so in the convincing and defensible manner that is required. For these reasons, we strongly recommend that you not use the proposed A1A and A1B management prescriptions and redefine the management direction of lands so designated in ways that will be more responsive to present and future public needs during the plan period.

You state that many people feel that the remaining roadless areas should be retained in recognition of the increasing interest in unroaded recreation and the shrinking land base and that interest in this issue "is also part of a national trend." The last statement is not true. From the base year of 1980 used in the Forest Recreation analysis to the last year of record, 1986, Dispersed General Undeveloped Area Recreation Servicewide Summary on a national basis has increased 0.7 percent or 359 MRVDs. This is not a significant upward trend and is indeed a misrepresentation in the DEIS. Statewide, as previously indicated, there is no such rising demand either. Locally, the ONF Planning Staff and peer reviewers should be well aware that in the "backcountry" areas of ONP that are roadless and designated for Wilderness in the master plan, recreation use has been steadily declining over the most recent past decade.

RESPONSE: The DEIS and FEIS have examined a wide range of uses of unroaded lands on the Forest and Alternative C-Preferred (Modified) represents a mixture of uses that was intended to represent a wide range of public interests. Refer to Chapter IV, section entitled "Unroaded Areas," and Appendix C for the environmental consequences of allocating unroaded areas to uses that would reduce the total acres currently providing Semi-Primitive and Primitive opportunities.

The Forest is currently unable to meet demand for unroaded undeveloped recreation while it is more than capable of providing roaded recreation opportunities to meet demand and and will continue to do so. Therefore, the major issue that the DEIS and FEIS focused on was how much of the unroaded areas should be retained in an unroaded condition in order that they may continue to provide undeveloped unroaded recreation opportunities and help meet some of the demand.

The Forest Plan would retain approximately 65 percent of the unroaded areas. The decline of backcountry use in the ONP may be the cause of any one or combination of factors (e.g., overcrowding or lack of solitude may cause people to seek unroaded recreation experiences elsewhere) and, therefore, does not necessarily indicate that there is an overall decline in the demand for unroaded recreation. A decline in use does not indicate whether the use of an area is still above existing capacity. Refer to Table III-33 in Chapter 3 of the FEIS for comparison of demand and supply by ROS class and Appendix C for allocation of unroaded areas by alternative.

COMMENT: *Using the sights and sounds argument to preclude roadless management as an option in Forest Planning is an insufficient, inadequate reason. It is of no real consequence if one can observe sights and sounds from some locations in the area.*

RESPONSE: The criteria involving the "sights and sounds" in any given ROS class is part of the Forest Service Recreation Opportunity Spectrum (ROS) and is used to help measure the off-site or nearby distractions that will effect one's recreation experience and the settings in which one recreates. The Recreation Opportunity Spectrum is outlined in the USDA, Forest Service Handbook, entitled "ROS Users Guide".

COMMENT: *There were a few comments that indicated that retaining unroaded areas for unroaded recreation purpose was in conflict with the 1984 Washington State Wilderness Act.*

The Washington State Wilderness Act of 1984 (PL 98-339) bestowed Congressional approval on the RARE II results with sufficient release language to designate the most suitable lands from that inventory as new units of the Wilderness Preservation System. This Act of Congress deemed that the remaining roadless areas be managed for nonWilderness multiple uses pursuant to NFMA Sec. 6 management plans and need not be managed to preserve any Wilderness characteristics for subsequent Congressional direction. This is in conflict with the disposition of roadless areas as proposed in the draft plan.

The map of the proposed Alternative exhibits a majority of boundary miles classified in management areas A1A, A1B and A2 situated as wilderness buffers in direct conflict with the spirit and intend of Sec. 9 to wit: "Congress does not intend that designation of wilderness areas in the State of WA lead to the creation of protective perimeters or buffer zones around each wilderness area. The fact that nowilderness activities or uses can be seen or heard from areas within the wilderness shall not, of itself, preclude such activities or uses up to the boundary of the wilderness area." Plainly, it is contrary to Congressional direction to waste adjacent nonwilderness land and resources for the purposes of allegedly guarding wilderness values and such proposed action is also a violation of FS Washington Office policy.

The proposed plan implementation schedule would leave over 80 percent of the total unroaded areas in this developed condition by the end of the plan period. We believe this potential situation is contrary to the intent of the WA Wild. Act of '84 and the direction of the RPA program pursuant to the Amended Resources Planning Act.

RESPONSE: The Washington State Wilderness Act of 1984 states that the purpose of the Act is to "insure that certain other National Forest System lands ... be available for nonwilderness multiple uses." Both the DEIS and FEIS provide a range of management alternatives for a variety of nonwilderness resource mixes. The various alternatives provide a range of allocations from retaining areas or portions of areas for unroaded undeveloped recreation to making them available for development and intensive management.

COMMENT: *A couple of comments were made concerning the use of the Upper So. Fk. Skokomish unroaded area and the trail.*

In the Upper So. Fk. Skokomish River Area it appears motorized activity within this management area will impact the surrounding "non-motorized areas". Is this true? Has it been evaluated? What would be the likely impacts; noise, smell?

In the Upper Skokomish Roadless Area the trail should be closed to ORVs because it accesses the ONP and is close to Wonder Mtn. Wilderness. The areas around Capitol Peak and Mt. Church should be designated to A1A.

RESPONSE: The Upper So. Fk. Skokomish unroaded area is allocated to Undeveloped Recreation (Non-Motorized) in the FEIS. The Upper So. Fk. Skokomish trail is closed to ORVs because it accesses the Park. Refer to Table III-26 in Chapter III for trail information.

COMMENT: *McDonald Creek roadless area now belongs to the ONP and this needs to changed. How many roadless areas were recently lost in the land exchange with the Park?*

RESPONSE: None of the McDonald unroaded was transferred to the Park with the 1986 Forest/Park boundary adjustment. Refer to Chapter III of the FEIS, section entitled "Historical Trends" for information concerning the boundary adjustment.

COMMENT: *In the Quilcene Roadless Area the Deer Ridge Trail and adjacent land have been designated A1B, admitting off-road vehicles. The trail provides access to Deer Park and the ONP. To obviate conflict between non-motorized uses in the Park and to remove the temptation to vehicle users to continue riding into the Park, this trail and adjacent land should be designated A1A. The same applies to the northern access to Mt. Townsend Trail and area from Dirty Face Ridge and Last Water Camp due to their close proximity to Buckhorn Wilderness. The side of Tyler Peak should be designated A1A, rather than A1B, because of its proximity to the wilderness.*

RESPONSE: The Deer Ridge area has been changed and is now allocated to Undeveloped Recreation (Non-Motorized). Both the Deer Ridge and Little Quilcene trails are closed to motorized vehicles because they access either the Park or Wilderness. The Gold Creek trail is open to ORVs as it ends on the Silver Creek road and can not access the Buckhorn Wilderness. Refer to Table III-28 in Chapter III of the FEIS for trail information.

COMMENT: *In the Jupiter Ridge Roadless Area, the Mt. Jupiter trail should be closed to ORVs because it also accesses Wilderness. The areas surrounding the trail should be designated A1A, not A1B. In the river bottom immediately south of Little Hump, the west half of the valley is Wilderness and the east half, under Alts. G & H, is A1B. The designation should be A1A instead.*

RESPONSE: The portion of the Jupiter Ridge unroaded area that surrounds the Mt. Jupiter trail is allocated to Undeveloped Recreation (Non-Motorized) and the trail is closed to ORVs because the trail enters The Brothers Wilderness. A small portion of the Jupiter Ridge unroaded area that is in the vicinity of the Little Hump is within a Wild and Scenic Rivers allocation in the Preferred Alternative. The rest of the area south of the Little Hump is allocated to timber production.

COMMENT: *In the Jefferson Ridge Roadless Area, the Jeff. Ridge trail should be preserved from clearcutting. The area south of Mt. Ellinor and Mt. Wash. should remain closed to ORVs.*

RESPONSE: The area surrounding the Jefferson Ridge trail is allocated to undeveloped Recreation (Non-Motorized) use in the Preferred Alternative. The area south of Mt. Ellinor and Mt. Washington is allocated to Scenery. Both the Mt. Ellinor and Mt. Washington trails are closed to ORVs.

COMMENT: *The South Quinault Ridge Roadless Area should not be logged in order to protect the scenery above Lake Quinault. There is no reason to allow logging in the Wrights Canyon area next to the Colonel Bob Wilderness.*

RESPONSE: In the Preferred Alternative, the South Quinault Ridge unroaded area has approximately 4,400 acres allocated to Undeveloped Recreation (Non-Motorized), 1,500 acres to Spotted Owl habitat, and 1,500 acres are in a Research Natural Area. There is no timber programmed for harvest within these 7,400 unroaded acres. However, there are 2,400 acres that are allocated to Scenic Management (timber is programmed for harvesting) and all management activities must meet the Visual Quality Objectives established within this allocation. Wrights Canyon area is allocated to Timber Production. There are several areas where timber harvesting activities will take place adjacent to Wilderness and the Park, Wrights Canyon being one.

COMMENT: *There are some inconsistencies on the Maps. For example, the area near Green Mtn. is designated A1A on Alts. F & G but it is colored white (E1- Timber harvest).*

RESPONSE: These map inconsistencies have been corrected in the FEIS.

COMMENT: *We would like to see the following incorporated into the report: In the appendices section of the various roadless areas, for S. Quin. Ridge unroaded area, the topic of availability should have the subheading "Minerals" under resource potential in order to be consistent with the other sections.*

RESPONSE: The subheading "Minerals" has been added to the text for So. Quinault Ridge unroaded area in Appendix C.

COMMENT: *A couple of comments where made concerning use of lands near unroaded areas.*

I find cutting hundreds of years of old-growth development in the Humptulips near Moonlight Dome as tragic, as well as similar proposals on the So. Quinault Ridge, the Rugged Ridge above the Sitcum River, the Dosewallips Valley and Alckee Creek in the Soleduck drainage.

There are some areas on the ONF where the number and magnitude of benefits accrued appear to far outweigh the potential commodities. A prime example is the Dungeness River Valley from about East Crossing cpgd. to the Buckhorn Wilderness and including Dirty Face Ridge, Tyler Peak, Maynard Peak, Three O'Clock Ridge and Silver Creek. This area is quite dry, the terrain is steep and the soil is rocky. The soils are unstable and roadbuilding has resulted in erosion and large landslides. The few clearcuts are regenerating very poorly due to the dry conditions and poor site class.

RESPONSE: The DEIS and FEIS have examined a wide range of uses of lands on the Forest and Alternative C-Preferred (Modified) involves a range of uses that represents a wide range of public interests.

COMMENT: *There were many comments made as to how individual unroaded areas should be managed, including:*

The Rugged Ridge area should remain roadless, but timber harvest should be allowed, but limited to individual tree and group selection harvest methods. No further road expansion should be allowed in the Baldy Ridge area and allow timber harvesting same as Rugged Ridge. The Tyler Peak area above the Dungeness Rd. 2950, including 3-O'Clock Ridge should be kept unroaded and undeveloped. This area should be added to the Buckhorn Wilderness. The Dirty Face Ridge area should also be kept unroaded and undeveloped. Motorized use should be prohibited. Add to Buckhorn Wilderness. The Mt. Zion, Quilcene Ridge, Hamilton Mtn. and Dosewallips corridor should all be managed as roadless areas but allowing harvesting of individual trees or group selection. Maple, Delta, and Lower Lena Creek watersheds, including Lena Lake, should be kept unroaded and undeveloped. Entry quotas should be set for Lena Lake and enforced and the heavily used camping spots should be rehabilitated. Add Lena Lake area to The Brothers Wilderness. Mt. Ellinor, Mt. Washington, and Jefferson Ridge should be kept undeveloped and added to the Mt. Skok. Wilderness. The Dry Creek, Lightning Peak, Upper So. Skok. Mt. Church and Capitol Peak roadless land should be kept undeveloped and added to the Wonder Mtn. Wilderness. Motorized traffic should definitely not be allowed. Moonlight Dome and So. Quinault Ridge areas should be managed for continuous production of old-growth habitat. Harvest of timber should be carried out by individual tree or group harvest methods. Clearcutting should not be used under any circumstances nor should any further road expansion be allowed.

RESPONSE: The DEIS and FEIS have examined a wide range of uses of unroaded lands on the Forest and Alternative C-Preferred (Modified) represents a mixture of uses that was intended to represent a wide range of public interests. Refer to Chapter IV, section entitled "Unroaded Areas" and Appendix C for the environmental consequences of allocating unroaded areas

COMMENT: *The idea of buffer strips for undeveloped recreation (in which roads cannot be constructed within 1/2 mile) seems senseless. Congress specifically asked that no Wilderness areas have buffer strips, so roadless areas certainly shouldn't. Please remove that requirement from the standards and guidelines.*

RESPONSE: The criteria involving roads not being constructed within 1/2 mile of an area allocated to Undeveloped Recreation is part of the Forest Service Recreation Opportunity Spectrum (ROS) program and is used to help inventory ROS classes and to measure the off-site or nearby distractions that will affect

one's recreation experience and the settings in which one recreates. The Recreation Opportunity Spectrum is outlined in the USDA, Forest Service Handbook, entitled "ROS Users Guide".

COMMENT: *Recreational opportunity is considered to remain constant, even though use has been increasing to the point that "Use figures indicate that the theoretical capacity of the Wildernesses to provide high quality experiences is currently being exceeded. How can increased use not be affected by VQOs, lack of Wilderness habitat and roadless recreation? Existing use exceeds the theoretical capacity of these areas to provide high quality experiences... even if planned trail system expansion occurs." Demand is higher than the supply on the Olympic National Forest and yet these factors are held constant in the FORPLAN runs and trend analysis, benefits analysis and economic tradeoffs.*

Why is less roadless area set aside throughout the Forest if "... the availability of experiences of even less-than-standard quality will be greatly diminished, and will fall substantially below expected demand"?

RESPONSE: The Forest cannot meet every demand for each resource and that is one of the purposes of this planning effort. The DEIS and FEIS examined a wide range of uses for unroaded areas and the Preferred Alternative represents a mixture of uses of these areas based on a wide range of public interests. Refer to Chapters III and IV of the FEIS and Appendix C for how unroaded areas were allocated and the environmental consequences upon each unroaded area by alternative.

SCENERY

COMMENT: *A few comments were made concerning the impacts that facilities such as road and utilities have on scenery.*

More work should be done on mitigation of road construction through retention and partial retention VQOs. I suggest a more quantitative guideline such as was done with clearcuts.

Logging and road construction have reaped havoc on the scenery and resources of a large proportion of the ONF. This should be brought out forthrightly as one of the most important problems which the Forest Plan needs to resolve. Yet the best the Plan can do is provide for Retention and Partial Retention of VQOs on 40 percent of the Forest and build 93 miles of road in the next 10 years and reduce timber harvesting in riparian areas by 20 percent.

The potential impacts on scenic quality of proposed hydropower on various rivers and streams needs to be discussed.

RESPONSE: The scenic management system applies to all management activities, including road and utility projects. Some management activities such as road construction, do have a very lasting effect upon scenery and careful planning and design must be given to assure that their visual impacts are avoided or minimized. The National Forest Landscape Management program provides guidelines for implementing visual resource concerns into project design and construction. Volume 2, Chapter 2 applies to Utilities and Volume 2, Chapter 4, applies to Roads.

COMMENT: *Clear cut areas such as the western (Hoh River) approach to the National Park and the road heading west from Mora serve as the stark reminders of our disregard for the old forests.*

RESPONSE: Management of the visual resource is guided by the scenic Management System. All National Forest lands are assigned a Visual Quality Objective to insure that scenic and highly visible landscapes involve careful planning and design during all management activity planning. There are many acres of forested land on the Olympic Peninsula that are managed by other agencies or private companies that may or may not be concerned with protecting scenery and will obviously have a cumulative effect on scenic viewsheds. However, the Forest Service has no control off National Forest lands. The DEIS and FEIS have examined a wide range of protection for scenery on the Forest and Alternative C-Preferred (Modified) represents a relatively high range of scenery protection. Refer to Chapter IV of the FEIS for the effects upon Scenery by viewshed by alternative.

COMMENT: *A few comments were made that protecting scenic values should not impact timber harvesting.*

Visual Resources are an abstract unknown value. I enjoy looking at a well managed high yield forest, with lots of clearcuts with trees at different age levels. I feel Region 6 guidelines on visual resources are prejudice against the timber industry and do not express everyone's views.

Why should one area be hurt for Seattle's scenic value? You did not ask local communities for input into your Plan, only the environmentalists. Quilcene and Brinnon won't be here if your Plan goes into action.

RESPONSE: Management of the visual resource is guided by the Scenic Management System. All National Forest lands are assigned a Visual Quality Objective (VQO) to insure that scenic and highly visible landscapes involve careful planning and design during all management activity planning. Everyone, including those people living in local Peninsula communities, was given an opportunity to comment on the DEIS. Under the Preferred Alternative, 15 percent of the Forest is in either Wilderness or Research Natural Area allocations and will therefore, be managed under the Preservation VQO and 15 percent is classified as Retention and Partial Retention. The remaining 70 percent of the Forest will be managed under the Modification and Maximum Modification VQOs.

COMMENT: *The following areas need clarification and more specific direction and funding. I think more training, staff assistance or District personnel will be needed to implement the Visual Quality analysis requirements.*

RESPONSE: Visual resource issues and concerns are addressed in individual project environmental analysis and the District Ranger is responsible, with the assistance of the Forest Landscape Architect, to see that the Scenic Management System is incorporated into all proposed management activities. Areas that have been identified for their scenic value (landscapes that are seen from moderate to high use travel routes and from recreation use areas, such as campgrounds and resorts) are called viewsheds. Some viewsheds, or portions of, may be allocated to management prescriptions in which timber harvesting is not programmed and, therefore will remain natural appearing. Other viewsheds will be allocated to Scenic-A2. Refer to Standards and Guidelines for the Scenic-A2 allocation in Chapter IV of the Forest Plan.

COMMENT: *A few comments were made concerning the Visual Quality Objectives.*

In the description (S-7 of DEIS) of modification and max. modification, examples of these categories of visual quality objectives would be helpful to visualize impacts. Additionally, the acres dedicated to these two types of management are needed for comparisons. (The acreages are given for "low level" VQOs).

The EIS indicates that at present 28 percent of Forest land area meets Preservation, Retention, or Partial Retention VQOS; the remaining 72 percent is already substantially modified. Half of the 28 percent is in designated Wilderness and not subject to activities that would alter visual quality. This leaves roughly 14 percent of Forest land (90,000 acres) that can still be managed for Retention or Part. Retention of natural visual character. Alt.C-Prefered would maintain only 36,000 acres (only 5 percent of Forest acreage) in the Retention or Part. Retention VQOs. It is quite apparent that protection of scenic quality received little or no consideration in developing this alternative.

RESPONSE: Refer to Figure III-8a in Chapter III of the FEIS for a graphic that shows what an average landscape could look like under the various Visual Quality Objectives. The Preferred Alternative has been modified since the DEIS. Refer to Chapter IV of the FEIS for a comparison of the effects of the various alternatives upon the viewsheds (Partial Retention and Retention areas) and refer to Recreation under the Forest Wide Standards and Guidelines for how scenery will be managed outside of identified viewsheds. Refer to Standards and Guidelines for Scenic-A2 for how the visual resource will managed under a scenic allocation.

COMMENT: *The agency must justify why the demand for VQOs or visual quality zones will remain constant (see Plan pg II-3). The demand for forest uses is increasing throughout the Olympic Peninsula. The agency states that under projected demand the facilities now in place and planned will be unable to meet the load. Recreational use is on the rise according to your figures. Increased demand for real estate and undisturbed view sheds will certainly rise. How can the agency assert the need for VQOs will remain constant, therefore?*

RESPONSE: The projection of demand for scenic quality has been revised (see Forest Plan Chapter II) to reflect expected increases in demand for recreation as a whole. The original demand projection was a reflection of the fact that potential supply of scenic quality (in acreage terms) is constant, and that *acreage* demanded could not and would not increase. It is nonetheless true that the intensity of demand will increase, and that it is appropriate to reflect this change in intensity in demand projections.

COMMENT: *One of the aspects of scenic management that is mentioned but not quantified is the degree to which management of the visual resource increases the cost of timber management. Smaller cutting units, buffer strips, less alteration of the ground, road construction restrictions, additional road mileage and helicopter logging are increasing the costs.*

RESPONSE: In some cases, the cost of implementing techniques and practices that will minimize the negative impacts of timber harvesting and road construction upon the visual resource will be increased. However, under direction in the National Forest Management Act of 1976, the Forest Service is directed to "insure that clearcutting... and other cuts designed to regenerate an even-age stand of timber will be used as a cutting method on National Forest System lands only where such cuts are carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation, and esthetic resources, and the regeneration of the timber resource." The Code of Federal Regulations, Chapter II, Part 219, Subpart A-National Forest System Land and Resource Management Planning, 219.27 Management requirements (b) Vegetative manipulation, states that "Management prescriptions that involve vegetative manipulation of tree cover for any purpose shall- (3) Not be chosen primarily because they will give the greatest dollar return or the greatest output of timber, although these factors shall be considered."

COMMENT: *The DEIS creates a few allocation problems of its own, Quinault assumed 1500 acres of the Quinault Viewshed was loggable. The DEIS assumes 2100 acres. I felt our projections were overly optimistic and this has been borne out recently with exam of options in the Wright Canyon area. I am also of the firm opinion that the management direction for the viewshed (the area visible above Neilton from Hwy 101) should remain in management prescription A2-Scenic.*

RESPONSE: In the Preferred Alternative, the So. Quinault Ridge area involves a mixture of allocations. Most of the area will be allocated to Undeveloped Recreation (Non-Motorized) where timber harvesting will not be programmed. The southern portion of the ridge behind Neilton will be managed under a Scenic allocation and over a long period of time will have a slightly altered appearance. The Wright Canyon area is allocated to timber production and most of this area is not visible from the roads or use areas. Those portions of Wright Canyon that may be visible have been given a Visual Quality Objective that shall be met. Refer to Forest Wide Standards and Guidelines and the same for Scenic A2 in Chapter IV of the Forest Plan.

COMMENT: *A few comments were made concerning certain areas warranting scenic protection.*

I recommend that the portions of Wrights Canyon, Quilcene Ridge, and Mt. Walker that are allocated to E1 be verified that they cannot be seen from a high use travel route, use area, or waterbody. If they can be seen then they should be included in the scenic allocation.

RESPONSE: The DEIS and FEIS have examined a mix or range for managing the scenic viewsheds on the Forest. Alternative C-Preferred (Modified) represents scenic allocations based on a wide range of public interests. All National Forest lands are assigned a Visual Quality Objective which is based upon a visual analysis involving the visual variety, sensitive levels and distance zones. If for some reason a particular area was classified incorrectly (an area inventoried as unseen and later determined to be visible

from a high use area or travel route) the Scenic Management System allows for updating or correcting any part of the inventory that is incorrect. Refer to the "Scenery" section of Chapter IV of the FEIS for a display of how the various viewsheds will appear by alternative.

COMMENT: *Certain added constraints were placed on scenic management categories, i.e. foreground retention, partial retention; middleground retention, etc. such that a percentage limit on clearcutting on these areas in any one period was imposed. Although 32,100 acres are included in the scenic management category, no discussion takes place nor any consideration given in the Olympic EIS or Plan as to where these acres are located. Whether these 32,100 acres in scenic management already are part of the 41,147 acres assigned to minimum level management in the various allocation zones, or whether they are part of the originally withdrawn acres (164,279) or the MR acres (99,700) set aside is unknown or known but unstated.*

RESPONSE: The visual prescriptions were deleted from the FEIS and will be used as guidelines (not constraints) for meeting VQOs during viewshed scheduling and project planning. V-1 involves foreground retention areas which are with in 1/2 mile of a level 1 travel route and have a distinctive or common variety class. The V-2 visual prescription applies to middleground retention areas which are seen from level 1 travel routes and have a distinctive variety class; and foreground partial retention areas which are seen from level 2 travel routes and involve distinctive and common landscapes. The V-3 prescription involves background retention and middleground and background partial retention areas. These visual prescriptions will involve guidelines (such as target size tree, percentage of the stand to be maintained with target size tress, size of cutting units, etc.) to help determining the best way to meet assigned Visual Quality Objectives within a given viewshed. The acres assigned to the scenic A2 allocation are programmed for timber harvesting, but Visual Quality Objectives must be met. Refer to Standards and Guilelines for Scenic A2 in Chapter IV of the Forest Plan.

WILD AND SCENIC RIVERS

COMMENT: *Many individuals, organizations and agencies expressed a concern that additional rivers should be found eligible and recommended for inclusion within the Wild and Scenic Rivers System in order to preserve their free flowing character and to protect the fisheries, wildlife, recreational and scenic values. Among the specific comments were:*

All six rivers evaluated for suitability should be recommended for inclusion within the Wild and Scenic Rivers System.

All "eligible" rivers should be recommended for inclusion in the Wild and Scenic Rivers System.

The values of the South Fork of the Skokomish, the East Fork of the Humptulips, the Soleduck and the Sitkum are such that they along with the six rivers evaluated for suitability should be recommended as additions to the Wild and Scenic Rivers System.

All rivers evaluated deserve recommendation for inclusion in the Wild and Scenic Rivers System.

The Upper Dungeness should be an addition to the list of rivers recommended.

All rivers except the South Fork of the Skokomish and the Elwha deserve Wild and Scenic river status.

Five of the 15 rivers evaluated were found to be ineligible because they lack any Outstandingly Remarkable Values. These rivers should be reevaluated as they have Outstandingly Remarkable fisheries, wildlife and scenic values.

Two of the eligible rivers; the Soleduck and the Humptulips were not recommended based on more suitable rivers nearby in the Olympic National Park. The act, guidelines, or direction does not reference proximity of other rivers as an evaluation criteria.

Reanalyze all rivers that may qualify under the Wild and Scenic Rivers Act.

The East Fork of the Humptulips is the white water gem of the Olympics and should be recommended as an addition to the Wild and Scenic Rivers System.

The major tributaries of the Quillayutte; the Soleduck, the Sitkum, The Calawah, and the Bogachiel should be added to the Wild and Scenic Rivers System.

RESPONSE: All rivers that were initially evaluated in the draft were reevaluated to include the additional information that became available during the period following the draft, and the information that was received from individuals,organizations, Indian tribes, and other agencies. The number of rivers evaluated was increased from sixteen to seventeen as the Gray Wolf was evaluated on its own merits separate from the Dungeness.

The reevaluation process is found in Appendix F of the FEIS, Wild and Scenic River Review. Of the seventeen rivers evaluated, fourteen were determined to be eligible by having at least one outstandingly remarkable value. Of these it was determined that four, the Elwha, Bogachiel, Hoh, and the Quinault should be evaluated for suitability by the National Park Service, due to the very minor acreage of National Forest within the river corridor. Three of the remaining ten rivers evaluated for suitability are recommended for

addition to the Wild and Scenic Rivers System. The suitability analysis is found near the conclusion of Appendix F.

The recommendation of the Duckabush, Dungeness, and Gray Wolf Rivers for inclusion in the Wild and Scenic Rivers System, plus the determination of the suitability of the Quinault and Hoh, indicate that these selected rivers with their outstandingly remarkable values provide an excellent representation of the free flowing rivers of the Olympic Peninsula. Recognizing the values of the other rivers and the adjacent lands, future management has been specifically addressed in the last section of Appendix F of the FEIS and the appropriate Standards and Guidelines found in the Forest Plan.

COMMENT: *There were many comments from individuals who were opposed to recommending any rivers for additions to the Wild and Scenic Rivers System due to a concern for their property and their rights.*

The proposal to include some of the rivers on the Olympic Peninsula into the Wild and Scenic Rivers System will directly affect me as a land and property owner.

I am concerned and oppose recommendations for including rivers on the Olympic Peninsula into the Wild and Scenic Rivers System as it will result in a loss of homes, property, jobs, friends and eventually result in the end of our community.

We are opposed to the designation of the Duckabush, Dosewallips, Dungeness/Gray Wolf as Wild and Scenic Rivers as each river system flows through the Olympic National Forest where management can be altered to reflect greater or lesser consumptive uses without having to obtain Congressional designation.

RESPONSE: The potential impact on private lands and property owners was one of the suitability evaluation criteria and was a factor in making a decision on which rivers to recommend for inclusion in the Wild and Scenic Rivers System (see Appendix F, FEIS). Also considered in this analysis were the values foreclosed, including consumptive uses, if the river was recommended for inclusion in the National Wild and Scenic Rivers System.

While the rivers were looked at "as a whole", and recommended accordingly, the implementation of this Plan will only apply to the National Forest lands within the boundary of the Olympic National Forest. For those rivers recommended for inclusion within the Wild and Scenic Rivers System, the river and river corridor will be managed to retain its values. Acquisition of non-federal land would be considered only if the landowner expressed an interest in the Forest Service acquiring their property. Should the recommended rivers be designated by Congress as Wild and Scenic Rivers, the provisions of Sec. 6, Land Acquisition, of the Act would apply. The Wild and Scenic Rivers Act states that if 50 percent or more of the acreage within the federally administered Wild and Scenic Area is in Federal or State ownership, then acquisition of fee title cannot be acquired through condemnation. The Act does allow for condemnation when necessary to clear title or to obtain scenic easements or other reasonably necessary easements. Within the eligible reaches of the three rivers recommended, nearly 90 percent of the Duckabush and Dungeness and all of the Gray Wolf corridors are in Federal or State ownership which indicates little potential for a need to acquire scenic easements or access.

COMMENT: *There were a number of comments that supported protection of river corridors but did not specifically recommend Wild and Scenic designation.*

The preferred alternative should be improved to encourage protection of more river corridors.

There is a need to further moderate the effects of logging practices within the river corridors on the Olympic peninsula.

Many resources; fisheries, wildlife, recreation, etc. overlap within the valleys of these river corridors and need special recognition.

These river corridors have a great value as old-growth habitat.

Fisherman are concerned that timber production will severely impact the rivers and prevent salmon and steelhead production. More protection is needed in the river corridors.

RESPONSE: Recognizing that these rivers and the adjacent lands have special values, each non-recommended river, and the future management along that river, is addressed in Appendix F of the FEIS. Depending upon the resource associated with each river, a specific Management Prescription has been established which will ensure the values of that river are provided for. The prescriptions include; River Corridor,(A4B), Watershed,(F1), and Riparian Areas (F2). Twelve rivers are allocated to the River Corridor prescription. This prescription will provide significant protection of the river resources, including fisheries and water quality. Please refer to the Standards and Guidelines section of the Forest Plan for details of the River Corridor prescription and refer to the accompanying maps for the Preferred Alternative for the location of the river allocations.

COMMENT: *There were a number of comments that expressed a concern with the potential of hydropower projects being developed on the major rivers of the Olympic peninsula and the lack of a "hard look" at the potential hydropower projects versus the Wild and Scenic river values.*

Close to the development of hydropower the Dungeness/Gray Wolf, Dosewallips, Duckabush, Hamma Hamma and Sitkum rivers.

A comprehensive approach for dealing with hydropower proposals is needed.

The potential for hydropower development on the Hamma Hamma and Dosewallips rivers was the major obstacle to recommending these rivers for inclusion in the Wild and Scenic Rivers System. This finding falls short of the "hard look" NEPA commands for such a decision.

The need for hydropower is discussed in a cursory fashion with a general failure to acknowledge the adverse environmental effects of the decision not to recommend rivers for addition to the Wild and Scenic Rivers System.

RESPONSE: An overall discussion of the hydropower potential of the rivers on Olympic Peninsula and specifically the Olympic National Forest is found in the "Energy" section of the Chapter III of the FEIS. Specific information on the hydropower potential of the eligible segments is addressed river by river in Appendix F of the FEIS, within both the "Classification" discussion and the "Suitability Analysis". Within the "Analysis" section the hydropower potential is addressed as a use foreclosed. The designation as a Wild and Scenic River considers uses that would be enhanced. These, along with a number of other factors were considered in the determination of suitability. While each of these contributed to the determination of suitability, no one factor was primary in the determination of suitability.

On rivers recommended for designation as Wild and Scenic, any new hydropower projects would be prohibited. For non-recommended rivers that have been designated as "River Corridor," development of

new hydropower projects will be compatible with the goal and desired future condition. Low head/run of the river projects generally may be permitted. The desired future condition is a river that is basically free flowing, with minor diversions or alterations.

COMMENT: *There were several comments that expressed a concern about the ability to distinguish between Wild and Scenic River and the River Corridor designation and the need for specific management prescriptions for both designations and the classifications within each designation.*

The river analysis needs to be more clear on which areas of each river are Wild ,Scenic and Recreational river or a River Corridor designation.

Management designations need to have explicit guidelines.

The management prescriptions for Wild and Scenic Rivers, (A4A), must include:
-The banning of hydropower projects.
-A protection from other water resource development projects.
-Limiting road construction to that consistent with the classification.
-Guidelines for timber harvesting.
-Visual quality objectives.
-Limitation on utility lines.
-Limitation on motorized travel within Wild and Scenic River corridors.

It is difficult to determine what the Plan calls for regarding protection for rivers in the Olympic National Forest since there appears there is no way to tell which rivers are covered by "Wild and Scenic River" or "River Corridor" designations. Explicit guidelines are needed for "River Corridor" and the management prescriptions.

RESPONSE: A map of the Forest Plan river allocations has been included with this FEIS to display the Wild and Scenic River Corridor, (A4A), and River Corridor, (A4B), plus the management intensity /classification within each management prescription. The Standards and Guidelines within each prescription are found in Chapter IV of the Management Plan.

COMMENT: *There were a number of comments that expressed a need to weigh long term fisheries and recreational values over present economic gains of timber harvesting within the river corridors.*

RESPONSE: For each river that was found to be eligible, where the decision was made that the Forest Service should proceed with the evaluation process, there was a significant section within the "General Description of Resources" on the fisheries and timber values of the river and the river corridor (Appendix F, FEIS). These values were considered in the suitability analysis. Rivers that are recommended for Wild and Scenic River designation will provide the maximum recognition of the fisheries values.

Nonrecommended rivers have been allocated to a variety of management prescriptions which provide additional recognition of the fisheries values while retaining a significant portion of the timber values in the river corridor.

COMMENT: *The DEIS considered the possibility that all or none of each river reviewed be included in the Wild and Scenic Rivers System. These rivers should be segmented in the analysis.*

RESPONSE: The rivers do have different segments classified in different ways with some segments eligible and other not. This is addressed in Appendix F of the FEIS.

COMMENT: *There were a number of comments that expressed a belief that the rivers should be designated Wild and Scenic solely by their outstandingly remarkable values and not on the basis of past opposition, or potential restrictions on hydropower and timber management.*

RESPONSE: While eligibility is a key element in the process of evaluating rivers for consideration as Wild and Scenic Rivers, the Wild and Scenic Rivers Act also specifies that each river, if included, shall be classified and administered as either Wild, Scenic or Recreational River. To determine the management of the rivers prior to the time of designation the classification of each eligible river, by segment, was necessary. Also the Act requires the Secretary of Agriculture, as appropriate, to report on the suitability or nonsuitability for addition to the National Wild and Scenic Rivers System those rivers that have been studied. The determination of eligibility, classification, and analysis of suitability are found in Appendix F," Wild and Scenic Rivers Review."

COMMENT: *There were a few comments that highlighted that Washington State Parks is currently evaluating rivers within the State of Washington for inclusion in the State's Scenic River System and no alternative should be implemented that reduces the value of a river as a candidate for the State Scenic River System.*

RESPONSE: The Washington State Parks has identified four rivers on the Olympic Peninsula which possess the natural, cultural, and recreational values that would make them suitable additions to the Washington State Scenic Rivers System. They are: the Duckabush, Humptulips (including West and East Fork), Soleduck, and Wynoochee. In the Forest Plan, the National Forest sections of these rivers have been allocated to the following management prescription:

Duckabush: Wild and Scenic River, (A4A).
West Fork and East Fork Humptulips: River Corridor, (A4B), except for the upper reaches which are Riparian Areas, (F2).
Soleduck: River Corridor, (A4B).
Wynoochee: River Corridor, (A4B).

These allocations will retain the values as candidates for the State Scenic River System.

COMMENT: *There were a few comments that express a belief that little supportive technical data was provided to justify the inclusion of certain rivers in the Wild and Scenic River, (A4A), or River Corridor, (A4B), while excluding others.*

RESPONSE: Within Appendix F, each of the three key steps, eligibility, classification, and suitability analysis has a level of technical detail adequate to make a decision for that specific step. This detail has been strengthened as a result of public comment and additional information that became available following the release of the DEIS.

COMMENT: *The segment of the Duckabush river from R.M. 2.3 to 7.0 is erroneously interpreted as Scenic. It is not largely "primitive or undeveloped". Large lineal distances of this segment of the river is accessible by road. At the best it qualifies as "Recreational".*

The free flowing characteristic of the Duckabush river has been substantially affected by the dynamiting to widen the river. "i.e." to create the "Ranger Hole" and widen the river. Large diversions of water have occurred for the old State fish hatchery and for past and present needs of Jupiter City.

RESPONSE: The Criteria for classification appeared in the Federal Register of September 7, 1982. Scenic River areas as described in the Act are: "To qualify for scenic classification, the rivers segment's shorelines and immediate environment should not show substantial evidence of human activity." Largely primitive means that the shorelines and the immediate river environment still present an overall natural character, but that in places, land may be developed for agricultural purposes. Row crops would be considered as meeting this test of largely primitive as would timber harvest and other resource use. Accessible in places by road means that roads may reach the river area and occasionally bridge the river. The presence of short stretches of conspicuous or longer stretches of inconspicuous and well-screened roads or railroads will not necessarily preclude scenic river designation. This description fits the Duckabush River and river corridor. While the free flowing characteristics of the Duckabush river may have received some minor alterations the river remains "free flowing" and free of existing impoundments. Historical, but currently unused, diversions do not disqualify a river from the Scenic classification.

COMMENT: *There was a specific comment challenging the adequacy, objectivity, validity, and legality of the draft E.I.S. and recommendation of the Duckabush as an addition to the Wild and Scenic River System on the following grounds.*

The establishment of the Duckabush as a Wild and Scenic River is a permanent thing and applies for more than the 15 years of the Forest Plan.

Does the Forest Service have a conflict of interest as "Lead Study Agency"? Unless it provides a neutral forum the U.S.F.S. should be disqualified as "Lead Study Agency".

RESPONSE: As stated in the Introduction to the Forest Plan, Chapter I, "This Forest Plan establishes management direction for the Olympic National Forest. The Plan will ordinarily be revised on a 10-year cycle, with a maximum of 15 years between Plan revisions." It is recognized that certain land allocations will exceed the planning cycle and some are considered permanent, such as designated Wilderness. If any of the recommended rivers become Congressionally designated they will also be considered as permanent allocations. The review and possible modification of management within these allocations may occur at each planning cycle.

The purpose and authority for study of wild and scenic rivers are in the Wild and Scenic Rivers Act of October 1, 1982, as amended. Revised USDA-USDI Guidelines for Eligibility, Classification, and Management of River Areas dated September 7, 1982, supplements the Act. These direct the Secretary of Agriculture to study and submit to the President a report on the suitability or nonsuitability for addition to the National Wild and Scenic River system of rivers flowing through the National Forest. The Forest Service becomes the lead agency if the segment is long enough to make an eligibility determination by itself or in perspective of the river as a whole. Through the use of the NEPA process, which provides the public the opportunity to be involved in the decision making process, the Forest Service provides a forum for all views to be represented from which an informed management decision is made.

ROADS/FACILITIES

COMMENT: *New permanent road construction should halt immediately because the ONF is grossly over-roaded already. A program of road rehabilitation should be initiated to reduce erosion from existing roads. Management standards and guidelines should prohibit road construction on slopes steeper than 20 percent.*

RESPONSE: Road construction is necessary to access and manage the resources of the Forest. Road management, maintenance, and closure programs are developed with consideration of erosion reduction possibilities, as are the standards and guidelines governing road development. Refer to FEIS Chapter IV, "Road Access," and Plan Chapter IV, "Forest-Wide Standards and Guidelines" and "Management Prescriptions" for detail.

COMMENT: *Road construction is said to average 9.3 miles per year in the Preferred alternative. Yet the 5 year action plan for the Soleduck District alone shows 13-15 miles per year. Won't actual construction exceed that reported in the DEIS?*

RESPONSE: The procedure for estimating road construction mileage has been modified. See FEIS Appendix B ("The Forest Planning Model") for discussion.

COMMENT: *Eight miles of new road construction is proposed per year. This does not allow for reconstruction of roads that have deteriorated.*

RESPONSE: Construction and reconstruction mileages are listed separately in FEIS Chapter II, Table II-14.

COMMENT: *Of particular importance to the Bonneville Power Administration (BPA) is the designation of both existing and planned transportation and utility corridors. It is not clear whether the few existing transmission lines that cross the Forest are "officially designated". We request that you consider designation of corridors in the Plan. If additional corridors may be required, these should also be identified and designated. It is also desirable to have "avoidance" and "exclusion" areas identified in one section of the documents.*

RESPONSE: Please refer to Chapter IV of the Forest Plan and the section under Resource Summaries that speaks specifically to the designation of utility corridors. "Avoidance" or "exclusion" areas, or limits within which management practices will be implemented/accepted, are included in the Forest-wide Standards and Guidelines, and the Standards and Guidelines for specific management unit prescriptions. These standards and guidelines are also found in Chapter IV of the Forest Plan.

Part IV - Letters Received from Agencies, Elected Officials and American Indian Tribal Groups

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December 31, 1986

Olympic National Forest
P.O. Box 2288
Olympia, WA 98507

Attention: Forest Planner

Dear Sirs:

The Forest Service has a tough job balancing all the benefits that might come from a forest. My idea of the U.S.F.S. mission may be a bit old fashioned but I think it should be guided by some enduring principles, not subject to various whims of the time.

The Forest Service should manage for:

The greatest good, for the greatest number, over the long term.

U.S.F.S. decision makers must exercise great wisdom to remain faithful to their enduring principle during chaotic times. A realization must be accepted that the U.S.F.S., or more specifically, Olympic National Forest, cannot satisfactorily meet all demands of all the people.

In determining alternatives and making choices between competing demands, O.N.F. must remain consistent with the enduring principles that define the U.S.F.S. mission. Managers must consider what unique opportunities O.N.F. can offer. These unique opportunities must be of higher priority than ones that can be provided by others. Viewed in this way, the 10 issues identified by O.N.F. can be judged as to their relative value on emphasis within a final, adopted plan.

1. Scenic Resources: Low importance - every feature that might be offered by O.N.F. as a scenic resource can be offered many times over by the adjacent O.N.P. and other land owners. O.N.F. is only a fragmented ring around a huge National Park that encompasses some of the most spectacular scenery on the Olympic Peninsula.

2. Outdoor Recreation: Low importance - Outdoor recreation opportunities abound in the vicinity of O.N.F. Again the O.N.P. offers world class attractions of all sorts. Many thousands of acres outside the Park are available for hunting, fishing and other outdoor recreation.

3. Old-growth: Low importance - Again the O.N.F. is insignificant compared to the vast acreage of old growth protected within the O.N.P. O.N.F. is hardly in a unique position to provide for this need.

4. Timber Management: High importance - O.N.F. does and can play a significant role in offering timber production in a long term sustained yield basis. The unique opportunity that O.N.F. has is to provide existing inventories of mature timber for sale while young stands on private and State lands mature. Only the O.N.F. can fill this industry and community stabilizing need.

5. Road & Trail System: Medium importance: Other land managers are providing some of these needs on the Olympic Peninsula but with access limited to O.N.P., the O.N.F. will provide road systems within timber production areas and trails within wilderness areas.

6. Soil & Water Resources: Medium importance - Other land management activities should be carries out with sensitivity to these needs. O.N.F. is not in a unique position to provide for this need as most water quality challenges are shared with other owners.

7. Fish & Wildlife Habitat: Medium importance - O.N.F. does not control any habitat that is unique on the Peninsula. The O.N.P. which borders every block of O.N.F. provides vast habitat. Management activities on O.N.F. should be done in a way that is sensitive to fish and wildlife habitat.

8. Unroaded Areas: Low importance - Since nearly 15% of the total O.N.F. is already designated as wilderness and the O.N.P. provides additional vast roadless areas, this issue must be one of the least important for O.N.F.

9. Wild, Scenic and Recreational Rivers: Low importance - These elements are found in abundance within the O.N.P. The Olympic Peninsula is blessed with abundant recreational opportunities along wild and scenic rivers. This is not a unique opportunity for O.N.F.

10. Shelton CSYU: High importance - The O.N.F. has been in a unique position to provide economic stabilization to industry and communities and should continue to do so.

Alternative B seems to come closest to recognizing the relative values of the issues as I have addressed them.

Each resource the Forest Service manages has equal opportunity for consideration within the planning process. You are not restricted by a narrow mission statement. Therefore, each forest should consider its place, its own resources and its unique opportunities to meet the needs locally, statewide and nationally. The Olympic Peninsula has been a major timber producing region for the last 50 years. O.N.F. has the opportunity to use its unique characteristics to maintain the region as a major timber producer for the next 50 years.

How fortunate for all of us that here on the Olympic Peninsula we can have it all. Olympic National Park, which dominates the region, offers world class resources: Scenic, Outdoor Recreation, Old-growth, Trail Systems, Fish & Wildlife Habitat and Wild and Scenic Rivers. The O.N.F. has an opportunity to provide Unroaded Areas (Wilderness), and Timber Management Resources.

Thank you for the opportunity to comment.

Sincerely,

John M Calhoun

John M. Calhoun
Olympic Area Manager
Department of Natural Resorces

JC:sw

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BERT F. THOMPSON
Director

STATE OF WASHINGTON
DEPARTMENT OF COMMUNITY DEVELOPMENT
OFFICE OF ARCHAEOLOGY AND HISTORIC PRESERVATION
111 West Twenty-first Avenue, KL-11 • Olympia, Washington 98504-5411 • (206) 753-4011 • SCAN 234-4011

January 28, 1987

Mr. Clifford D. Rushton
Forest Plans Coordinator
Environmental Review Section
Department of Ecology, PV-11
Olympia, WA 98504-8711

Log Reference: 846-F-FS-OLY-09
Re: Olympic Forest Plan & DEIS

Dear Mr. Rushton:

A staff review has been completed of the above referenced environmental impact statement and proposed land and resource management plan. The document considers cultural resource issues programmatically in relation to the identified alternatives. It accurately describes current knowledge regarding the resources and details the process by which cultural resources are considered during project planning activities.

Sincerely,

Robert G. Whitlam, Ph.D.
State Archaeologist
(206) 753-4405

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ROBERT L. WEIER
Director

STATE OF WASHINGTON
INTERAGENCY COMMITTEE FOR OUTDOOR RECREATION
4800 Capitol Blvd. KP-11 • Tumwater, Washington 98504-5511 • (206) 753-2027 • SCAN 234-2027

January 26, 1987

Mr. Doug Ruston
Forest Plan DEIS Coordinator
Department of Ecology, PV-11
Olympia, Washington 98504-8711

Dear Mr. Rushton:

Re: Olympic National Forest Plan

Shown here are our comments on this forest plan and draft environmental impac statement. We understand that these will be attached as a group and forwarde to the Forest Service.

Based on our review using such reports as the Statewide Comprehensive Outdoor Recreation Plan (SCORP, Sixth Edition), the ORV Plan, and Winter Recreation P we feel that Alternative E is the best choice for future management.

Our basic concern lies in the amount of available and usable forest for dispe unroaded recreation. Alternative E provides for higher amounts than the pre- ferred alternative (C-preferred). In the semi-primitive ROS classes, E repre only a modest reduction from Current Situation while C-preferred shows a 36 p cent decline. To address the growing pressures and demand for such acreage allocation, we feel that it should remain as near constant as possible. Page II-118 of the plan states "Objectives of Alternative E include substantial expansion of the area allocated to retention of dispersed unroaded recreation opportunities." We support such a management direction.

Opportunities for off-road recreation, camping, and fishing are also increase in Alternative E. Camping needs and trail needs are high in this geographic area as identified by SCORP. Moreover, the ORV Plan identifies scenic motori trails as a high need in this area. In all cases we would have concern that choices of management do not displace future potential opportunities to meet these recreational needs.

The inclusion of a quick reference (explaining meanings and giving pages wher further information can be found) for the numerous acronyms listed in the rep would be helpful. For those of us who are not accustomed to dealing with CSY MMRs, SOHAs, PNVs, and IDTs, confusion sets in very rapidly. After awhile it becomes irritating and defeats the time-saving goal of an acronym to have to turn back several pages after every few lines of reading in order to remind oneself of what the letters stand for.

In at least two areas of the plan (EIS, III-104, F-75) a reference is made to an outdated edition of the Statewide Comprehensive Outdoor Recreation Plan (SCORP). In mid-1985, the Sixth Edition of SCORP replaced the earlier 1979 version. We recommend that any citations refer to the more recent document.

The recreational use of all-terrain vehicles (ATVs) has become increasingly popular on our National Forests in recent years. Since some of these Forests, most notably the Wenatchee, have experienced problems when these vehicles try to traverse multi-purpose trails, you may wish to address this issue in your plan. We suggest that a policy be developed which relates where these vehicles can be used.

Much like ATVs, we could find no reference to four-wheel drive vehicles in the plan. Since recent IAC surveys indicate that this subgroup of ORV recreationists represents nearly 12 percent of all Washington households, we feel this activity should be mentioned.

Thank you for the opportunity to comment on this plan. We hope these comments are useful to you.

Sincerely,

Gerald W. Pelton

GERALD W. PELTON, Chief
Planning Services Division

GWP:LAA:ah

WILLIAM R. WILKERSON
Director

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STATE OF WASHINGTON
DEPARTMENT OF FISHERIES
115 General Administration Building • Olympia, Washington 98504 • (206) 753-6600

February 13, 1987

Mr. Clifford D. Rushton
Forest Plans Coordinator
Environmental Review Section
Department of Ecology
Olympia, Washington 98504-3711

Dear Mr. Rushton:

Draft Management Plan for
Olympic National Forest

We have completed our review of the four documents (plus maps) that, in aggregate, constitute a draft management plan for the Olympic National Forest (Forest). Pacific salmon are well-recognized as a valuable natural resource by the Forest and are covered extensively in a professional manner. The Forest clearly recognizes the partial incompatibility between certain resource potentials and the general inverse relationship between fish producti and various levels of environmental modification. The draft plan is relativel close to something which can be accepted and supported by the Washington Department of Fisheries.

Our primary problem with the present draft involves the Forest's basic policy treatment of salmon production impacts from timber harvesting, road building and other critical environmental changes. We believe that production losses (or reductions from natural potentials) should be treated by the Forest as a definite mitigation responsibility. This should be an area with firm, dependable funding that is fitting for a defined resource commitment.

Our logic for the above-request is quite simple. If a hydropower developer blocked off 20 percent of a watershed's salmon production potential, there would be no question as to the mitigation responsibility involved and its leve (e.g., a full 20 percent). We feel that any environmental alteration which wo lower a watershed's natural production potential by the same 20 percent shoul be treated in a comparable manner. We believe that the Forest's plan can be modified to include this responsibility without creating major impacts on oth resource uses or over-burdening the Forest's budget. The present draft's mitigation proposals would fund a significant proportion of that responsibili

We also believe that this direct linkage would provide a more objective basis for making decisions that impact fish production. In some cases, you may fin avoiding impacts makes more sense economically (as well as biologically) ratn than trying to recreate habitat.

Other areas of major concern involve; 1) the data base used by the Forest, and 2) some of the critical conclusions derived from technical analysis. An example of data base problems would be the treatment of pink salmon runs, which occur only during odd-numbered years in Puget Sound. In the second area, critical decisions are made with little apparent technical justification for factors such as forest canopy, width of riparian zone protection, risks of mass wasting, water temperature changes, etc. It is difficult or impossible to assess the results of various conclusions if the technical basis for each decision is not provided.

We began our review with the Appendices - Draft Environmental Impact Statement, followed by the Draft Environmental Impact Statement, and the Proposed Land and Resource Management Plan. We attempted to address each concern the first time it appeared in this sequence of review. We did not attempt to reference the same concerns each time they appeared since this would have been redundant and serve no useful purpose. Detailed comments are attached.

We appreciate the opportunity to review the draft plan for Olympic National 4Forest and congratulate their staff for a well-done, professional product. We will also volunteer our help to assist the Forest in any manner necessary to finalize the plan.

Sincerely,

Sam Wright

Sam Wright
Senior Fisheries Research Scientist

SW:dmm

Attachment

DETAILED COMMENTS ON THE PROPOSED OLYMPIC NATIONAL FOREST PLAN

APPENDICES-DRAFT ENVIRONMENTAL IMPACT STATEMENT

Page B-11: The paragraphs under "Lands Subject to Irreversible Resource Damage contain two rather tenuous rule of thumb values that are critical to subsequent decisions. The 65 percent slope definition could lead to major future problems if there are any significant risks associated with slopes less than 65 percent. There is undoubtedly a gradually declining degree of risk that varies by slope and other factors over some range of values. A more detailed treatment of this relationship is needed. A single major slide in a critical salmon production area would quickly void your fish production forecasts.

Similarily, the 50 percent harvest guideline could also lead to major resource losses if there are any meaningful risks associated with timber harvest levels less than 50 percent. While the current draft does not contemplate use of the percent guideline, we note concern because of possible future modifications uti lizing this approach.

Page B-14: Under "Data from off-Forest Sources," No. 1, we note concern becaus the draft plans for two other Washington National Forests (Okanogan and Wenatchee) rely upon the modified Universal Soil Loss Equation (USLE) for their basic sediment planning indices. We need some explanation, possibly from your Regional Office, as to why completely different methodologies are being used within the same State.

Page B-24: The analysis area delineators eliminated (riparian character, slope class, and erosion hazard) are cause for concern due to several assumptions or conclusions that are largely unexplained. An outside observer cannot really ma an informed judgment as to the merits of your decision since it is impossible t determine if the factors are really as unimportant as stated or if one or more the assumptions are likely to be flawed. A more detailed treatment is needed i this section.

Page B-33: Under "Riparian Area," the mixture of "no harvest, extended rotatic harvest, and normal harvest" is advanced "to assure that fish habitat and water quality can be maintained at present levels." There is no explanation of or reference for the technical basis of this determination. It would also be help ful to show percentage of area in each category (for example, what proportion c total riparian acres is represented by the 8,120 acres?)

In this section, as well as numerous subsequent discussions, it would be much better to relate all salmon production values to the natural levels that could be expected in the absence of environmental manipulations such as logging and road building. We believe that the Forest Service has a definite mitigation responsibility for that increment of lost salmon production resulting from the management activities. Thus, the difference between natural and what is expec in the future is important to determine since it quantifies your possible miti tion responsibility. The incidental relationship between current versus futur Forest Service direction has no practical value with respect to this issue.

In addition, various terms that imply salmon resource "enhancement" are used improperly throughout your draft documents. This description should only be used for any incremental increase in salmon production above the natural potential. Production increases anywhere in the area below natural potential should be referred to as "mitigation."

Page B-36: Under the "Potential Wild and Scenic River Corridor Protection Prescription," a "quarter-mile wide corridor" standard appears. In addition to meeting visual objectives, this would also seem to provide protection for fishery resources. The same prescription (V-2) is also applied in the "Extended Rotation" section for riparian areas, but without a standard corridor distance. An earlier section (Page B-5 and 6) references the 200-foot standard for riparian zones.

Page B-42 and 43: Under "Selection of Regeneration Harvest Strategy," it is not readily apparent that the compelling arguments for clear cutting would apply equally to the extended rotation prescription. If this has been analyzed separately, then the conclusions should be presented. If not, then it should be explored technically. Other timber harvest strategies may have greater merit in riparian areas.

Page B-56: We appreciate the sincere effort directed toward producing a practical, contemporary methodology for quantifying the linkage between sediment and fish production. This was not attempted in the draft plans for the Okanogan and Wenatchee Forests, which we considered to be a major deficiency in both.

Page B-57: "Under Fishery Yields," the draft essentially states that sediment will be the only quantified factor affecting the calculations of fish populations. We agree that this is probably the major source of impact and see no problem with using this as a reasonable index of expected changes. However, in the absence of any technical supporting data, we cannot support a blanket conclusion that Minimum Management Requirements (MMR's) will assure adequate sources of large organic debris.

It is generally agreed that sediments lower production of salmonids primarily from effects on embryos and fry prior to and during emergence from the gravel (other important factors are adverse modification of channel habitat by bed loading and lowered aquatic food production due to changes in substrate composition). Thus, sediments mainly impact survival, or in terms of practical fishery management considerations, the average proportion of the population that can be harvested at Maximum Sustained Yield (MSY).

On the other hand, large organic matter mainly determines the volume of suitable rearing habitat available during the critical life history stages that determine carrying capacity. This relates to the magnitude of fish populations at MSY.

A third critical factor is adequate fish passage or access to the habitat. This must include not only the well-known upstream movement of adults and downstream migration of smolts, but also the ability of rearing juveniles to move freely between preferred habitat during their various life history stages. At a minimum, higher levels of environmental modifications (such as road building) must increase the overall risks of fish passage delays and failures.

Page B-62: The phrase "on the Forest" at the end of the fourth paragraph implies that off-Forest fish user days were not included in the value calculations. Subsequent sections (for example, Page B-72) indicates that they were included. In the fifth paragraph, the ramifications of using a single commercial price per pound should be explored. It is common knowledge that prices vary substantially between species.

Page B-67: As stated previously, we believe that fish mitigation obligations exist and should be expressed as activities which are necessary to conduct the essential business of the Forest. Since the alternatives expressed show variab impacts on natural production potential for salmon, estimated costs of mitigati should also vary accordingly.

Page B-72 and 73: The low resource values derived from the 1985 RPA analysis are, at best, on the conservative end of a potential range for nationwide consideration. They are generally outside (below) the range of values recommended for salmon by qualified economists in the Pacific Northwest. Various downward adjustments, such as the standardization of recreational fish usage to 12-hour days, further exacerbates this disparity. While national standardization of ec nomic methodology has merit, a similar tact was not pursued for factors such as sedimentation. At a minimum, the plan should include a sensitivity analysis wi more realistic salmon values.

Page B-76: The second full paragraph should be modified to reflect the importance of National Forests in aggregate to fisheries resources in the Pacific Northwest. While an individual forest's contribution may be relatively minor, this is certainly not the case for National Forest habitat in general.

Page B-78 and 79: As in the previous comment, the section beginning at the bot tom of Page 78 needs to be modified to reflect a broader Forest Service habitat perspective. In this case, the assumptions are so rough that the conclusions a essentially "forced." Other important values, such as catches by treaty Indian for subsistence and ceremonial uses, are ignored.

Page B-93: The assumption of full habitat utilization (No. 3) is incorrect. T state and treaty Indian tribes are currently developing "watershed plans" that will, among other things, specify long-term management intents for discreet salmon stocks. In cases where natural stocks will receive primary consideratic during fishery management decisions, the objective will be management for MSY. This is not synonymous with full habitat utilization in all years, which generally falls somewhat above MSY. In other cases, the state and tribes may agree to use the higher fishing rates needed to harvest co-mingled artifically-produced salmon stocks. In these cases, natural spawning escapements will, on the average, be less than those capable of yielding MSY. Some of this potentia loss may be mitigated by management practices such as fry or fingerling plants under-utilized habitats. A description of expected long-term fishery managemen practices should be included in the Olympic Forest Plan.

The table at the bottom of the page illustrates a major problem that appears throughout the plan. Important options for increased salmon production are typically tied to timber harvest options that would have drastic adverse consequences with respect to critical factors such as net income, payments to loca

governments, etc. These alternatives have essentially no chance for eventual adoption. Some of this linkage is logical and unavoidable since fish-related factors such as sediment will vary with levels of environmental modification. However, some factors such as percentage of logging in riparian areas and extent of protected stream corridors are only partially linked to timber production. Other factors such as funding levels for fish mitigation are nearly or completely independent of timber production options. The plan needs to sort these out in some reasonable manner by category. As currently organized and displayed, this is impossible to evaluate with any degree of objectivity.

Page B-106: Under "Water Quality in Municipal Watersheds," appropriate technical references or a description of the methodology for the 16 percent value is lacking. We need to know the technical basis for proposing significantly greater protection for water quality in municipal watershed than is subsequently advocated for fish habitat.

Page B-107: Again, the stated technical basis for a very critical basic planning decision is the following short narrative: "The riparian protection allocations included in FORPLAN were cooperatively developed by the Forest hydrologist and Forest fisheries biologist, and were based on consideration of both water quality and fish habitat needs."

A much more concise description of this process is needed, especially since many subsequent discussions of options for greater riparian protection typically describe them as "more than required." Further, several sections in the plan acknowledge the importance of slope and soil type in riparian protection considerations. There is no indication that either of these were given consideration (for example, slopes slightly less than the 65 percent upper limit for viable timber harvest).

Page B-117: The paragraph at the top of the page appears to be in conflict with several previous and subsequent statements about riparian protection. The same acreage values are characterized as "desired future riparian condition" on Page B-107, but are described here as "to assure maintenance of the current level of fish rearing habitat quality and to prevent reductions in overall water quality."

Page B-128: The statistics under "Fisheries Outputs" appear to be reflective of full natural potential if they are being computed for a time-frame in which all significant impacts are returned to natural levels. As noted previously, factors for adequate woody debris and full, unimpeded fish passage also need to be considered. The resultant natural potental value should be used consistently in all tables and figures that compare plan alternatives. This would clearly quantify the full potential fish production charges associated with each plan alternative.

Page B-155: We support the proposed river protection corridors for the preferred alternative ("C") that include the Duckabush, South Fork Skokomish, Dungeness-Gray Wolf and West Fork Humptulips. However, little supporting technical data are provided to justify the inclusion of these systems versus the exclusion of others. As stated previously, it is impossible to objectively evaluate the merits of expansion to more systems since these only appear in other alternatives with severe timber harvest restrictions. In general, we support maximum use of protective corridors in your final plan.

Page B-168 and 169: The material on these pages illustrates several points. First is the combination of expanded river corridors with many other restrictions on timber harvesting. In addition, some rivers (including those not eligible for the Wild and Scenic River System) may be suitable for the Washington State Scenic River Program. This program and its relationship to Forest Servic planning needs to be addressed. A third area to note is the stated concern ove the adequacy of MMR's in protecting riparian areas. This should have been expressed earlier (for example, pages B-33 or 107).

Page D-1: The "helping verb" section could be improved since its ambiguity is obvious in subsequent sections. The main problem is the "should, ought" defini tion, which is often used in practice as "optional." It would be better to eli minate these verbs and allow specific, qualified deviations from the "mandatory definition of "must" and "shall."

Page D-6: Under No. 6, the phrase "minimizing the impact" should be modified t "fully compensating for the impact." Partial replacement of resource losses is not sufficient for hydropower uses.

Page D-28: This section introduces a third category of riparian area protectic (one-eighth mile on either side of a river channel), adding to the previous 200-foot and one-quarter mile standards. It is clear that the smallest zone is considered critical (for example, see bottom of Page B-5) yet proposed management practices vary widely by each of four stream Classes. Comments on a one-quarter mile zone do not include any expectation of fishery benefits, but these are predicted for one-eighth mile (for example, see South Fork Skokomish paragraph on Page B-155). Thus, the above illustrates that there is a good de of contradictory information as to the extent of riparian protection actually considered necessary for fishery resources. The relationships between these various levels of protection need to be sorted out.

Page D-46: This section introduces the eight percent harvest per decade limit tion for riparian areas in municipal watersheds. As with the 16 percent overa harvest limitation, this newer value is advanced without any technical supporting basis and is also much more restrictive than any of the plan's proposa for fish habitat protection.

Page D-48: The term "fish-bearing" needs to be modified to reflect potential well as actual use. Fish may only use a stream for part of a year or may be t porarily absent due to fish passage problems or inadequate spawning escapement both correctable situations. The 60 percent minimum canopy standard needs to supported by a technical basis.

Page D-49: For No. 8, there needs to be a quantified minimum standard for lar conifers along with a supporting technical basis. This measure has little val as presently stated.

The draft plan repeatedly states that many quantified measures are for plannin purposes only and that actual management will be "on the ground" on a "site-specific" basis. However, very little information is provided to descri the quantified technical basis for these numerous individual decisions.

Page II-52: Paragraph "C" has an example of a problem addressed previously. The amount of riparian area protection needed was previously described as a controversial issue upon which there was no general agreement. A possibly viable upper range for this protection is now portrayed as "2.5 times greater" than needed. In this stated context, it appears to be only an unnecessary waste of effort at the expense of other resource values.

Page II-78: The last two lines appear to eliminate all protection considerations for Class III and IV streams, which could presumably be degraded to anything less than existing conditions. This needs to be modified.

Page III-19: This section correctly describes the sediment data as only indices since not all significant sources are included. Their value is limited mainly to "making relative comparisons between alternatives." Since sediments are only indices and fish production estimates are based on that data, then the latter must also be "indices" (by definition minimal since only some inputs are included). Both of these should be portrayed consistently as indices throughout the plan. As presently drafted, many descriptions incorrectly imply absolute measures for both values.

Page III-21: The last part of the second paragraph (beginning with "Broad-level mitigation...") merits considerable expansion, possibly in a separate section. In terms of cumulative impacts, "scheduling and distribution" may be much more valuable mitigation measures than some specific in-stream habitat improvements.

Page III-22: Minimal data from a single river system are not adequate to make a broad conclusion that temperature "should not be a problem in any of the other drainages." Note also that the Skokomish is an east side stream, but the preceeding paragraph expresses greater concern for west side streams. In essence, extent of potential water temperature problems is unknown. A discussion of data from Carnation Creek in British Columbia might be useful for this section.

Page III-24: The first paragraph causes some concern since there is no assessment of potential problems if the usage rate of existing water rights has a significant increase over time.

The "Historic Trends" section illustrates a basis problem involving the timing of mitigation actions. The list of needs from past damage is always much longer than can be accommodated by available funds. This results in a long average delay between damage and subsequent mitigation. The "costs" are thousands of salmon from several cycles. The thrust of the draft plan does not offer much potential for breaking out of this dilemma, at least not in the near future. Over a long period, improved management practices will presumably lessen damages and close the actual gap between losses and subsequent mitigative measures. However, even this will not happen unless average annual new needs are significantly less than average funds available. We recommend development of an "up-front" or one-time budget to correct all known past habitat damages on the Forest. This would be followed by smaller annual sums designed to correct damage as it occurs. As stated previously, we also believe that mitigation is a definite responsibility with a mandatory funding requirement. Recent experience indicates that fish habitat work will be one of the first budget cuts if treated as an "optional" item.

Page III-25: The narrative does a good job of expressing various pros and cons in the relationship between timber harvest and water run-off. However, several recent cycles of Puget Sound pink salmon have been devastated when warm rains followed a heavy early snowfall. There is a general belief that timber removal added significantly to the magnitude of the problem.

Page III-26: There is a general need to standardize numbers frequently used in the plan. For example, an 80 percent estimate appears here for sediments from roads, but Page I-17 has an 85 percent estimate for what appears to be the same factor.

The next to last paragraph gives a general conclusion without referencing any technical supporting basis. Some studies such as those on the Clearwater, indicated that low dissolved oxygen will not be a problem. However, the Clearwater study areas generally had steep gradients (with heavy precipitation and this same end product cannot be assumed for all Forest streams in general. The same lack of technical justification applies to the last paragraph and the first paragraph at the top of Page III-27.

Page III-37: Under "Roads," the 30 percent unexplained gap between the 35 percent and 65 percent figures given in the second and third paragraphs, respectively, is cause for concern. The unstated implication is that there is a continually increasing degree of risk in this zone. The "gap" needs to be explained.

Page III-63: The evidence presented in the second paragraph under "Riparian Areas" would seem to help justify greater protection for Class III and Class I streams than is currently proposed in the Forest's draft plan.

Page III-80: Note that a comma is often used instead of a period in many of t commercial fishery entries (for example, "$1,370 million" on this page).

We assumed that statistics in Table III-15 could be converted to natural potential by dividing each stream's totals by the stream Habitat Quality Indices (HQI's). The commercial pounds calculated in this manner equal the 1.625 million pounds for natural level given on Page B-128 of the Appendices (natural potential in fish is 395,193 adults). The difference between fish numbers (74,142 adults) provides a minimum estimate of the mitigation responsibility for on-Forest production ("minimum" since sediment is only an index). The full mitigation responsibility would also include off-Forest losses plus conversion of on- and off-Forest losses from indices to estimated absolutes.

Page III-81: The data provided in Table III-16 fulfills a substantial proportion of the Forest's salmon mitigation responsibility. It appears that this could be converted to full mitigation with only a modest annual budget increas over that proposed in the preferred alternative. Conversion to such a match is recommended.

Page IV-16 and 17: Narrative at the bottom of page 16 and top of page 17 further add to our concern over mass wasting. This section portrays a much le confident opinion with respect to predictibility than noted elsewhere. Also note the 70 percent value as opposed to an earlier 65 percent slope standard.

Page D-50: Paragraph "C" at the top of the page limits protection to only Class I and II streams, while previous sections include at least Class III streams. The relationship to Table B-21 (Page B-107) needs to be explained. There appears to be a partial conflict. No. 7 also appears to be in conflict with the information provided on Page B-11. The former indicates that logging will not be carried out on slopes exceeding 65 percent. No. 1 under "Water, Soil and Air" needs to be quantified and supported with a technical basis. It has little value as stated.

Page F-2: As noted previously, this section of the report should have included consideration of the State Scenic Rivers Program and its implementing legislation. We recognize the need for "professional judgment" in this type of evaluation, but the subjective nature of many decisions should be emphasized to a greater degree.

Page F-10: All data on fish species and distribution needs to be thoroughly checked and revised as necessary. The Calawah has major runs of chinook and coho, but chum salmon are either rare or non-existent. No odd-year pink salmon runs occur on the Washington coast, although there have been isolated observations of even-year fish in the lower reaches of several large rivers on the northern Olympic Peninsula. The only known sockeye run is restricted to the Quinault River. Catches taken at the mouths of other coastal rivers are "dip-in" fish destined for the Quinault. Sea-run Dolly Varden are found in a number of streams north of Grays Harbor. Major pink salmon runs occur in Puget Sound, but these are restricted to odd years.

Page F-12: We disagree with your assessment for the Wynoochee River. The middle portion of the river has three major bedrock canyon areas that constitute excellent holding areas for adult early-run coho and spring-run chinook. The river had one of the region's largest spr ng chinook runs in the past,but this has probably been completely eliminated. However, there are tentative plans for reestablishment of this resource. The upper Wynoochee also has one of the earliest coho runs in the state but this has been reduced to low levels because of environmental problems. Further, the Wynoochee differs from other coastal rivers because the river basin is long and narrow with few major tributaries. It is known as a producer of large, late-run winter steelhead. We believe it qualifies as "outstandingly remarkable" due to the combination of anadromous fish factors cited above.

Page F-27: The Quinault should receive additional attention somewhere in the plan due to the very limited major spawning area distribution of its unique sockeye run. Most of the effective spawning occurs in a few small streams above Lake Quinault that are north of the main river. Several of these involve a mixture of National Park, National Forest and private ownership. There may be some valuable opportunities for special habitat protection, land exchanges, development of spawning areas, etc.

Page F-36: As noted previously, pink salmon runs are restricted to odd years only in Puget Sound streams. Any tables, figures or other displays of annual averages for salmon production should include only 50 percent of the pink salmon production figures. This change needs to be carried throughout the planning documents, including the FORPLAN data base.

Page F-87: Data on chum salmon production are available for the Humptulips system.

Page F-114: From the standpoint of salmon production, the Hoh and Queets River are generally considered to be different due to their mainstem glacial charact We feel that some of their fish runs have unique genetic factors that enable t to be successful in this type of environment. Other major coastal rivers are generally grouped in a second "non-glacial" category with respect to salmon pr duction characteristics.

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Page S-6: The draft would benefit from an early, expanded description of the five salmon species present in Olympic National Forest. This should stress th short freshwater life histories of pink and chum salmon plus their general dependence upon suitable spawning gravel as their habitat limiting factor. Chinook and coho salmon have much longer periods of juvenile freshwater residence and are limited in production mainly by amount of rearing habitat. Adul holding water can also be critical. These are also the two primary species taken in recreational fisheries. Sockeye are limited to a single system, the Quinault. These major differences by species will have important ramificatior for a number of subsequent sections (for example, the suitability of certain types of habitat improvements).

Page II-18 to 20: As stated previously, we believe that a definite salmon mitigation responsibility exists, thus this section should be described as "mitigation measures." Many of the types of projects listed have a poor overa track record of success to-date in the Pacific Northwest. Only a limited numb have been adequately evaluated and a majority have not produced the benefits originally ezpected. We acknowledge that the technology is improving rapidly. but as presently written, this section is far too optimistic. In addition, i should be pointed out that these various types of projects can only work if th stay in place and effectively address the critical limiting factors of target species. Further, such projects can only succeed in areas where the agreed-to (state-tribal) fishery management plans provide adequate adult spawners. We a recommend that your range of potential mitigation measures be expanded to inc proven methods such as spawning channels and egg incubation stations (pink, cr plus juvenile rearing ponds (chinook, coho).

Page II-35: The first paragraph contains an example of contradictory language that often appears in the draft. A second special corridor is proposed in wh timber harvest is allowed, but "activities should be designed to maintain or enhance fisheries values." This same type of narrative commonly appears in references to riparian area management in general. The plan should explain exactly what new features are proposed for all special river corridors that w be lacking for all other streams without special corridors. A tabular listin by factor would be useful. (Possible categories are: 200 feet-Class I, 200 feet-Class II, 200 feet-Class III, 200 feet-Class IV, one-eighth mile with an without timber harvest, and one-quarter mile.)

Page IV-20: The paragraph at the top of the page adds further to the seemingly good justification for greater protection than currently proposed for Class III and Class IV streams.

Page IV-26: The second sentence of the fifth paragraph starts with the following: "Many unstable areas along these streams have been withdrawn..." This seems to be an inaccurate statement in view of previous data, particularly the very low percentages of riparian areas scheduled for protection in the case of Class III and Class IV streams (see, for example, Table B-21 on Page B-107 of the Appendices). Again, a percentage estimate of total amounts proposed for protection is needed.

Page IV-37: The basic approach described in the third paragraph is unclear. Spawning escapement objectives are established by WDF based on currently existing habitat conditions. These goals would have to be increased to account for additional natural habitat capabilities that are not being mitigated at the present time. The last paragraph (that ends on Page IV-38) correctly describes a process that is often treated as an objectively-defined absolute in other sections of the draft plan.

Page IV-38: A much more complete technical foundation is needed to justify (if possible) the estimates expressed in the third paragraph. In addition, the second sentence needs to be rewritten to make it clear that annual average production is expected to increase by 20 percent in the first decade (not "about 20 percent per year"). In considering current knowledge of the draft plan's proposed mitigation measures (generally new and/or inadequately measured), we doubt that a basis exists at this time for quantifying expected benefits. Again, the needs of different species must be stressed. For example, methods directed primarily at increased rearing space would offer little potential benefit to pink or chum salmon.

Page IV-41: Figure IV-13 needs to be modified to show the natural production potential level in the same manner that natural sediment levels are illustrated in Figures IV-2 through IV-6 on Pages IV-21 through 23.

Page IV-56: The last paragraph describes a special management designation for a specific area due to past management activities. We would like to see the draft modified to include a generic prescription for meeting the potential problem as it may arise in the future.

PROPOSED LAND AND RESOURCE MANAGEMENT PLAN

Pages II-25 and 27: Several of the "Research Needs" (for example, No's. 3, 4 and 8) and "Inventory Needs" (No's. 2, 3, 4, and 6) support our earlier comments on these same issues. In general, a number of previous sections implied more precision or knowledge than really exists. More realistic descriptions would have resulted if individual assessments of future research/inventory needs had been included in these sections.

RICHARD J. THOMPSON
Director

STATE OF WASHINGTON
DEPARTMENT OF COMMUNITY DEVELOPMENT
DIVISION OF EMERGENCY MANAGEMENT
4220 E. Martin Way, PT-11 • Olympia, Washington 98504-8611 • (206) 753-5255 • SCAN 234-5255

February 18, 1987

Mr. Tom Elwell
Environmental Review Section
Department of Ecology, PV-11
Olympia, Washington 98504-8711

Dear Mr. Elwell:

The following comments are provided on the Draft Environmental Impact Statement for the Proposed Land and Resource Management Plan for Olympic National Forest:

> Logging and road construction operations should be conducted in such a manner that there is no, or minimal, impact on watercourses and structures downstream. A good management plan needs to be developed and adhered to that would address logging and road construction operations. Logging operations should keep debris out of watercourses or controlled so that it will not affect people and property downstream at any time. Road construction and maintenance should be done in such a way to prevent erosion so that it does not affect watercourses. Land owners should also evaluate their roads and stabilize them when they no longer serve a function.

Thank you for providing us the opportunity to comment. If you have any questions please call me at (206) 753-5255.

Sincerely,

Robert S. Neilson, Manager
Plans and Preparedness Section
Division of Emergency Management

RSN:JPA:lf

RICHARD J. THOMPSON
Director

3519

STATE OF WASHINGTON
DEPARTMENT OF COMMUNITY DEVELOPMENT
LOCAL GOVERNMENT SERVICES DIVISION
Ninth & Columbia Building, MS GH-51 • Olympia, Washington 98504-4151 • (206) 753-2222 • SCAN 234-2222

March 12, 1987

Forest Supervisor
Olympic National Forest
P.O. Box 2288
Olympia, Washington 98507

Dear Sir:

I am writing in regard to the "Draft Environmental Impact Statement" and "Proposed Land and Resource Management Plan" for the Olympic National Forest. Thank you for the opportunity to review these documents and to consider the various management alternatives which you have developed.

As you may be aware, in the recent past the Department of Community Development has not routinely submitted comments on the community impacts of draft environmental impact statements. This does not, however, mean that the state is not vitally concerned about the impacts which national forest management plans have on the local communities of our state. You may recall that last fall we responded to the USFS Draft EIS on Spotted Owl Guidelines, a program which would impact the Olympic National Forest, among others. In our response, we cautioned about the impact of further job losses in communities already economically distressed, and we questioned whether or not the spotted owl management alternatives presented were mutually exclusive. We added our concern that any action which further reduces the number of employment opportunities threatens the continued existence of these communities and the self-sufficiency of their residents. In this regard, we are concerned about the level of detail of the data in the Draft EIS for the Olympic National Forest related to such community impact variables as employment levels. Data are presented in the aggregate rather than on a specific community by community basis, making a comprehensive analysis extremely difficult. We would urge the Forest Service to further refine the anticipated community impacts of the various management alteratives and present them in a more community-specific manner.

We recognize that whatever alternative management plan is selected can potentially have a profound effect on the local economy and on the financial viability of local governments in proximity to our national forests. This is particularly true in the case of the Olympic National Forest because of the degree to which local communities on the economically depressed Olympic Peninsula are dependent upon forest-related activities for their livelihood.

Because of our concerns in this area, I anticipate that we will be speaking more directly to draft Forest Service management plans and EIS's in the future. This is true not only with regard to the Olympic National Forest but also to the other national forests which are updating their management plans. Further, we would note that in the past other state agencies have expressed a desire to review all draft Forest Service management plans for Washington's national forests at the same time rather than on an individual forest by forest basis. This is in recognition of the cummulative impact of Forest Service management practices and the interdependence between and among the national forests and other forest lands in the state of Washington. The Department of Community Development concurs in this recommendation.

Please keep us informed as you proceed with the process of completing your EIS and management plan. As with other public policy issues, our department recognizes and supports the balancing of economic needs with environmental protection, and appreciates the complexity of such a task. We encourage a thorough examination of the alternatives and a more finite identification of the community impacts on specific communities dependent on the Olympic National Forest for their livelihood.

The U.S. Forest Service is to be commended for the openness which has characterized the process of developing the draft EIS and management plan for the Olympic National Forest. Thank you for the opportunity to comment.

Sincerely,

Michael J. McCormick
Assistant Director

MJM:ct

WASHINGTON STATE DEPARTMENT OF
Natural Resources

To: Marc Hatton - FYI
3524

BRIAN BOYLE
Commissioner of Public Lands

OLYMPIA, WA 98504

February 13, 1987

Andrea Beatty Riniker, Director
Department of Ecology
Mail Stop PV-11
Olympia, WA 98504-8711

Dear Ms. Riniker:

The Department of Natural Resources' response to the Draft Environmental Impact Statement and Plan for the Olympic National Forest is enclosed for inclusion in the state response letter.

While we have forwarded these comments directly to the Olympic Forest Supervisor, we appreciate this opportunity to have our comments presented with those of other state agencies.

Sincerely,

Art Stearns
Supervisor

AS:MH:mks

Enclosure

Equal Opportunity/Affirmative Action Employer

WASHINGTON STATE DEPARTMENT OF
Natural Resources

February 13, 1987

Ted C. Stubblefield
Forest Supervisor
Olympic National Forest
P.O. Box 2288
Olympia, WA 98507

Dear Mr. Stubblefield:

In our letters of response to the Okanogan and Wenatchee National Forest Draft Environmental Impact Statements (DEIS' and Plans, we supported and echoed recommendations from other states in the Pacific Northwest Region that no final forest plans be issued until after the drafts have been made public. Our concern is that the sustainable harvest or management of other resources on each national forest could change appreciably with significant cumulative effects statewide. Some of the alternatives that effect significant changes in timber harvest levels could indirectly affect demand for state-managed timber on the Olympic Peninsula. Because of this, we wish to reiterate our support of this recommendation to you and defer selection of a preferred alternative at this time.

In our comments, we will address the "No Action" Alternative, Economic Efficiency, Alternatives Assessment, concerns specific to Geology and Mineral Resources and Natural Heritage, and General Observations.

NO ACTION ALTERNATIVE

Alternative A, the "No Action" alternative, appears to be a continuation of the current programmed sale of timber. However, this is not the case. During the most recent 10-year period the offering timber averaged 387 million board feet per year. This is 20 million board feet higher than Alternative A. The allowable sale quantity declined to 367.2 million board feet which is 5 percent less than the recent sale level. Forest planners attribute the decline to a reduction in the management base due to legal requirements such as recreation uses.

Reviewers need to know what the recent sale level has been in order to understand that the "No Action" alternative does not reflect a continuation of the past sales level.

ECONOMIC EFFICIENCY

Economic efficiency is determined by maximizing present net value (P for the market-priced products. The emphasis on market opportunities with established market price is discussed in Alternative B-Departure (RPA).

Rankings in the fifth decade indicate the RPA alternative has the lowest net dollar receipts of any of the ten alternatives. Are there some below-cost timber sales involved which produce this result? Further explanation is needed.

Present net value (PNV) is used in the Plan/DEIS for valuing both commodity products and nonmarket goods. Only the commodity goods should have dollars assigned to them. For maximization of social net benefit, implicit dollar values should not be added to market-derived dollar values. The combined value does not provide a meaningful measure for choosing between the alternatives. Nonmarket values should be arrayed separately for the purpose of EIS analysis.

ALTERNATIVES ASSESSMENT

Community effects are a concern both for the federal and state governments. The revenues to counties, as well as the jobs and income effects, are particularly involved in assessments of impacts.

We note that Alternatives C-Departure, C (Preferred), F, G, H, and I do not have positive community effects. A difficulty with Alternative B-Departure (RPA) is the declining timber harvest departure feature.

Three alternatives, Alternative A (Current Direction), D-Departure, and E seem realistic in terms of continuation of timber as a commodity resource and an important community stability resource.

GEOLOGY AND MINERAL RESOURCES

An important issue to the Department is access to land for mineral exploration and mine development. The Department is in support of protecting and improving the opportunities for mineral exploration when consistent with the protection of other resource objectives.

Our Geology and Earth Resources Division staff may have information on specific areas in the Olympic National Forest of mineral interest. Please feel free to call Ray Lasmanis, Division Manager at (206) 459-6372 in Olympia.

NATURAL HERITAGE

Research Natural Areas: The Research Natural Area (RNA) Program is strongly supported by the Department as part of the cooperative effort of federal, state, and private groups to establish a statewide system of natural areas. The natural area needs, outlined in the State of Washington Natural Heritage Plan (WDNR 1985), will be best met by all the participants inventorying for, and designating, the best examples

of representative ecosystems and rare species populations on their land. The Department supports the Olympic National Forest (ONF) in their designation of the Buckhorn and Wet Weather Creek RNAs.

Based on ecological work by the forest ecologist of the ONF, many potential sites for future RNAs are known. These could protect a number of ecosystem types found **only** on the forest. Using the forest ecologist's expertise, we encourage you to designate additional RNAs appropriate.

Special Interest Areas: The Department supports the designation of t Special Interest Areas (SIAs) for botanical areas. The Department encourages additional designations as appropriate.

The plan states that "utilization for native bird or animal habitat will be encouraged" in SIAs. SIAs set aside for plants should not be modified for the purpose of encouraging wildlife.

Rare Plants: The Olympic National Forest has a large number of rare plants and unusual plant species. No mention is made of an inventory for rare plants in the proposed plan.

The recent Regional Forester's Sensitive Species List (February, 1986 can be consulted. In addition, the Natural Heritage Program can provide your staff with an up-to-date list.

Logging practices can affect sensitive plant species. Timber harvesting activities (other than cutting) can have significant effects. These other activities include road construction, soil erosion, sediment load and changes in hydrology. In addition, activities such as fish habitat enhancement and pothole development, seeding projects, campground development, and trail construction can also have impacts.

GENERAL OBSERVATIONS

We would expect the plan to ensure operations are conducted to equal exceed the requirements in the Forest Practice, Forest Fire Protectio Surface Mining, and Forest Insect and Disease Control state statutes and subsequent regulations. It appears that no access problems will result from any of the alternatives. We would expect t transportation system management program not to interfere with the access for Department-managed lands.

Overall, the Olympic National Forest Plan provides a good basis for making sensible decisions for managing the national forest during the next 10 to 15 years.

The large scale maps are extremely well done. The maps for Alternative C, which are included in Appendix B of the Proposed Land and Resource Management Plan, provide an excellent display of the detail of planning which has occurred, at least for this alternative.

We appreciate this opportunity to comment on the Olympic National Forest Plan and DEIS. If you would like further clarification, please call Glenn Yeary, Manager of the Analysis and Planning Section in Olympia at (206) 586-4435.

Sincerely,

Art Stearns
Supervisor

AS:MH:mks

c: Andrea Beatty Riniker, DOE

a:Olyplan1

A RESOLUTION IN OPPOSITION TO THE U. S. FOREST SERVICE
PREFERRED ALTERNATIVE FOR MANAGEMENT OF
THE OLYMPIC NATIONAL FOREST

WEHERAS, the Grays Harbor Chamber of Commerce has reviewed the Forest Service's plan that will establish management direction on the Olympic National Forest for the next ten to fifteen years, and

WHEREAS, this plan can be the blueprint for economic stability of forest resource based communities on the Olympic Peninsula by maximizing management of these lands for wood products, and

WHEREAS, almost fifty percent of the Olympic Peninsula employment is either directly or indirectly dependent upon the wood products industry, and

WHEREAS, the demand for wood products from the Olympic National forest will continue to grow in the future, and

WHEREAS, the Forest Service now threatens to reduce that supply far below the existing plan (harvest levels are proposed to decline from 341 million board feet to 186 million board feet annually as a result of the plan), and

WHEREAS, this reduction in harvest levels has the potential to eliminate over 1,000 direct and indirect jobs and cost taxpayers to lose over $18.4 million in timber receipts, including $4.6 million to schools and counties, and

WHEREAS, this reduction in harvest level unfairly harms the wood products industry and communities dependent upon timber from the Olympic Peninsula Ranger districts; NOW, THEREFORE,

BE IT RESOLVED that the Grays Harbor Chamber of Commerce goes on record in opposition to the Forest Service proposal and further urges the Forest Supervisor to adopt the Community Stability Alternative which would:

(a) more fairly balance the timber and recreation demands by recognizing the recreation supplied by the Olympic National Park by using more of the National Forest land base to meet the timber supply needs of local communities;

(b) protect other multiple-use benefits such as protecting vital watersheds, and enhancing habitats for most wildlife species;

(c) retain 455,100 of 485,000 acres suitable for timber production;

(d) provide for an annual timber harvest level of at least 250 million board feet;

(e) maintain an annual harvest level of at least 36 million board feet on the Hood Canal and Quilcene Ranger Districts.

Steven C. Levold, President

Patrick Farwell, Chairman
Governmental Affairs Committee

1125

Port of Port Angeles

Port Angeles, Washington

Commissioners' Resolution No. 622

A RESOLUTION IN OPPOSITION TO THE U.S. FOREST SERVICE PREFERRED ALTERNATIVE FOR MANAGEMENT OF THE OLYMPIC NATIONAL FOREST.

WHEREAS, the Port of Port Angeles has reviewed the U.S. Forest Service's plan for future management of the Olympic National Forest; and

WHEREAS, the Forest Service plan includes a Preferred Alternative (Alternative C) that has the effect of reducing timber harvest levels from 341 million board feet to 186 million board feet annually; and

WHEREAS, long term demand for wood products from the Olympic Peninsula, including the Olympic National Forest, will continue to grow in the future; and

WHEREAS, timber supply will fall considerably short of projected demand if the Forest Service Preferred Alternative is implemented; and

WHEREAS, future, stable timber supply is essential for the economic health of communities within the Port District of the Port of Port Angeles.

NOW, THEREFORE, be it resolved that the Port of Port Angeles is in opposition to the Forest Service Preferred Alternative; and

BE IT FURTHER RESOLVED that the Port of Port Angeles requests the Forest Service Supervisor to propose and adopt a new alternative plan that would:

a. Manage the timber resource in the Olympic National Forest for the long term supply needs of local communities.

b. Maintain timber harvest levels of at least 250 million board feet annually.

c. Recognize and utilize the Olympic National Park in conjunction with National Forest Lands to meet multiple use demands such as recreation, protection of watersheds and enhancement of wildlife habitats.

Passed and adopted this day, February 23, 1987.

PORT OF PORT ANGELES
PORT COMMISSION

Robert M. McCrorie, President

Ted Spoelstra, Secretary

PORT OF GRAYS HARBOR

COMMISSION
JOHN H. STEVENS • GERALD S. TERRELL • J. K. LEWIS
HENRY E. SOIKE, General Manager

March 10, 1987

Forest Supervisor
Olympic National Forest
Post Office Box 2288
Olympia, WA 98507

Re: Olympic National Forest Plan

Dear Sir:

No! No! No! Your preferred Alternative (Alternative C) for the Olympic National Forest Plan is a terrible mistake!

Alternative C will reduce harvest levels to 186 mmbf annually, 25 percent less than the average annual harvest in recent years. This reduction would cost communities around the Olympic Peninsula over 1,000 jobs, and reduce annual Forest Service Timber Sales revenues to these communities by over $4.5 million. You must surely know that the Olympic Peninsula can not afford another economic bomb. Alternative C is a bomb!

Please do not be mislead by those who are saying that tourism related jobs will compensate for loss in timber based employment. At current salary levels it takes four jobs in tourism to equal one job in the woods or in a mill. You just can't believe that Alternative C will spawn 4,000 new jobs in tourism, can you?

Please be reasonable. Look at the amount of federal land which has already been withdrawn from timber management on the Peninsula (over 70 percent). It is too much to ask that timber production be given a high priority in the remaining National Forest.

We urge you to select a plan which will retain a timber production land base of at least 455,000 acres, with a sustainable yield of at least 250 mmbf annually. This would provide a flow of raw material which would not have an unstabilizing effect on the communities around the Peninsula.

P.O. BOX 660 • ABERDEEN, WASHINGTON 98520-0141 • (206) 533-9528 • SCAN 579-9528

Thank you for this opportunity to comment, please let us know what you decide.

Sincerely,

PORT OF GRAYS HARBOR

John Stevens
John Stevens,
President

G. S. Terrell
G. S. Terrell
Vice President

J. K. Lewis
J.K. "Bun" Lewis
Secretary

JHS/GST/JKL:gc

cc: Washington State Congressional Delegation
Governor Booth Gardner
Warner Mayr

0002

BROCK ADAMS
U.S. SENATE

1011 Western Avenue, 10th Floor
Seattle, WA 98104

November 20, 1986

Dear friend:

Thank you for your recent letter and comments on the U.S. Forest Service Supplemental Environmental Impact Statement. I share your concern that we protect sufficient amounts of old-growth timber.

I have instructed my staff to review the various Forest Service EIS's. I am concerned that the USFS is proceeding in a hasty and short-sighted manner and not giving sufficient thought to the long term impacts of their timber harvest plans. Specifically I feel they must:

* develop a map based inventory of old-growth forest in the Pacific Northwest.
* perform accurate and unbiased benefit/cost analysis on the proposed alternatives.
* develop plans that protect critical habitat for indicator species such as the Northern Spotted Owl.

Our natural resources are the basis of our wealth and existence. We cannot afford to squander our heritage for short term economic gain. Below-cost timber sales and excessive road building projects must be curtailed.

2124 Fourth Avenue • Suite 203 • Seattle, Washington 98121 • (206) 443-5700

Again thank you for contacting me on this important issue. I look forward to receiving your input as the USFS plans proceed.

Sincerely,

Brock Adams

cc: ✓Mr. Ted Stubblefield, Forest Supervisor, Olympic N.F.
Mr. William D. Shenk, Forest Supervisor, Colville N.F.
Mr. Robert Williams, Forest Supervisor, Gifford-Pinchot N.F.
Mr. J.D. Mac Williams, Forest Supervisor, Mt. Baker-Snoqualmie
Mr. William D. McLaughlin, Forest Supervisor, Okanogan N.F.
Mr. Donald H. Smith, Forest Supervisor, Wenatchee N.F.

BROCK ADAMS
WASHINGTON

United States Senate

WASHINGTON, D.C. 20510

COMMITTEES:
COMMERCE, SCIENCE AND TRANSPORTATION
FOREIGN RELATIONS
LABOR AND HUMAN RESOURCES
RULES AND ADMINISTRATION

March 5, 1987

Mr. Ted C. Stubblefield
Olympia National Forest
PO Box 2288
Olympia, Washington 98507

Dear Mr. Stubblefield:

Thank you for contacting me regarding the U.S. Forest Service (USFS) Supplemental Environmental Impact statement. I share your concern that we protect sufficient amounts of old-growth timber.

I have instructed my staff to review the various Forest Service EIS's. I am concerned that the USFS is proceeding in a hasty and short-sighted manner and not giving sufficient thought to the long term impacts of their timber harvest plans. Specifically I feel they must:

* develop a map based inventory of old-growth forest in the Pacific Northwest.
* perform accurate and unbiased benefit/cost analysis on the proposed alternatives.
* develop plans that protect critical habitat for indicator species such as the Northern Spotted Owl.

Our natural resources are the basis of our wealth and existence. We cannot afford to squander our heritage for short term economic gain. Below-cost timber sales and excessive road building projects must be curtailed.

Again thank you for contacting me on this important issue. I look forward to receiving your input as the USFS plans proceed.

Sincerely,

Brock Adams
United States Senator

BA/do

WASHINGTON STATE LEGISLATURE

Senate • House of Representatives • Legislative Building • Olympia, Washington 98504

February 19, 1987

Ted Stubblefield, Forest Supervisor
Olympic National Forest
P.O. Box 2288
Olympia, WA 98507

Dear Mr. Stubblefield:

We, the members of the Coastal Caucus, wish to express our concern on the Draft Environmental Impact Statement and Proposed Land and Resource Management Plan currently open for public review.

In our view, the Forest Service preferred alternative will not adequately meet the economic and employment needs of the communities dependent upon the timber supply from the Olympic National Forest. For example, a dramatic cut of 80% in harvest levels from the Quilcene and Hood Canal Ranger Districts. We believe that suitable land is available to sustain at least the current timber consumption of 250 million board feet. This level of timber supply is clearly warranted for the timber industry. The domestic industry has suffered severely in the State. Since 1979 employment in the timber industry has dropped by over 60% from 56,000 to only 36,000. Now, due to the settlement of the Canadian lumber dispute, improved lumber prices, increased markets, greater productivity, lower interest rates and increased demand for Pacific Northwest wood products, the State has an opportunity to regain some of tis employment losses and improve the economic stability of its timber dependent communities rather than further economic decline.

Your willingness to recognize the timber industry needs is critical to maintaining an important local and regional industry, improving our overall economic base in the state and on the Olympic Peninsula while protecting the livelihoods of many men and women. We hope you will agree with our concerns and make every effort possible to meet the economic and employment needs of our timber dependent communities.

Sincerely,

THE HONORABLE ARLIE DeJARNATT
State Senator
19th Legislative District

THE HONORABLE JIM HARGROVE
State Representative
24th Legislative District

Bob Basich

THE HONORABLE BOB BASICH
State Representative
19B Legislative District

Paul H. Conner

THE HONORABLE PAUL CONNER
State Senator
24th Legislative District

Richard E. Fisch

THE HONORABLE RICHARD FISCH
State Representative
24th Legislative District

Brad Owen

THE HONORABLE BRAD OWEN
State Senator
35th Legislative District

Douglas S. Sayan

THE HONORABLE DOUG SAYAN
State Representative
35th Legislative District

Max Vekich

THE HONORABLE MAX VEKICH
State Representative
35th Legislative District

cc: Dan Evans
Brock Adams
Don Bonker
Al Swift
Tom Foley
Mike Lowry
Rod Chandler
Sid Morrison
John Miller
Norm Dicks

/003

Office Of The Mayor
City of Seattle

Charles Royer, Mayor

March 13, 1987

Ted Stubblefield
Forest Supervisor
Olympic National Forest
P.O. Box 2288
Olympia, Washington 98507

Dear Mr. Stubblefield:

The citizens of Seattle have a keen interest in the Olympic National Forest, and I appreciate the opportunity to respond to your Draft Land and Resources Management Plan.

The Olympic is not only highly visible from Seattle, it is also a popular destination for Seattleites. The wild and beautiful Olympic draws us--whether for hiking, hunting, fishing, rafting, or simply driving scenic Highway 101. Hikes along quiet trails through the roadless back country are cherished outings for many of our citizens. As the Draft Environmental Impact Statement points out, demand for hiking and other primitive types of recreation will continue to increase. It appears, however, that the destinations will continue to shrink with the proposed plan.

We are particularly concerned about the proposed increase in road construcion. These additional roads will drastically change the landscape and use of the forest, increasing sedimentation and splitting the lower forested trails into short segments. While short interpretive trails are a very positive feature, hiking from one logging road to another is not very attractive. Not only do these low elevation areas remain open for extended periods, they provide longer hikes, disperse visitors, and often provide special features such as groves of large trees and undisturbed shores of major rivers. More roads will only push the increasing numbers of users into ever smaller, higher areas, increasing the impacts to these fragile high mountain lands.

Some roads have experienced a high rate of erosion and were previously proposed for closure. We support the closure of the Silver Creek, Boulder Creek, and Wright Canyon roads and hope the slopes are restabilized, and the natural vegetation allowed to reclaim these scarred areas.

Because we cannot afford to lose any more of our pristine trail system, I am disturbed by the thought of motorbike usage of the trails, creating a hazard to the many people enjoying spectacular vistas and fragile wildflowers on the popular day hike to Mount Townsend. It also seems inappropriate to encourage RVs on trails such as the South Fork Skokomish or Jupiter Ridge that access a wilderness or the national park.

Greater protection of the rivers and watersheds is also needed. Preserving the roadless areas will be the most effective in maintaining that high water quality. Improved protection of the riparian zones by retaining more forest cover and, of course, keeping the rivers free-flowing are both essential. We applaud your proposal for inclusion of the Duckabush and Dungeness/Graywolf in the National Wild and Scenic Rivers System. However, there are several other outstanding rivers that need and deserve such protection. These include the Dosewallips, Hamma Hamma, South Fork Skokomish, Soleduck, and upper Dungeness.

Seattle residents are also concerned about wildlife habitat in our national forests. Scientists tell me that the Olympic pennisula is isolated by geography and human development. This makes protection of the wildlife habitat so vitally important. The situation is especially acute with the old growth forests, as that habitat has shrunk drastically over the past century. We must make every effort to preserve these ancient and complex expanses of forest and their associated wildlife that find refuge nowhere else. The South Quinault Ridge with its rain forest is an example of such an area with huge evergreens towering over gentle trails along the valley bottom.

The national forests are also great educational resources. They not only provide research opportunities for our universities, but are also great for teaching our children about nature and conservation. Tourism and recreation are among our state's fastest growing industries. Sales of books, tours, camping equipment, lodging, and roadside services are just some of the activities that benefit the local and regional economy.

Maintaining the scenic beauty that draws people to the forest and the region must be a priority. The shores and mountains that rise above Hood Canal and Lake Quinault must be maintained in all their natural, spectacular beauty. Highway 101 and the roads that follow valleys such as the Dosewallips and Hamma Hamma Rivers provide scenic views of rushing water, towering trees, and distant peaks which need strong protection.

Significantly, our quality of life is a major attraction for industries seeking new locations. Such economic diversity will complement the contribution of our timber industry as we move into the next century and adapt to new economic patterns.

Protecting the Olympic National Forest's recreation, fish, and wildlife resources is essential for continued growth of our economy, to provide refreshment from the stresses of modern life, and to gain a better understanding and appreciation of our natural heritage. Proper stewardship of these public lands will provide many resources for us and our kids. We urge you to give careful consideration to these values.

In many cases, protecting roadless areas, primitive recreation opportunities, scenic vistas, wildlife habitat and clean water for fish and human use are very compatible. Timber harvesting should be done in a sensitive manner and at a moderate level that is more in balance with these other uses. To achieve that, the preferred alternative needs to be modified. We feel that Alternative H, which was developed with the input of the Washington State Game Department, would better provide that kind of stewardship of these public lands, and we urge you to incorporate its features in your final plan.

Thank you for the opportunity to comment on this important planning process.

Sincerely,

Charles Royer

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101

/162

REPLY TO
ATTN OF: ND-136

MAY 18 1987

Mr. Ted C. Stubblefield
Forest Supervisor
Olympic National Forest
P.O. Box 2288
Olympia, Washington 98507

Attention: Dave Yates

Dear Mr. Stubblefield:

In accordance with our responsibilities under Section 309 of the Clean Air Act and the National Environmental Policy Act, we have reviewed the Draft Environmental Impact Statement (DEIS) and Proposed Land and Resource Management Plan (Plan) for the Olympic National Forest (ONF). The ONF is located on the Olympic Peninsula in Western Washington and includes 650,000 acres. The preferred alternative upon which the Plan is based provides for intensive timber management, wilderness, and dispersed recreation. Big game winter range and riparian areas would also be emphasized. Geothermal, oil, and gas leasing would be permitted.

Based on our review, we have rated the DEIS EC-2 (Environmental Concerns-Insufficient Information). The basis for our rating is summarized below with details included in the enclosed review report. Our report is divided into three sections providing general comments and then specific comments on each document. Also enclosed is an explanation of our rating system for DEISs.

We have environmental concerns because the process for managing forest activities is not clear enough to assure us that adverse environmental effects, particularly to water quality and fisheries, will be prevented. We suggest more fully describing the management processes of the ONF.

The details of our comments are included in the enclosed review report. Several of the items identified in this review were discussed in the meeting we had with your staff in Seattle on October 29, 1986. This interaction was useful to us in becoming familiar with the issues on the ONF.

The intent of our comments is to be constructive. We are confident that by addressing our concerns and comments the ONF can present a Final EIS and Plan which clearly shows that important resources will be adequately protected while providing ONF personnel with the necessary flexibility to manage day to day activities on the ground.

Thank you for the opportunity to review the DEIS and Plan. If you have any questions about our review, please contact Ann Uhrich of our EIS and Energy Review Section at FTS 399-8516.

Sincerely,

Robert S. Burd
Director, Water Division

Enclosures

cc: Office of the Governor , State of Washington
USFS, R-6
USFS, R-1, 4
USFWS
NMFS
BLM
WDE
WDNR
WDF
WDG
TWS
SC
Jane Hadley, Seattle Times

(p. C-19 and C-20) should be expanded. For example, when and how would projects be selected to receive monitoring and mitigation? Would lakes as well as streams be monitored?

The adequacy of the monitoring plan to assess environmental impacts, and a process to ensure that the assessments are used in management decisions, are key factors in EPA's ability to evaluate the adequacy of Forest Plans and EISs. The monitoring plan together with the standards and guidelines should serve to highlight how the Plan will be implemented. The Final Plan should clearly outline how monitoring will be carried out such that mid-course corrections can be made in forest management. This serves as a system of accountability, reduces anxiety for any uncertainties in predicting Plan impacts, and makes it clear to the public how the Plan will be implemented. As the uncertainty in being able to protect against water quality and fish habitat effects increases, a higher level of monitoring becomes necessary.

The DEIS states that streams on the west side of the Forest are potentially susceptible to water temperature increases (page III-22), and then streams on the southeast side (So. Fork Skokomish drainage) are used to dismiss water temperature problems across the Forest. This apparent contradiction needs to be clarified.

Domestic Water Supplies

Water quality data is provided for the Big Quilcene River and it is stated that "other municipal watersheds should have similar water quality" (DEIS, page III-23). The technical support for this statement should be discussed or cited.

Other questions relative to the domestic water supply sources are as follows: Are any of the sources in a highly sensitive watershed? What management activities are planned for that watershed? Sensitive areas may be defined by such factors as physical features of the watershed, predicted sediment yield, the number of water users in the watershed, the type of water treatment employed, the location of water intakes, and past history of water quality problems. The DEIS nicely identifies predicted sediment yield but does not relate this to the existing water supply sources, except in a very general way (p. IV-19 and IV-20). There may also be effects on ground water supplies across ONF. The potential impact of the proposed plan on drinking water aquifers should be addressed.

Fisheries/Fish Habitat

Chapter III of the DEIS provides a very good overview of existing knowledge of the status of fish habitat and fish production on the ONF by drainage. However, it would be helpful to specifically relate the drainages with fisheries (DEIS, page III-19) to the drainages with high sediment yield (DEIS page III-20), perhaps by expanding the paragraph at the top of page III-83 in the DEIS.

With regard to Table III-15 in the DEIS (p. III-80), is it feasible to add another column titled "Adult Prod. Nos./River Mile of Habitat?" It would seem that this would allow for comparison of relative capabilities of drainages, at least for resident fish (for anadromous fish the number of smolts produced per river mile might be more meaningful). If not, is there some other way the drainages could be ranked so that mitigation or enhancement projects can be prioritized (for example, by physical habitat condition)? How and when will this be done? Are the fish habitat improvement projects listed in Appendix A of the Plan (page A-8) in order of priority? Also, how were the habitat capabilities developed? The technical support for this process should be cited.

The Plan states that "inventory of forest fish habitat to determine quality and quantity" is necessary (page C-16). This fact should be discussed in the DEIS, along with how any presently degraded streams will be managed for long-term recovery, beginning with the baseline inventory. It would be helpful if the streams which are of importance to anadromous fisheries were identified on a map, so that they could be related to management areas and to drainages which currently have high sediment yield indices.

Chapter IV of the DEIS presents an adequate summary of the impacts to fish habitat due to sediment yield indices of the various alternatives. However, as stated in the DEIS (p. IV-37), many other variables also affect fish habitat and fish passage and the Final EIS should make a concerted effort to incorporate these into the discussion of impacts to fisheries. It should also be emphasized that fish habitat mitigation and/or enhancement work is expensive and, while important and potentially successful, does not take the place of avoiding impacts to the greatest extent practicable from the beginning.

Riparian Area Management

The importance of riparian zones to water quality and fish and wildlife habitat greatly exceeds the actual area occupied by riparian vegetation. Any evaluation of the cost effectiveness of timber harvesting or grazing in these areas should reflect this fact. For example, the DEIS states that a maximum timber harvest level of eight percent of suitable forest land per decade was used for riparian areas within watersheds (p. IV-19). Would the allowable sale quantity (ASQ) or present net value (PNV) values for the various alternatives be significantly different if this figure were zero? It is essential to carefully explain how activities such as timber harvesting and road building can be made compatible with other riparian area resource values (e.g., protecting and enhancing water quality and fish habitat potential), keeping in mind that it may not be possible to replace these other resource values elsewhere on the Forest.

The DEIS presented a good summary of how high timber harvest levels could impact riparian areas, and adequately discusses the riparian acreage scheduled for harvest under each alternative. It was also gratifying to see Riparian Area management standards and monitoring separately presented in the Plan, in addition to MMRs.

However, following completion of inventory needs for water quality and riparian areas, it is very likely that several drainages will need to be improved such that they could even meet MMRs. Will these efforts be undertaken first, and then implementation of riparian area management

U.S. ENVIRONMENTAL PROTECTION AGENCY REVIEW
REPORT ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT
AND PROPOSED LAND AND RESOURCES MANAGEMENT PLAN FOR THE
OLYMPIC NATIONAL FOREST, WASHINGTON

GENERAL COMMENTS

Process Description

The primary output of the National Forest planning process is the Land and Resources Management Plan (the Plan), and the heart of the Plan is the forestwide standards and guidelines and the more localized management area prescriptions. These, in addition to the existing minimum management requirements (MMRs), set the backdrop against which goods and services are produced on the Forest.

A ready knowledge of these three management components at the outset (standards and guidelines, prescriptions, and MMRs) would greatly facilitate the readers' understanding of the Plan. This is touched on in the Plan (p. I-2 and p. IV-1), but only the first two terms are mentioned. MMRs are discussed in the DEIS (p. II-5), but not in relation to the first two items. Hence, a somewhat expanded summary of the three terms and how they coincide or differ would be helpful, perhaps in the Plan in Chapter I under "Relationship to Project Planning" or in the DEIS in Chapter I under "Planning Process."

The DEIS and the Plan rely heavily on subsequent environmental analyses and data collection for pinpointing specific impacts from forest activities. In order that we can be assured that the environmental effects of the selected alternative are acceptable, we need to have a complete picture of the forest management process. There are a number of elements within the forest management process that we believe are very important in minimizing adverse environmental impacts, particularly water quality effects. They include

1. A data base of existing conditions from which technical experts and the public can judge expected effects and levels of uncertainty of the predictions.

2. Best Management Practices (BMPs) and management area prescription development.

3. Selection of BMPs for a particular activity [Environmental Assessment (EA) preparation] and how uncertainty is factored into selection.

4. Thorough on-site inspection and administration, or "implementation monitoring," verifying that a particular activity is occurring consistent with BMPs and as prescribed in contracts, leases, or permits.

5. "Effectiveness" Monitoring after the completion of an activity to determine whether predicted impacts were exceeded, and possibly "validation monitoring" to assess the validity of the assumptions which went into predicting impacts for that activity.

6. Repairing damage caused by adverse effects that exceeded predictions.

7. Upgrading BMPs or prescriptions to correct inaccurate predictions.

The DEIS and Plan generally did a very good job of describing the available data base, best management practices (BMPs), and management area prescription development. In general, the monitoring and evaluation program plan appears to be adequate for the various actions and effects to be monitored. The monitoring worksheets (Plan, Appendix C) were very helpful. Selection of BMPs, on-site inspection, repairing damage, and upgrading BMPs have weaker commitments or are not clearly described.

The most important component that is missing is a good description of how these elements are related and dependent on each other. It would also be well to stress the iterative nature of the forest management planning process, in that information from the on-site inspections and monitoring can flow up to the management level to be used not only to modify management practice, but also to assist in the development of the forest's multi-year budget proposals, in an attempt to help circumvent implementation problems due solely to inadequate funding as opposed to technical difficulties.

Water Quality and Monitoring

Under "Uses of Water," the DEIS notes only one beneficial use, Municipal Watersheds (p. III-22). Other beneficial uses, particularly fisheries, need to be mentioned here. Referring the reader to the discussion under "Water" on pages III-82 and III-83 would also be helpful.

The DEIS states that the sediment yield index for the current condition serves as a baseline for comparison of alternatives (p. IV-18). However, the natural sediment yield index shown in Table IV-2 (DEIS, p. IV-19) also serves as such a baseline. Thus, while the average sediment yield index for the preferred alternative over the first five decades is a little lower than the current situation, it is still very much higher than the natural index. This fact and its environmental implications need to be highlighted and discussed in the DEIS. The reader might well be referred to the discussion of fish production under "Historic Trends" on p. III-81 of the DEIS, where it is acknowledged that increased sediment yields (such as the level of the current situation?) have been one of the factors in reducing fish habitat. Under the proposed plan, the potential for impacts to fisheries and other beneficial uses due to greater than natural sediment yields appears to remain high.

It is recognized that the sediment indices are to be used for making relative comparisons between alternatives. This is very helpful and we commend their use. However, since they cannot be measured in the field they cannot be considered as a parameter in the monitoring plan that responds directly to state water quality standards. The Plan states that "there is a need to quantify existing water quality in major watersheds" (p. C-20). This fact should be discussed in the DEIS. In addition, we believe the discussion of water quality monitoring and evaluation in the Plan

prescriptions? If so, this should be stated in the Plan. Also, as proposed, timber harvest would be allowable in essentially all riparian areas as long as standards and guidelines (and prescription F2) were met. We would submit that this again points to the need for monitoring and mitigation programs that are built into the budget process for the Forest.

Mining

It is well to state in the standards and guidelines that operating plans will be developed for each area where a mineral source is to be developed. However, for locatable minerals we believe the Plan should include water quality monitoring requirements for sites with the potential to affect water quality and beneficial uses. Water quality monitoring data may be needed to ensure compliance with the operating plans.

The potential impacts of mining on water resources and fisheries are discussed in Section III of the DEIS (page III-172), but not under Minerals in Section IV. The ground-disturbing potential of energy development or mining activities, and subsequent potential environmental impacts on water quality and cultural resources, should be discussed in Section IV, not simply how other activities could affect mineral exploration.

Air Quality

How many cords of firewood are projected to be taken for personal use from the ONF each year over the first decade? This needs to be identified in the EIS (page III-178), as there is a potential for indirect effects on winter air quality in local urban communities via the firewood provided by the ONF. There are also potential associated health effects.

Forest land managers that provide firewood have a unique opportunity to educate the public regarding fuelwood use and air pollution through the permit process. Pamphlets discussing the association between wood stoves, air pollution, and health concerns, or providing tips on efficient wood stove operation, for example, could be distributed with fuelwood permits. If appropriate literature is not readily available, we would be happy to provide examples that are being used elsewhere.

Cumulative Impacts

We have discussed the use of "area analyses" with other national forests and generally support their use. It appears that much of the detailed analysis we believe to be necessary, but which the Forest Plan does not provide and can be missed by individual project evaluations, could be performed at this level of study. Area analyses would be the most appropriate vehicles for evaluating the cumulative effects of many similar activities, and the combined effects of different types of activities, occurring in a fairly large area and over a period of time.

Because detailed and specific analysis of cumulative impacts is extremely important, the Final Plan should discuss in some detail the process for assessing these effects. For example, for how large an area (2nd order drainages?) would such analyses be performed? What period of time between projects would be considered? Would all activities producing sediment in the area be included (e.g., timber harvest, plus roads, mines, etc.)? How will multiple ownership drainages fit into these analyses, particularly on the sustained yield units? Will documents be prepared and available for public review and comment?

We believe that an area analysis would be appropriate for all watersheds in which development is planned near important aquatic resources, such as domestic supply watersheds and anadromous fishery watersheds. We further believe that such analyses should generally receive public review as Draft EAs or EISs, depending upon the source conflict potential of the projects. As such, the discussion of area analyses might aptly be placed under "Environmental Analysis" on page V-2 of the Plan.

SPECIFIC COMMENTS ON DEIS

PAGE

II-80 It is noted that management areas C4 and F2, while substantial in size, are apparently included as part of other management areas, since their acreages are not subtracted from the total Forest area. Is this true and, if so, why were they handled this way?

II-110 Fish Habitat Quality: It is not clear that the riparian MMRs will assure an adequate source of large organic debris. This needs to be elaborated upon. Also, enhancement activities usually refer to increasing habitat above present levels. Use of the term "mitigation" appears more appropriate here.

II-112 An assurance is made that water quality will be maintained "at present levels" in all alternatives. Since present water quality is generally unknown, this statement appears to ignore the fact that certain streams may currently be degraded and to foreclose the possibility of that streams presently not meeting State Water Quality Standards (WQS) would need to be upgraded.

II-133 It is important to note here that demand for wilderness areas and other unroaded resources cannot be met by any substitute. Once these areas are lost they are essentially irreplaceable and it is therefore much easier to shift demand for the commodity resources to other areas than to try to mitigate for loss of such lands.

III-10 It is stated that "landslides are occurring on many oversteepened channel walls." This may in fact be a natural phenomenon but management practices can exacerbate the problem. In steep headwall areas not already withdrawn from harvest will riparian prescriptions call for long rotation? If "no harvest" were selected instead, would the ASQ or PNV for the various alternatives be significantly different

from a situation where long rotations were implemented, over 50 years of the plan? If not, a "no harvest" prescription in these areas across the Forest would also seem to be a feasible alternative and could greatly increase protection of water quality and fisheries.

III-17 A greater amount of wildlife use on the Forest also occurs near water. This should be added to the last paragraph.

III-24 Is Table III-5 a listing of needs for the whole Forest or just the northwest portion? Were potential fisheries restoration or enhancement projects also inventoried?

III-27 Regarding fertilization buffer strips, do the BMPs call for these? If not, based on this information it would seem wise to incorporate them.

III-28 The figure of 30% fine material from road surfaces disagrees with a figure of 25% given on p. III-29.

III-33 The statement that "the primary factors influencing the effectiveness of an erosion control program are time and funding" is a good one. This concept might well be expanded to other types of mitigation projects across the Forest. Implementation of mitigation in a timely manner so as to protect beneficial uses is often dependent upon funding rather than technical capability, and this points to the need to give equal weight to restoration and mitigation funding along with funding for Forest commodity outputs during the forest budgeting process.

III-42 The statement that the Shelton Cooperative Sustained Yield Unit is essentially a mature Forest disagrees with the data in Table III-6. Please clarify.

III-62 It is stated that riparian areas occupy a "limited" amount of space in the forest environment, but on p. III-63 it is stated that on the ONF they make up 28% of the land base. This does not seem "limited."

III-63 Riparian areas could also appropriately be designated around lakes and wetlands.

III-64 Riparian areas are also likely to contain archaeological remnants of potential importance (see p. III-100).

III-66 "What affects wetlands" should include discussion of potential negative impacts to wetlands from management practices.

III-78 It is well to state that fisheries habitat enhancement projects will be implemented "as funding becomes available" but funds for mitigation or restoration should be a firm commitment in the Forest budget. We believe the FEIS should indicate that management activities would not be implemented where mitigation funds are not available.

III-80 Should not "potential existing habitat" (at the bottom of the page) be "potential <u>enhanced</u> habitat?"

III-91 Escaped slash fires account for a significant portion of the acreage that will burn in wildfires. This undoubtedly results in suppression investment or cost. What would be the alternative costs of leaving the slash in place and/or removing it by means other than fire?

III-95 Are not the wilderness areas within the ONF also Class I air quality areas?

III-141 Fire can also impact wilderness areas indirectly, when smoke from slash fires on the ONF enters the wilderness airshed. This should be noted.

IV-11 Where are the 47,218 acres of old growth that will not be harvested located on the ONF? (e.g., east vs. west side, low vs. high elevation, etc.)

IV-16 State timber harvest plans are discussed but not those of Indian nations (top of page). This should be included.

IV-26 Large woody material is also necessary for fisheries habitat in Class III and IV streams and, since it is stated that "most of the timber harvest in the alternatives will occur along Class III and IV streams," it will be particularly important to ensure retention of large diameter vegetation in these riparian areas. It is also stated that riparian MMRs apply in all alternatives. However, out of 182,000 acres in the WIZ (DEIS, page III-63) only 28,021 acres are apparently protected by the MMRs (DEIS, page II-6). This apparent discrepancy should be clarified.

IV-31 The technical justification for 323,000 acres of spotted owl habitat listed for Olympic National Park should be cited. How did Park officials derive this estimate?

IV-40 Cumulative impact on fisheries should also consider and incorporate other off-Forest land uses, whether or not they remain at current levels. This is clearly stated under NEPA (Section 1508.7). This needs to be addressed in the FEIS. A good example of this type of cumulative impact is the decline of Roosevelt elk discussed in the Plan (page II-19).

SPECIFIC COMMENTS ON THE PLAN

I-2 The maps, both large and small scale, are very well done. However, the Plan notes that boundaries are approximate. Does this mean they could change substantially over time? If so, how would public review be undertaken?

II-14 It would seem that slight increases in the sediment index could result in at least some reduction of fish habitat capability overall, and most certainly could reduce capability of selected streams.

II-19 The Plan states that there has been a Peninsula-wide decline in Roosevelt elk. The DEIS also notes that aerial photo analysis of current habitat shows very little thermal cover outside of the Forest boundary. This points to the need to retain adequate big game cover within the ONF if further decline is to be precluded.

II-25 How will information needs be prioritized, since funding constraints may very well be anticipated?

IV-15 While it is true that the projected sediment indices are below the current index, they are still significantly above the natural level. This point should be clarified in the Plan.

IV-35 While standards are equated to guidelines here, the DEIS (p. GL-10) makes a distinction between the two, Clarification on this point would be helpful.

IV-39 Item E.6. should be clarified to reflect what is "appropriate." For example, areas where wildlife snags are to be left or where dead and down wood are to remain in the riparian zone are clearly inappropriate.

IV-39 Item F.2. states that no more than 20% of an area should be compacted, but the DEIS (p. III-25) states that large winter peak flows can be increased when soil compaction occupies more than 10 to 12 percent of a total watershed. How do these two statements relate?

IV-63 Taking snags or dead and down wood in riparian zones should not be permitted. (Item E.3.)

IV-66 Item F.2.--Are the wilderness areas on the ONF in Class II or Class I airsheds?

IV-66 Item F.1.--We believe "should" ought to be replaced with "shall."

IV-69 Management Area C.1.--Are these prescriptions congruent with Forest Service Plans for Spotted Owl Habitat Area management as presented in its recent EIS on this subject? If not, how do they differ and why?

IV-69 Item C.1.--The technical justification for these particular guidelines should be cited.

IV-72 Item E.3.--Add that dead and down wood should remain in riparian areas.

A-8 "Year needed"--What does this refer to? (e.g., year funding is necessary? Year project should be completed and in place?)

C-19 Monitoring Topic--It would be good to reference the Federal Water Quality Act (formerly the Clean Water Act) and the State Water Quality Standards here.

C-19 Monitoring Questions--B. Why just in municipal watersheds? Why not Class I and II waters? Also, are water quality incidents reported promptly and accurately? Are water quality incidents promptly analyzed to reduce probability of future occurrences? As in air quality monitoring, there may be peak events or incidents that can affect Class I and II waters at critical times.

C-27 Monitoring Question--Though perhaps implied by your question, we believe you ought to add "and NEPA."

0054

U.S. Department of Transportation
Federal Aviation Administration

Northwest Mountain Region
Colorado, Idaho, Montana,
Oregon, Utah, Washington,
Wyoming

17900 Pacific Highway South
C-68966
Seattle, Washington 98168

DEC 3 1986

Forest Planner
Olympic National Forest
P.O.Box 2288
Olympia, Washington 98507

Dear Sir:

We have reviewed your draft environmental impact statement and proposed Land and Resource Management Plan and do not foresee any impact on aviation or its activities.

Thank you for the opportunity to comment on your proposal.

Sincerely,

Kenneth Thomasson

Kenneth Thomasson
Acting Policy and Planning Officer

50 Years of Air Traffic Control Excellence
— A Standard for the World —

U.S.Department of Transportation
Federal Highway Administration

Region 10
Alaska Idaho,
Oregon, Washington

706 S W Third Avenue
Portland Oregon 97204

January 5, 1986

In Reply Refer to:
HPP-010.3

Mr. Ted C. Stubblefield, Forest Supervisor
Olympic National Forest
P.O. Box 2288
Olympia, Washington 98507

Dear Mr. Stubblefield:

Federal Highway Administration, Region 10, has reviewed the draft environmental impact statement for the Olympic National Forest Land and Resource Management Plan and offers the following comments for your consideration:

Washington highway route 101, which is on the Federal-aid highway system, is within the Olympic National Forest. Quite often such highways in National Forest areas do not have defined right-of-way. To make highway improvements with FHWA funds on any of the above routes, or any Forest Highway System routes which may use any lands designated as recreation, requires a determination by FHWA that there is not other feasible and prudent alternative than the selected proposal. Without an adequately defined right-of-way, this has, in similar situations, caused considerable delay in project implementation and increased taxpayer expense.

We suggest the final EIS acknowledge that when right-of-way for Federal-aid highway routes or forest highway routes are not defined, a management effort will be made to work out such details with the government officials having operating responsibilities for that route.

Ideally, in any area designated recreation by you, the designated right-of-way should be of sufficient width to allow bridge replacements, roadway widening, or elimination of safety hazards such as bad curves.

Roadway improvements within a defined corridor designated for highway use do not require a 4(f) determination. NEPA action will apply to all highway improvements.

Sincerely,

M. Eldon Green
Regional Administrator

BY: E. J. Valach, Director
Office of Planning
& Program Development

United States Department of the Interior
BUREAU OF MINES
WESTERN FIELD OPERATIONS CENTER
EAST 360 3RD AVENUE
SPOKANE, WASHINGTON 99202

February 6, 1987

Mr. Dave Yates
Planning Staff Officer
Olympic National Forest
P.O. Box 2288
Olympia, Washington 98507

Dear Mr. Yates:

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT AND PROPOSED LAND AND RESOURCE MANAGEMENT PLAN FOR THE OLYMPIC NATIONAL FOREST, WASHINGTON

Overall, the report addresses minerals adequately. It appears that the Forest management is interested in ensuring all resources are adequately addressed as per NEPA. However, there are several items which we feel need to be clarified and restated. Of particular concern is the statement which was made under the section, "Forest-Wide Standards and Guidelines," page IV-35, in the volume entitled, "Proposed Land and Resource Management Plan." It states on page IV-41 that the Forest would "monitor the BLM listing of claims and activity along wilderness and other special area boundaries, require an operating plan, and challenge the validity of any claim where significant ground disturbance is planned that could impact the Wilderness or special area." This statement raises an important question.

1. Is the U.S. Forest Service initiating a new policy regarding mining claims not in wilderness areas?

2. If this is a new policy, it is in contradiction to another new nationa forest policy of promoting mineral exploration (attached). Even though the law does not technically allow the claimant to develop a discovery after the staking of a claim, to challenge validity before a claim has had a reasonable time to exist does not give the claimant adequate time to develop a discovery, and is therefore contrary to you policy's intent in promoting mineral development. There are certainly many regulatory methods to ensure the protection or mitigation of impacts to the various environmental values which the Forest Service has at its disposal, e.g., the operating plan.

We would like to see the following incorporated into the report:

1. The Crescent Mine production of 47,000 tons of manganese, over $1,000,000 in 1981 dollars.

2. Mineral Potential Map - should be at the same scale as alternative maps, and in color. The best examples are the Kootenai National Forest, Montana, and the Okanogan National Forest, Washington.

3. Our office reviews numerous EIS documents and has come across an excellent classification system as shown in table II-11 (attachment 1), pages II-71 and II-72 of the Beaverhead National Forest DEIS.

   We suggest a modification of this, as shown on the following page, using percentages rather than acreages. We feel it is easier to envision the comparison and comprehend the effects each alternative may have on mineral resources. The percentage numbers are based on the Beaverhead table.

   The potential classification consists of five parts, with a range from high potential to very low potential based on current knowledge. The availability classification consists of four categories, including withdrawn, specific legal protection measures, special management conditions, and standard operating conditions. Combining potential with availability and comparing acreages provides an excellent statistical representation of minerals availability.

4. Provide evaluation criteria for nonenergy minerals such as that from the Wallowa Whitman National Forest, Oregon (Table J-3, attachment 2).

5. Provide a definition of access categories such as that from the Beaverhead National Forest, Montana (attachment 3).

6. In the appendices section of the various roadless areas, for South Quinault Ridge Unroaded Area (page C-98), the topic of Availability (page C-101) should have the subheading "Minerals" under Resource Potential in order to be consistent with the other sections.

7. On page III-164, utilization of the geologic time periods should be defined (i.e., Mesozoic - 65 to 225 million years before present, etc.) next to the term or in the Glossary.

		Non-energy Mineral Potential Category (MPC)[1]					Energy Mineral Potential Category (MPC)				
		I	II	III	IV	V	I	II	III	IV	V
Total acres of potential		579,789	425,032	1,142,700	0	0	216,257	376,288	1,382,040	173,036	0
	Access Category[2]	Percent of total acres of each MPC affected					Percent of total acres of each MPC affected				
Alt. 1	A	12	16	17	0	0	0	0	16	58	0
	B	27	2	4	0	0	1	4	12	7	0
	C	8	2	4	0	0	0	0	8	1	0
	D	53	80	75	0	0	99	95	6	34	0
Alt. 2	A	0	0	16	0	0	0	0	6	58	0
	B	16	2	3	0	0	2	5	8	1	0
	C	29	45	42	0	0	54	58	34	17	0
	D	55	52	40	0	0	45	36	52	23	0

[1]See attachment 2, from DEIS, Wallowa-Whitman National Forest, Oregon.
[2]See attachment 3, from DEIS, Beaverhead National Forest, Montana.

Again, overall, the Olympic National Forest DEIS and Proposed Land and Resource Management Plan did an adequate job in considering minerals. We feel the suggestions will enhance an already good document. Thank you for allowing us the opportunity to comment on this important report.

Sincerely,

D'Arcy P. Banister, Supervisor
Minerals Involvement Section
Branch of Engineering Studies

Attachments

FOREST SERVICE
MINERALS PROGRAM POLICY

The availability of mineral and energy resources within the National Forests and Grasslands significantly affects the development, economic growth, and defense of the Nation. The mission of the Forest Service in relation to minerals management is to encourage, facilitate, and administer the orderly exploration, development, and production of mineral and energy resources on National Forest System lands to help meet the present and future needs of the Nation.

The Forest Service administers its mineral program to:

1. Encourage and facilitate the orderly exploration, development, and production of mineral and energy resources within the National Forest System in order to maintain a viable, healthy minerals industry and to promote self-sufficiency in those mineral and energy resources necessary for economic growth and the national defense.

2. Ensure that exploration, development, and production of mineral and energy resources are conducted in an environmentally sound manner and that these activities are integrated with the planning and management of other National Forest resources.

3. Ensure that lands disturbed by mineral and energy activities are reclaimed for other productive uses.

The Forest Service policy is to:

1. Process mineral applications, operating plans, leases, licenses, permits and other use authorizations efficiently and timely.

2. Ensure the integration of mineral resource programs and activities with the planning and management of renewable resources through the land and resource management planning process (FSM 1922), recognizing that mineral development can occur concurrently or sequentially with other resource uses.

3. Plan and provide for access to and occupancy of National Forest System lands for mineral resource activities, consistent with the overall management objectives and the rights granted through statutes, leases, licenses, and permits. Eliminate or prevent occupancy that is not reasonably incident to and required for mineral operations.

4. Prior to applying for the administrative withdrawal of National Forest System lands from mineral entry, ensure the consideration of (a) the national interest in strategic and critical minerals (b) the value of the mineral resource foregone (c) the value of the resource or improvement being protected (FSM 2760).

5. Ensure that valid existing rights have been established before allowing mineral or energy activities in congressionally-designated or other withdrawn areas.

6. Coordinate and cooperate with other Federal and State agencies having authority and expertise in mineral-related activities.

7. Maintain an effective professional, technical, and managerial work force that is knowledgable in mineral exploration and development.

8. Ensure the uniform application of exploration, development, and reclamation standards.

9. For all mineral exploration and development proposals that would create environmental disturbance require a reclamation plan to return the land to other productive uses consistent with land and mineral management goals.

Table II-11

Mineral Evaluation Report

Alternative A

Access Category	Energy Low	Energy Mod	Energy High	Energy Very High	Access Category	Non-Energy Low	Non-Energy Mod	Non-Energy High	Non-Energy Very High
A	101,081	230,311	0	0	A	0	193,812	66,868	70,612
B	12,765	172,068	16,648	2,395	B	0	42,167	6,927	154,782
C	972	104,542	1,858	722	C	0	50,639	10,238	47,217
D	58,218	875,119	357,782	213,140	D	0	856,082	340,999	307,178

Alternative B

Access Category	Energy Low	Energy Mod	Energy High	Energy Very High	Access Category	Non-Energy Low	Non-Energy Mod	Non-Energy High	Non-Energy Very High
A	101,081	76,532	0	0	A	0	177,613	0	0
B	2,471	116,094	19,317	3,369	B	0	35,877	10,914	94,460
C	29,666	467,929	220,241	115,770	C	0	474,729	191,967	166,910
D	39,818	721,428	136,762	97,043	D	0	455,906	221,941	317,204

Alternative C

Access Category	Energy Low	Energy Mod	Energy High	Energy Very High	Access Category	Non-Energy Low	Non-Energy Mod	Non-Energy High	Non-Energy Very High
A	128,066	481,154	329,998	165,242	A	0	704,850	267,623	131,987
B	3,835	105,873	223	110,690	B	0	27,091	7,832	75,767
C	10,889	169,777	8,569	11,263	C	0	95,162	29,873	75,463
D	30,246	625,104	37,530	38,993	D	0	315,597	119,704	296,572

Alternative D

Access Category	Energy Low	Energy Mod	Energy High	Energy Very High	Access Category	Non-Energy Low	Non-Energy Mod	Non-Energy High	Non-Energy Very High
A	127,970	402,124	201,920	125,976	A	0	564,337	193,234	100,399
B	4,072	207,232	44,843	14,872	B	0	83,286	49,076	138,657
C	22,309	302,479	50,680	24,115	C	0	190,031	68,515	141,037
D	18,685	470,073	78,877	51,294	D	0	305,026	114,207	199,696

Table II - 11 cont.

Alternative F

Access Category	Energy Low	Energy Mod	Energy High	Energy Very High	Access Category	Non-Energy Low	Non-Energy Mod	Non-Energy High	Non-Energy Very High
A	112,520	326,993	40,857	125,976	A	0	433,889	98,997	73,460
B	5,277	112,218	29,458	12,822	B	0	46,025	23,517	90,233
C	38,575	560,449	151,230	36,396	C	0	370,867	180,352	235,431
D	16,664	405,538	123,090	49,458	D	0	291,919	122,166	180,665

Alternative G

Access Category	Energy Low	Energy Mod	Energy High	Energy Very High	Access Category	Non-Energy Low	Non-Energy Mod	Non-Energy High	Non-Energy Very High
A	101,081	85,511	40,857	0	A	0	225,309	2,140	0
B	3,004	139,404	0	0	B	0	18,517	12,730	111,161
C	33,572	459,851	188,380	97,431	C	0	446,052	178,442	154,740
D	35,379	697,507	147,083	118,461	D	0	454,037	231,720	312,673

Alternative H

Access Category	Energy Low	Energy Mod	Energy High	Energy Very High	Access Category	Non-Energy Low	Non-Energy Mod	Non-Energy High	Non-Energy Very High
A	101,081	152,261	12,907	0	A	0	126,769	68,868	70,612
B	95	185,669	13,068	0	B	0	42,368	63,272	93,192
C	27,092	466,101	226,368	132,792	C	0	503,529	197,358	151,466
D	44,768	566,754	135,220	83,345	D	0	397,530	154,971	277,586

Alternative I

Access Category	Energy Low	Energy Mod	Energy High	Energy Very High	Access Category	Non-Energy Low	Non-Energy Mod	Non-Energy High	Non-Energy Very High
A	128,405	809,421	330,757	168,615	A	0	848,419	329,759	259,020
B	1,750	66,933	636	943	B	0	6,136	1,462	62,664
C	9,885	116,556	3,679	9,090	C	0	80,952	11,709	46,549
D	32,996	388,998	41,248	37,609	D	0	207,193	82,102	211,556

Alternative W

Access Category	Energy Low	Energy Mod	Energy High	Energy Very High	Access Category	Non-Energy Low	Non-Energy Mod	Non-Energy High	Non-Energy Very High
A	118,629	355,544	32,039	0	A	0	304,971	106,567	94,674
B	1,561	91,450	1,966	3,225	B	0	21,094	8,748	68,360
C	38,655	506,842	170,956	119,536	C	0	437,432	176,320	222,237
D	14,191	428,072	171,359	93,496	D	0	379,203	133,397	194,518

Category A — Withdrawn or proposed for withdrawal from mineral entry.

1. Wilderness areas.
2. Wild and scenic rivers
3. Sites for facilities
4. Historic and cultural sites
5. Developed recreation sites.

Category B — Statutes or executive orders require specific protection or mitigation measures.

1. Proposed wilderness areas.
2. Congressionally mandated wilderness study areas.
3. RARE II Further Planning areas.
4. T & E Species.
5. Roadless (Type I) dispersed recreation areas.
6. Culturally significant areas.

Category C - Special conditions exist on lands which require special lease stipulations or plan of operation conditions.

1. Big game winter range.
2. Elk calving area.
3. Riparian area.

Category D — Standard lease stipulations and plan of operation conditions apply.

1. Timber production areas.
2. Existing mineral processing areas.

Attachment 3

EVALUATION CRITERIA FOR NONENERGY MINERALS

Table F-3 *

CATEGORY	I	II	III	IV	V
1. Potential for Substantial Development/ Production Within Ten Years	High	Moderately high	Moderate	Low	Very low based on current knowledge.
2. Current Activity Level	Production or development to progress or pending investment decision.	Comprehensive exploration, development likely. May include some small scale production.	Exploration programs which may include sampling, geochemical and geophysical surveys, geologic mapping, reconnaissance drilling. May include some hobby-site producers.	Sporadic exploration with occasional isolated intense programs by companies or prospectors.	Occasional interest by prospectors.
3. Land Position	Long-term maintenance of claims by established mineral companies/ individuals.	Long-term.	Intermittent by established mineral companies/individuals, long-term by prospectors.	Short-term by established companies/ individuals. Intermittent by prospectors.	Sporadic
4. Geology	Known and favorable for development of significant ore deposits.	Known and considered favorable from comparison with other producing districts.	Not well known, but appears to have favorable characteristics.	Not well known, some favorable characteristics.	Either unknown or unfavorable.
5. Reserve/Resource	Ore reserves established. Will sustain significant production.	Presence of, or strong potential for, substantial resources. May include small reserves.	Potential for large resource is unknown. Small resources, possibly some very small reserves.	Some mineral occurrences, but not enough information to establish resources.	Unknown.

* Includes all areas not in other categories.

0966

United States Department of Agriculture

Soil Conservation Service

W. 920 Riverside - Room 360
Spokane, Washington 99201-1080

February 23, 1987

Mr. Ted Stubblefield, Forest Supervisor
Olympia National Forest
801 South Capitol Way
Federal Building
Olympia, Washington 98507

Dear Mr. Stubblefield:

We have reviewed the Olympic National Forest Proposed Land and Resource Management Plan draft environmental impact statement. The soil, water, animal, and plant resources are more than adequately addressed in the draft.

The alternatives described recognize potential problems that we feel are involved with timber management and road building activities. Your alternatives have identified the critical timing "window" for controlling forestland erosion processes with vegetative rehabilitation practices. We also feel that soils relative to compaction and mass movement are sensitive, and forestry activities should be minimized when dealing with those sensitive areas.

Thank you for the opportunity to review your draft.

Sincerely,

Lynn Brown

LYNN A. BROWN
State Conservationist

The Soil Conservation Service
is an agency of the
United States Department of Agriculture

☆ U.S. Government Printing Office: 1983—420-934/1578

Department of Energy
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208 - 3621

112

FEB 26 1987

In reply refer to: SJ

Forest Supervisor
Olympic National Forest
P.O. Box 2288
Olympia, Washington 98507

Dear Sir or Madame:

Bonneville Power Administration (BPA) has reviewed the Olympic National Forest Draft Environmental Impact Statement (EIS) and Resource Management Plan, and we offer the following comments.

1. Of particular importance to BPA is the designation of both existing and planned transportation and utility corridors. Although the Resource Management Plan satisfactorily addresses energy transmission corridors, it is not clear whether the few existing transmission lines that cross the Forest have been "officially designated." Designation of corridors should help avoid a proliferation of rights-of-way and should facilitate the timely and orderly development of future utility projects. Therefore, we request that you consider designation of corridors in the EIS and Plan.

   If additional transmission corridors may be required in order to integrate proposed hydroelectric sites on the Forest, these planned corridors should also be identified and designated.

2. It is difficult to identify in the Plan and EIS which management areas are considered "avoidance" or "exclusion" areas for energy transmission corridors. It would be desirable to have this information summarized in one section of the documents.

3. Many of the Resource Management Plans and EIS's we review seem to neglect the issue of renewable energy resources. We commend the Olympic National Forest for thoroughly addressing this issue.

We appreciate having the opportunity to review the draft EIS and Management Plan. Please let me know if you need further information.

Sincerely,

Anthony R. Morrell

Anthony R. Morrell
Environmental Manager

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
ENVIRONMENTAL & TECHNICAL SERVICES DIVISION
847 NE 19th AVENUE SUITE 350
PORTLAND, OREGON 97232-2279
503 230-5400

F/NWR5:185

MAR 6 1987

Mr. Ted C. Stubblefield
Forest Supervisor
Olympic National Forest
P.O. Box 2288
Olympia, Washington 98507

Re: Draft Environmental Impact Statement (DEIS) for the Olympic National Forest Proposed Land and Resource Management Plan

Dear Mr. Stubblefield:

The National Marine Fisheries Service (NMFS) has reviewed the Draft Environmental Impact Statement (DEIS) and Proposed Land and Resource Management Plan (PLAN).

In order to provide as timely a response to your request for comments as possible, we are submitting the enclosed comments to you directly, in parallel with their transmittal to the Department of Commerce for incorporation in the Departmental response. These comments represent the views of the National Marine Fisheries Service. The formal, consolidated views of the Department should reach you shortly.

If you have questions concerning our draft comments, please contact Al Groves (206) 527-6172. Your continuing coordination efforts are appreciated.

Sincerely,

Dale R. Evans
Division Chief

Enclosure

DRAFT

F/NWR5:185

Mr. Ted C. Stubblefield
Forest Supervisor
Olympic National Forest
P.O. Box 2288
Olympia, Washington 98507

Re: Draft Environmental Impact Statement (DEIS) for the Olympic National Forest Proposed Land and Resource Management Plan

Dear Mr. Stubblefield:

The National Marine Fisheries Service (NMFS) has reviewed the Draft Environmental Impact Statement (DEIS) and Proposed Land and Resourc Management Plan (PLAN). Our review has focused on aspects of the DEIS and PLAN that address or apply to anadromous fish.

General Comments

We recognize the need to balance the multiple aspects of Forest management and can appreciate the complexity of this task in developing the PLAN and DEIS, but we have concerns over the coverag of anadromous fish issues in these documents.

Although needs of anadromous fish are stated as commitments of Forest management, the PLAN and DEIS lack sufficient information tc enable us to evaluate or comment on whether these needs will be met by the PLAN. Nor do the presented conclusions in the DEIS adequately describe the effects of the proposed management actions on anadromous fish.

Specific problems are: (1) The material on anadromous fish is diffused through the documents with little identification of the sources or methodologies used for its development. (2) All salmon and steelhead are evidently lumped together and labeled only as anadromous fish, although Forest practices can be expected to have different effects on different species because their numbers, life histories, and habitat requirements are all different. These effects should be considered in the FEIS. (3) Economic values for commercial and recreational fisheries for anadromous fish lack recognized economic methodology. (4) The DEIS and PLAN do not present Forest specific standards, guidelines, and objectives for managing riparian habitat areas.

Specific Comments on the PLAN

Page II-15.

Total fish habitat in the Forest is stated as 5,696 surface acres. The methodology for derivation of this figure should be given and whether this habitat is occupied by anadromous fish.

Page II-15, Table II-6; Page II-16, Table II-7.

The projected fish outputs do not show anadromous fish recreational output, but only commercial. Also, a source for the information should be referenced.

Page III-7.

The numbers for estimated fish production need support by reference as to the method of derivation.

Page IV-11, Table IV-1.

The numbers shown for fish production should be referenced to indicate origin.

Page IV-23.

The fifth paragraph states that habitat will be managed to promote fish productivity at the highest level that is cost efficient. How will the cost efficiency be measured? Will this be in terms of fish produced or timber production foregone? This should be explained.

Page IV-24.

In the first paragraph, what are the "acceptable limits" for sediment output from Forest activities? In the absence of Forest specific standards and objectives for riparian management, what is the basis for the conclusion that the PLAN will provide a level of fish habitat quality "somewhat" above the existing?

Page IV-24, Table IV-13.

As stated at the top of Page A-8 in the PLAN, the majority of specific fish habitat improvement projects have not been identified. How then can projected fishery outputs be tabulated as done in this table?

Page IV-80.

The Standards and Guidelines for Riparian Area Management should be strengthened by changing "should" to "shall" in guidelines 2 through 5.

SPECIFIC COMMENTS ON THE DEIS

Page II-6.

In the third paragraph, "no harvest" and "extended rotation" acreages are given for riparian zone and fish habitat management. As stated, these were derived by use of the computer model FORPLAN. According to Appendix B, these are not actual "set aside" acreages but are only mathematically specified, evidently as quotas. It appears unsupportable to state that this process "established" acreage allocations, when actually they are only computer outputs and not specific management allocations.

Pages II-72, II-73, Table II-1.

A reference or method should be cited to explain how the figures fc fish production were derived for each management alternative.

Page II-86, Table II-3a.

Again, references, methods, and a rationale should be given to explain the figures that are presented for numbers of fish, commercial harvest in "thousands of pounds of fish," additional fis from habitat improvement (also expressed in "thousands of pounds of fish"), for each of the alternatives. An added problem for the reviewer, however, is that all species of anadromous fish are lumpe together, as we have already noted.

Page III-19, Fifth Paragraph.

We question the applicability to the Olympic Forest of the USDA Forest Service Guidelines for Predicting Sediment Yields, Northern and Intermountain Region, 1980. The Olympic Forest has much greate amounts of rainfall than the Northern and Intermountain areas as well as different soil types. Modification of the method by Stephens, 1984, is mentioned, but should be explained, especially whether the modification validates the methodology for the Olympic Forest.

Page III-77, Second Paragraph, Line 10.

We suggest deleting the word "somewhat" because many coastal communities and Native American Tribes on the Peninsula rely heavil on recreational and commercial fisheries revenues.

Page III-78, III-79

Please explain how river miles, and lake and reservoir surface acre are converted to surface acres of fishery habitat.

Page III-79, Table III-14.

Please explain how the habitat acres were derived for the listed drainage systems.

Page III-80, First Paragraph.

Please explain how Habitat Capability Indices and Habitat Quality Indices (H.Q.I.) are determined. Also explain how the economic values associated with the production outputs were determined.

Page III-80, Table III-15.

Please cite the references or sources for the figures shown in this table.

Page III-81, Table III-16.

Please explain the methodology or rationale for estimating fishery output from enhancement of habitat capabilities.

Page IV-18, Fourth Paragraph.

The sediment model (Stephens 1980) is not actually described in Chapter III as stated. In fact it does not appear to be described in any of the documents including the references.

Page IV-19, Figure IV-2.

There should be an explanation of how the Forest-wide Sediment Indices were determined for the alternatives, how the differences were estimated, and how reliable the estimates are in terms of confidence limits.

Page IV-20, Last Paragraph and Figure IV-3.

Please explain how Cumulative Sediment Yield Indices are derived and estimate their degree of accuracy or error.

Page IV-37, Second Paragraph.

We suggest adding a fourth variable that will influence fish production. "(4) Peaked streamflows from increased run-offs following removal of vegetation." Such flushing events can scour stream channels, destroy redds, displace fish, and cause loss of spawning and rearing habitat.

Page IV-37, Fifth Paragraph.

Please delete "most" from the first sentence.

Page IV-38, Second Paragraph.

Sources of the numbers for adult anadromous fish production should be cited, and the "proposed enhancement package" referenced.

Page IV-38, Third Paragraph.

Clarify whether the $209,000 per year for enhancement is available or would require additional appropriation. Also explain how the increase in fish is derived, the rationale for expressing this in commercial pounds, and why recreational values are not included.

Page IV-39, Table IV-15.

Please explain how the numbers were derived for the different alternatives per year per decade.

Page IV-40, Sixth Paragraph.

The approach for cumulative effects analysis is not clearly apparer at this point in the document, or is it clearly outlined previously Figure IV-13 shows combined habitat capability, not cumulative effects as stated.

Comments on the Appendices

Page B-58, Third Paragraph.

Please explain how the "dollar value of output reduction" of (fish) was derived.

Page B-72, B-73.

Please explain the rationale for using "prices at the dock" for placing a value on the commercial fish harvest and why the high economic value of the recreational harvest is ignored.

Page B-74, Table B-9.

Explain why and how the value of $1.05 per pound is used for anadromous fish harvest. Also does "harvest" include commercial, recreational or both?

Page B-76, Third Paragraph.

We disagree with the assertion that the importance of the fishery output of the Forest is economically negligible. This conclusion

unsupported by sufficient data or information in any of the documents.

Page B-107.

This description of Riparian Zone Management indicates that streamside buffer zones could be harvested anywhere between 5 and 50 percent. This could significantly reduce the effectiveness of the buffer. Please explain the guidelines or standards that would determine the levels of harvest and still provide effective buffer zones.

We thank you for the opportunity to provide these comments.

Sincerely,

Dale R. Evans
Division Chief

cc: USFWS, Olympia
WDF
WDG
CRITFC

United States Department of the Interior

OFFICE OF ENVIRONMENTAL PROJECT REVIEW
500 N.E. MULTNOMAH STREET, SUITE 1692
PORTLAND, OREGON 97232

2949

TAKE PRIDE IN AMERICA

April 15, 1987

ER 86/1428

Mr. Ted Stubblefield
Forest Supervisor
Olympic National Forest
801 S. Capitol Way
Federal Building
Olympia, Washington 98507

Dear Mr. Stubblefield:

In a letter to you dated March 13, 1987, the Department of the Interior provided review comments concerning the Draft Environmental Impact Statement (DEIS) and Proposec Land and Resource Management Plan (PLRMP) for the Olympic National Forest, Washington. That letter inadvertently omitted the following comment concerning wildlife which we believe to be important to the DEIS and Plan.

> DEIS, Page III-67, Paragraph 5. The Forest is required, through the National Forest Management Act, to maintain species diversity. The DEIS considers eight species, or groups of species, to indicate impacts to all others (the "indicator species" concept). However, none of the species chosen represent top carnivores; i.e., this group is not considered at all in comparison of the alternatives. From the Park's standpoint, this is a major omission, since top carnivores, such as bears and mountain lions, generally have large home range requirements and certainly use habitat on both sides of the Park/Forest boundary. Consideration by the Forest of prey species (through the "indicator species" concept) is not adequate to address all habitat requirements of top carnivores; disturbance factors, etc., also must be addressed.

Thank you for your attention to this matter. I apologize for any inconvience it may have caused.

Sincerely,

Charles S. Polityka
Regional Environmental Officer

United States Department of the Interior

OFFICE OF ENVIRONMENTAL PROJECT REVIEW
500 N.E. MULTNOMAH STREET, SUITE 1692
PORTLAND, OREGON 97232

TAKE PRIDE IN AMERICA

March 13, 1987

ER 86/1428

Ted Stubblefield
Forest Supervisor
Olympic National Forest
801 S. Capitol Way
Federal Building
Olympia, Washington 98507

Dear Mr. Stubblefield:

The Department of Interior has reviewed the Draft Environmental Impact Statement (DEIS) and Proposed Land and Resource Management Plan (PLRMP) for the Olympic National Forest, Washington. The following comments are provided for use and consideration when preparing the final documents.

GENERAL COMMENTS

Fish and Wildlife Resources

A systematic and conclusive assessment of Forest Plan alternatives was made difficult for the following reasons:

1. Although there is a great deal of useful material in the plan documents there is a lack of detailed biological information (e.g. categorization of old-growth by various age brackets and associated parameters; display of snag yields with respect to wildlife requirements; and effects of roads on deer and elk with respect to projected numbers) and forest activity information (e.g. road construction and reconstruction).

2. The fish habitat capability submodel (based on capability of habitat to produce fish) is overly simplistic in that it does not include environmental factors that are essential components of fish habitat, e.g. it did not include instream large woody debris and its direct effect on the physical structure of the stream.

3. There is a lack of a comprehensive range of alternatives, i.e. an alternative that maximized fish and wildlife resources was not included. A thorough discussion of such an alternative would be very useful for comparison purposes and to present the full range of benefits for a Forest that is managed under the concept of multiple use.

4. The Fish and Wildlife Service (FWS) does not believe that the use of current trends on the Forest is an acceptable substitute for a no-action alternative.

Alternative "I" appears to have the greatest potential of all the presented alternatives for producing the best mix (number of species and number of individuals per species) of sensitive animal/plant species, big game and small game, non-game animals, and anadromous and resident fish. However, even alternative "I" is not the best designed fish and wildlife plan. It does not include measures that would significantly increase deer and elk populations over those projected for the other alternatives.

The cumulative effects analysis on fish production, as presented in the DEIS, appears to be based on incomplete information. First, the fish habitat capability model was overly simplistic, as was explained earlier. Second, the DEIS points out that off-Forest Service land uses were assumed to continue at current levels of use. This assumption may not be correct because off-Forest lands are owned and managed by a number of different entities and timber harvest is subject to market forces that very from year to year. Third, the DEIS also points out that there was much uncertainty surrounding fish production estimates for off-Forest areas. Thus projected fish numbers, under the cumulative effects analysis, may be widely off-target of actual field conditions. Because of this, the Forest Service (FS) should very closely monitor the Plan's effects on fish production. A discussion should be included in the Plan documents on how timber harvest plans will be modified when the cumulative impacts of logging and other activities threaten fish and wildlife resources and their habitat.

The DEIS discusses landownership planning pertaining to acquisition or disposal of certain types of FS lands. This discussion should include FS policy on securing all mineral rights to any land that is acquired by purchase in fee title or trade. Federal ownership of mineral rights will ensure that the FS has a full range of options for making management decisions that will protect fish and wildlife habitat on any acquired lands.

The Plan documents indicate that the FS plans to monitor the use of the chosen alternative to see if it is working as expected. Because the results of such an analysis are so important to management of fish and wildlife resources and their habitat we recommend that the monitoring effort be intensive and use the best scientific methods available. We suggest that the FS consider the use of two methodologies developed by the FWS: Habitat Evaluation Procedures (HEP) and Instream Flow Incremental Methodology (IFIM). HEP is a method which can be used to document the quality and quantity of available habitat for selected fish and wildlife species. HEP provides information for two general types of fish and wildlife habitat comparisons: (1) the relative value of different areas at the same point in time; and (2) the relative value of the same area at future points in time. By combining the two types of comparisons, the impact of proposed or anticipated land and water use changes on wildlife and fish habitat can be quantified. IFIM can be used to assess aquatic habitat as a function of flow and other environmental parameters. It is a collection of field techniques, computer models and analytical procedures designed to predict changes in fish habitat due to increments of flow change. It can also be used to evaluate such diverse impacts as changes in channel structure or alterations from a pollution source.

In general it can be used to translate changes in land use to changes in streanm environment. The use of HEP and IFIM, as well as other carefully designed studies, to monitor how well the chosen Forest plan works, will substantially reduce the uncertainty surrounding the predictive capabilities of the plan for protecting fish and wildlife. Use of such monitoring methods would also assist the FS in taking timely corrective actions to activities that would impede meeting fish and wildlife goals on the Forest.

Implications of the Migratory Bird Treaty Act for projects on the Forest should also be considered. There is insufficient recognition in the documents that migratory birds use the Forest despite the fact that some are important game species, e.g. bandtailed pigeons. Standards and Guidelines for the Plan give no indication that the Forest will be managed to specifically conserve migratory birds and their habitat, e.g. no specific consideration is given to the requirements and preferences of cavity-nesting waterfowl. A thorough discussion should be included in the subject documents on how the FS plans to prevent the destruction, and enhance the habitat of birds, nests and eggs protected under the Migratory Bird Treaty Act.

The FWS considers the northern spotted owl to be a "sensitive species"; i.e. one whose status is vulnerable as a species and needs action to prevent further declines. This is not a legal category, but is an administrative step toward meeting the FWS's policy of preventing additional species from becoming threatened or endangered as defined in the Endangered Species Act of 1973, as amended. The northern spotted owl, like most bird species in the United States, is also protected under the Migratory Bird Treaty Act (16 U.S.C. 708-711) and is subject to regulations under subchapter B of Title 50 CFR.

The northern spotted owl is considered vulnerable for the following reasons: 1) remaining suitable habitat in old-growth forests is being lost to logging and that which remains is patchy, creating fragmented habitat; 2) the barred owl is expanding its range into forests with fragmented habitat, bringing it into serious competition with the northern spotted owl for food, nests sites and roost sites; 3) increased patchiness of forest habitat makes the northern spotted owl very vulnerable to predation from the great horned owl which is adapting to the new forest conditions; 4) continued decline of northern spotted owl habitat will produce low spotted owl populations with greater risks from demographic, catastrophic and genetic causes. All of these factors apply to Olympic National Forest. The northern spotted owl, on the Olympic peninsula, is considered genetically isolated (Gutierrez, R.J. and A.B. Carey, tech. eds. 1985. Ecology and Management of the Spotted Owl in the Pacific NW. U.S.D.A., Forest Service, Gen. Tech. Report, no. PNW-185. Portland, Or.). The genetic isolation of the spotted owl, on the Forest, can be detrimental to the population as a whole. One adverse characteristic of a genetically isolated animal population is that the animals tend to lose genetic variability and are therefore less fit to meet environmental change.

When a wildlife species has declined to vulnerable population levels, as has the northern spotted owl, the prudent management strategy is to proceed conservatively, preserving as many options as possible. The preferred alternative (C-preferred) does not appear to meet these management criteria

since, under alternative C, the spotted owl has been rated as having a "moderate chance for survival" on the Forest (see page IV-30, EIS). The FWS can work with the FS to develop a final plan that will give a very high chance for survival of the spotted owl on the Forest.

Mitigation of existing and potential future adverse impacts, from Forest activities, on fish and wildlife resources and their habitat needs to be fully considered. It is the policy of the FWS to actively seek to mitigate losses of fish and wildlife habitat as a result of development projects. If we are requested to review specific projects/activities (e.g. small hydro projects, re-routing of stream channels, timber sales) that result from the Forest Plan the FWS Mitigation Policy (Federal Register, Vol. 46, No. 15, January 23, 1981; amended February 4, 1981) will be applied to those same projects/activities. The overall goal of the policy is twofold: 1) conserve, protect and enhance fish and wildlife habitat; and 2) facilitate balanced development of the Nation's natural resources.

Olympic National Park

We recommend that interagency planning, particularly with the Olympic National Park (Park), receive additional consideration in the Olympic National Forest (Forest) planning process. Further, we suggest that the numerous specific opportunities for joint planning and cooperative management be included in the EIS and Plan.

The significance of the Park should be given more comprehensive discussion in a single place, in addition to the specific references scattered throughout the documents. We encourage the inclusion of a discussion on the national and international significance of the Park as an International Biosphere Reserve, as a Class I Air Quality Area, as a World Heritage Site and as a park with 95 percent of its acreage proposed for Wilderness designation.

It is pointed out in these documents that the Forest is impacted by the Park, and the resource relationships between the Park and Forest are described from the point of view of the Forest. The National Park Service (NPS) acknowledges this relationship but views it from the "inside." The Park, being almost an island within the Forest, is impacted by many management decisions made by the Forest, especially those relating to timber harvest, road building, fire management and wilderness/backcountry management. Activities on the Forest also have the potential to impact resources of the Park, especially those resources which may move between areas, i.e., air, water (rivers), fish and wildlife.

For these reasons, we suggest that the final environmental impact statement include a section which describes the impacts upon the Park's resources from the alternative selected for implementation. These impacts are to some extent already present in the documents; however, the organization of the material makes a comprehensive review and analysis of impacts upon the Park's resources difficult.

Logging Practices Recent boundary changes between Forest and Park have served to decrease the impact of Forest logging practices on the Park. However, there are areas where Forest timber harvest activities do impact the Park.

Even where the Park/Forest boundary is along a ridgeline, clearcuts on the Forest can be a visual intrusion when seen from within the Park. Thinning of the stand along the ridge is frequently conspicuous and it becomes more so as a result of burning, windthrow of remaining trees, etc. Clearcuts elsewhere, such as at Lake Crescent, Quinault and Staircase, are quite conspicuous from these heavily visited Park areas. NPS recommends that wherever possible, and particularly in the three areas listed above, clearcut areas not extend to the Park boundary. NPS also recommends that in the three areas listed, existing clearcuts be withdrawn from future clearcut consideration and that selective cutting be practiced where cutting has not yet taken place.

Aside from the visual impacts, logging practices have other direct effects on park resources. Such elements as windthrow and sun scald of park trees next to clearcuts could be mitigated by having selective cutting instead of clearcutting adjacent to the boundary. Both operational and prescribed fires (slash burns) have escaped into Park lands in the past; a protective buffer of uncut or selectively cut trees would help protect the Park.

Sediment loading of park streams resulting from Forest logging is a potential problem, primarily at Four Stream in the Skokomish drainage and at Canoe Creek in the Quinault drainage. We recommend permanent or temporary closures of some roads in these two areas to help mitigate this problem.

Not enough information is presented (DEIS, Page III-46) to assess the impacts on the Park of using "genetically superior Douglas-fir seedlings" for reforestation of harvested Forest lands. The recognized value of the Park as a genetic reservoir (Biosphere Reserve, World Heritage Site) could be diminished by such genetic manipulations outside the Park boundary. A more complete discussion of this topic would be useful.

A final problem with timber harvest on the Park boundary has been mechanical injury to Park trees during harvest operations, particularly during yarding. Illegal trespass with tracked vehicles, unauthorized road construction, illegal utilization of Park trees for use as trailholds for cable systems (resulting in notched butts, cable slap, snapped tops, loosened roots) have been problems in the past. In recent years, the Forest Service has been conscientious in preventing such problems, but, once again, a protective "no clearcut" buffer next to the Park boundary would afford more complete protection for Park trees.

Air Quality The primary concern of the NPS regarding air quality involves the adverse impacts of smoke on visibility in the Park, a Class I Area, and on views of features outside the Park. The National Visibility Goal, as set forth in the Clean Air Act Amendments of 1977, is to prevent future, and to improve existing, visibility impairment from human activities. Therefore, we encourage the FS to take all actions possible to reduce the amount of burning and, when burning is a necessity, to employ control technology that will decrease the amount of particulate material released into the air.

Recreation While the Park is frequently cited as being the "magnet", the recreational core for tourism, surrounding FS lands are increasingly important for their role in providing primitive and semi-primitive recreation outside of Wilderness and Park lands.

Timber and recreation are listed as the first and second most economicall important forest activities/outputs. As stated in the DEIS, there is a tren toward increasing importance of recreation/tourism. In this context, the NP is concerned about the Plan's emphasis on continued timber production at th expense of recreation. It is inconsistent that the proposed plan acknowledge that while overall opportunity for dispersed roaded recreation will increase "...it is anticipated that the quality of dispersed roaded recreation wil decrease. Declines in scenic quality and overall "naturalness" of the fores environment will be the principal causes of the total quality reduction."

Hydroelectric Power

We suggest that a program element which addresses hydroelectric powe development, including small hydro projects, be added to the section title Forest-wide Standards and Guidelines. Standards and guidelines should addres the potential impacts of proposed hydroelectric projects, including th cumulative impacts of access roads and transmission lines. Hydroelectri power development may also include the development of public recreatic facilities. Any such development should be consistent with the Fores management objective for the area of the project.

Wild and Scenic Rivers

The Olympic National Forest staff is commended for their clear and concis process of evaluating rivers for designation into the National Wild and Sceni Rivers System.

However, we recommend several changes in the substantive findings. The firs addresses those rivers found ineligible due to the absence of a "outstandingly remarkable" value. In a recent evaluation of river recreatic in Washington State, co-authored by the NPS and the Washington Parks an Recreation Commission as part of the Pacific Northwest Rivers Study, segment of the Sitkum, East Fork Humptulips, Wynoochee and South Fork Skokomish wer given "outstanding" ratings for a variety of recreational uses. In evaluatin other resource information gathered in the study, all of these rivers had a least one "outstanding" rating in another resource category. We recommend re-evaluation of the eligibility of these rivers in light of the substantia countervailing findings of the Pacific Northwest Rivers Study.

The second recommendation concerns those rivers with limited corridor are within Olympic National Forest. While we concur with the deferral of th suitability analysis on these rivers, we recommend that a higher level o protection be afforded segments within your jurisdiction. The Forest segmen of the Hoh deserves management to "Recreational" standards; the Bogachiel an Quinault segments should be managed to "Scenic" standards.

Another recommendation refers to the most critical part of the analysis, th determination of suitability for the six rivers given full consideration fc designation as components of the Wild and Scenic River System. The consequence of finding a river unsuitable for designation are substantial. River value will inevitably be foregone and foreclosed in managing such rivers "for a ful range of resource values." Such consequences argue strongly for a mor thorough evaluation of suitability than that employed by the Forest.

Potential hydropower projects and possible controversy over designation seem inadequate justifications for discounting the suitability of the Dosewallips and Hamma Hamma, when their resource qualities appear deserving of protection. We are similarly concerned that potential landowner controversy on downstream segments of the Soleduck and the mainstream and West Fork of the Humptulips has forestalled consideration of substantial upstream segments within Olympic National Forest that seem equally appropriate as Wild and Scenic River candidates. We recommend that the entire Dosewallips, the entire Hamma Hamma, and the Olympic National Forest segments of the Soleduck and the Humptulips be re-evaluated for potential addition to the list of rivers recommended for designation.

Cultural Resources

The DEIS and the Plan provide a good summary of the Forest's cultural resource program and the current constraints. A serious drawback, however, is the Forest's apparent lack of a developed program for comprehensive cultural resource planning. Moreover, the DEIS and Plan provide virtually no information on how the Forest plans to manage the cultural resources already discovered in connection with its projects. Because the Regional Guide directs planning for all resources, it would seem to be an appropriate place to incorporate comprehensive cultural resource planning goals and standards.

The DEIS and Plan state that a program of systematic inventory of the Forest should be carried out well in advance of projects and in accordance with a sound research strategy and survey design. As these documents point out, this approach is dependent upon a sustained investment of money, time, and expertise. However, at the same time, they should point out that the legislatively mandated process for systematic cultural resource inventory and planning will not be truncated by considerations of relative economic importance or present net value.

The DEIS and Plan indicate that the Forest undertakes evaluation and mitigation only after it is clear that a site or structure will be impacted by a Forest activity. An increase of unevaluated cultural resources will likely be costly for the Forest in the long run because it results in (a) arbitrary management decisions about preservation or protection and (b) stagnant research contexts that do little to enhance professional or managerial perspectives on the significance of discovered resources.

The treatment of cultural resources in the DEIS and Plan is uneven and not based on consideration of how various areas of the Forest will be impacted in the next 10 years. The Plan provides a general summary of known and potential cultural resources in Unroaded and Wilderness areas, where the impacts are the least. However, cultural resources are not discussed for remaining Forest Management Areas, where the impacts are the greatest. For these areas the Plan should summarize not only the known and potential resources, but also the Forest's plans and priorities with regard to cultural resource investigations.

There are a few types of cultural resources affected by the Plan which might involve joint NPS-USFS concerns. Among these are historic expedition trails that cross both Forest and Park lands, historic railroad routes and logging

roads, and perhaps widely scattered but related archeological sites c prehistoric/historic Native American traditional areas and trails tha incorporate both Forest and Park lands.

The DEIS mentions current NPS-USFS cooperative efforts to develop a share data base and survey design for identifying and documenting prehistori archeological sites. Other opportunities for cooperative planning regardin cultural resources could include the signing and interpretation of 1890 O'Nei Expedition trails in the Staircase area, and of the Press Expedition route ou of the Olympics in the Quinault Valley Lake Quinault area, and any activitie affecting the Spruce Railroad grade which leaves the Park west of Fairholm an enters Forest Service land, making it a shared cultural resource.

Mineral Resources

Generally, we find the acknowledgement and discussion of minerals as a important resource requiring management consistent with the mineral terrains resource potential, and historic uses within the Forest, as well as with th general policy to encourage exploration and development throughout the DEIS to be well described. It would be helpful if the EIS Chapter III contained more complete historical account of past and present mineral activity withi Forest in order to provide the reviewer/manager with more complete basis fc anticipating future interest in minerals development.

It should also be noted that mining claimants have the right of reasonabl access to open Federal lands and the right to carry out mineral prospectinc location and mining provided such actions do not cause unnecessary or undu degradation of non-mineral resources, while stipulations can be placed on an leasing actions to mitigate acces and site development impacts. This shoul be acknowleged in the PLRMP, Summary of the Management Situation, Chapter II as it is in Chapter IV. Appreciative of this control, it should be possibl to view mineral development as less of an undesirable impact and to possibl reduce the amount of land under high to moderate restrictions on minera activity.

The utility of the PLRMP would be materially enhanced if either Chapter I c IV included a planning map annotated with land availability status for minera entry, leasing or restrictions to such as tabulated on page IV-34. The valu of such a map to management would be further improved if it also include known mineral terrains, mining districts, classification boundaries, etc Such information would aid decisions concerning resource allocations in ligh of how minerals might be impacted.

We would also like to note the desirability of continued cooperative effor between the Bureau of Land Management and the FS to compile minera inforamtion for western Washington preferably in GIS format.

SUMMARY

We recommend that the Forest Service develop a fuller range of alternatives, including an alternative that maximizes fish and wildlife production in terms of diversity and numbers so that the multiple use concept of the Forest can be adequately analyzed. Standards and Guidelines should be improved by adding specific criteria to protect fish and wildlife habitat. The FS should carefully weigh all decisions that could cause an irreversible loss of fish and wildlife habitat, including that in existing old-growth forests and associated biological communities. An intensive monitoring plan for determining if the Forest plan is working as expected and plans for the restoration of Forest fish and wildlife habitat that has already been adversely impacted are also strongly encouraged.

We encourage cooperative Park Service/Forest Service planning, and we recommend that frequent statements to this effect be included in all the subject documents. It is vital that a broad range of activities/outputs not be diminished or abridged and that neither agency inadvertently foreclose options or duplicate the efforts of the other by taking unilateral action.

Additional comments related to specific portions of the subject documents are attached. Suggestions for revisions of several tables were sent to the Forest from the Bureau of Mines at an earlier date and biological review comments on threatened and endangered species will be provided by the FWS under separate cover.

Thank you for the opportunity to review these documents.

Sincerely,

Charles S. Polityka
Regional Environmental Officer

Attachment 1
Specific Comments

ER 86/1428

ATTACHMENT 1

U.S. Department of the Interior Specific Comments Related
to the
DEIS and Proposed Land and Resource Management Plan
for the
Olympic National Forest

DEIS

Tables S-14 and II-1. These tables, both titled "Response to Issues, Concern and Opportunities by Alternative," omit any reference to cultural resources While cultural resouces may not have been identified by the public as a issue, the NPS is greatly concerned with the resource. The Fores acknowledges that as timber harvesting, road, trail and campgroun construction and recreation use increases, the potential for adverse effect on cultural resources increases. These same activities increase opportunitie to survey, identify, protect and interpret previously unrecognized cultura resources.

Page II-19, Mitigation and Enhancement. It is indicated that the Fores Service plans to remove barriers to anadromous fish migration. We cannc determine if this action is intended as habitat enhancement or as mitigatic for adverse environmental impacts from logging. This should be clarified. Th FWS strongly prefers, when possible, to mitigate habitat losses on-site rathe than in off-site areas.

Page II-21, Historical and Cultural Resources. Why are cultural resource beyond the scope of the planning process? A brief explanation of this woul be helpful.

Page II-74, Table II-1. Two of ten stream systems under study for inclusi in the Wild and Scenic River System are recommended for inclusion in th System under the preferred alternative. Consequently, the opportunity t protect eight of the eligible stream systems and associated fish and wildli habitat will be lost under this alternative. The irreversible effect of su a decision on fish and wildlife resources and habitat should be considered a discribed in Chapter IV.

Page III-22, Water Quality. Conflicting statements are made in relation t the significance of logging-related increases in stream temperatures a potential adverse impacts on fish. It is stated in paragraph 2 that "Wat temperature increase could be of concern in the case of a hot summer with l stream flows." On the other hand, it is stated in paragraph 3 that "The da collected shows that water temperature increases are not a problem in t South Fork Skokomish River drainage and, therefore, should not be a problem any of the other river drainages." This should be clarified.

Page III-67, Wildlife: The reference to "...holding insect populations endemic levels..." could be clarified for the general public. Perha "normal" or "historic" would be better terms.

Paragraph 4: The Olympic marmot is a species, not subspecies. Also, the complexity of wildlife habitat described for the forest is strongly affected by human manipulations such as logging, fire control, etc.

Paragraph 5: Note that the estimated acreage of the Park is now 922,344.

Page III-70, Wildlife, Paragraph 4: The assumption that the secretive marten is not occupying its habitat because it is not observed to do so is questionable. Please clarify whether field documentation/studies exist regarding the occurrence of marten in the forest.

Paragraph 6: What is the evidence that peregrine falcon, bald eagle and spotted owl population levels have historically been low? Documentation would improve the EIS.

Paragraph 7: The NPS should be included as an active participant in plans for the introduction of six pairs of peregrine falcons. Probable nest sites and foraging habitats closely adjoin the east Park boundary or are within the Park.

Page III-71, Wildlife, paragraph 1: What data base supports the statement that "...deer populations appear to be increasing"? Inferences based solely on harvest data may not reflect such increases. Can trends be established based on a single year's data (1981)? The most reliable information on which to base this discussion would be actual population data, as opposed to harvest records or habitat availability.

Paragraph 3: The current estimate of the mountain goat population is 1,000. The same sentence should read "...studying the feasibility of eliminating or controlling the mountain goat within park boundaries." Also, is should be clarified whether the Washington Department of Game (WDG) has plans or a commitment to regulate goat populations on the Forest, particularly Forest Wilderness Areas.

Page III-73, Climate: While this section deals with textbook impacts of climate on wildlife, its presentation raises some questions. Does most of the Forest have migratory herds of elk and deer? Isn't much of the westside habitat either lowland or middle elevation where resident herds occur? The presence of resident herds and pertinent management practices and impacts need to be described in relevant sections of the document.

Page III-75, Roads: Road closures during intensive hunting seasons or during winter also limit human access, reduce wildlife disturbance and improve the quality of hunting. Seasonal road closures may significantly enhance wildlife condition and use of range area.

Page III-76, Plans of Others: The Park does manage the wildlife resource for "non-consumptive" uses, such as ecological diversity, recreational sightseeing, etc, and as such, wildlife is an important part of the Park experience. Increased roads and hunting adjacent to Park boundaries increase demand (impact) on wildlife within and near the Park. Forest management resulting in increased access and loss of habitat may be impacting Park wildlife more than the reverse. In this context, Park wildlife protection concerns should be more fully considered in Forest Service planning near mutual boundaries.

Moreover, cooperative management initiatives in limiting hunter access and in the design and testing of special hunts of mutual benefit should be actively pursued with the WDG. Note again the Park acreage change to 922,344.

Page III-77, Fisheries. The DEIS discusses an enhancement program which is projected to result in increased production of anadromous fish, although species and stock are not identified. The specific techniques are not presented, so it is difficult to determine the chances of success or the probable benefit in light of existing management activities.

Page III-78, Anadromous Salmon and Trout. Anadromous Dolly Varden char are found in most coastal rivers and some Hood Canal rivers.

Page III-82, Fisheries, Future Trends. Three principal sources of demand for fishery outputs are listed. They are commercial fishing, ocean sport fishing and fresh-water sport fishing. However, salmonids are important beyond simply being caught. They play an important role as a source of prey and/or carrion for black bear, raccoons, river otters, gray and Stellar's jays, dippers, bald eagles, ravens, crows and other animals. Salmonid carcasses are also important in transporting nutrients from the ocean back into freshwater ecosystems. When salmonids return to their natal streams to spawn, they also provide a source of non-consumptive recreation for the viewing public. These functions or "outputs" should be recognized.

Page III-83. The second paragraph indicates that water temperatures are at or below the optimum, thus detrimental effects from Forest activities are not anticipated. However, studies by the FWS have documented temperatures in small clearcut streams in the Raft River drainage to 70°F following logging and slash burning. The FWS and WDG can provide data regarding optimum stream temperature related to fish life stages.

Page III-91, Fire. In this discussion there should be a section of the role of natural fire in wilderness, possibly in the section (III-91-95) on "What Affects Fire?".

Page III-95, Plans of Others. The statement is made that Park "management plans permit natural fires to play out their role in the ecological development of the Park's biosystems. Therefore, lightning fires that originate on the Forest can be permitted to spread into the Park under specific conditions agreed to by the Park Service." This is only partially accurate. Further discussion is needed of opportunities for allowing prescribed natural fire to cross the Park/Forest boundary in either direction under mutually agreed upon conditions and locations.

Page III-95, Air: The "good" quality of Olympic Peninsula air is also due to geography and prevailing weather patterns.

The air quality classifications put limitations on the maximum allowable increases, not changes, of specific air pollutants allowable from human activities.

A more accurate statement in paragraph eight would be, "ONP since 1981 has maintained and operated an NADP (National Atmospheric Deposition Program) site designed to monitor precipitation chemistry in the Hoh Valley."

The Park also conducts visibility monitoring at Port Angeles and Lake Crescent using conventional color transparency photography to record visibility of the same vistas, day-to-day, year-to-year. The Park also maintains an air quality sampling station at Port Angeles, in conjunction with the Olympic Air Pollution Control Authority. Sulfur dioxide, ozone, total suspended particulates and nephelometer measurements are made at this site.

A more useful measure for determining impacts to air quality would be tons of waste, rather than acres of slash.

Page III-96, Air, Historic Trends. Advances toward meeting the emission reduction goal can also be assisted by improved burning techniques. Better scheduling of slash burns probably has had a positive effect in avoiding the projecting of smoke plumes into heavily populated areas, but still better smoke management is needed. Impaired visibility in the Park, a class I area, is still a problem and the subject of visitor comments. Discussion of more efficient burning techniques and of better utilization of residue would be appropriate here.

A discussion of the acid precipitation problem is also needed, since acid rain "events" do occur in the Hoh Valley.

Page III-98, Historical and Cultural Resources. The DEIS should explain the circumstances whereby a site may be considered to possess local significance and interpretive potential, yet not qualify for nomination to the National Register of Historic Places.

The DEIS points out that a data bank is a highly useful tool for comparing cultural resources, providing a basis for evaluating their significance, and making informed decisions about their treatment. We agree that it is a basis, but the DEIS should stress that this approach is limited by the absence of historic and prehistoric contexts. Such contexts are developed through critical review of the relationship of the data to relevant research problems, adequate evaluation of discovered sites and structures, and focused studies of topics and areas beyond the project level. Reference to these contexts ultimately will allow the Forest to be more selective about its cultural resource expenditures, but their development will be precluded by the persistent orientation toward project-by-project inventory and protection at the expense of large-scale planning. The development and use of these contexts could be particularly fruitful in light of the DEIS's conclusion that the "Olympic Peninsula has great archeological potential."

We agree with the statement that "unresolved conflicts between competing resource needs will persist" in a climate of "management by mitigation rather than a focused attempt at preservation, protection, and enhancement." However, focused attempts will prove beneficial only if they involve the systematic identification, evaluation, treatment and planning of cultural resources beyond the project level.

Page III-99. The DEIS should make it clear that field reconnaissance is the best procedure to identify the significance of sites only if (a) they are adequately explored at and/or beneath the surface and (b) the indicated data categories can be tied to a developed research context.

We encourage the cooperation between the Park and the Forest in developing mutual data base for the purpose of predictive modeling and survey design.

Page III-100. What is being done to evaluate, protect, preserve and manag the considerable remains of the historic "equipment, cabins, trails, railroa trestles, wagon roads, logging camps, Forest Service guard stations, an shelters" mentioned in the DEIS?

Page III-109, National Recreation Trails. NPS records show five Nationa Recreation Trails, with the total mileage being 28.6 miles. The lis includes: Lena Lake, 20.8 miles; Quinault Loop, 4.1 miles; Quinault Rai Forest, 0.4 miles; Wynoohee Lake Shore, 10.0 miles; and Cape Alva, 3.3 miles.

Page III-121, Scenery. We are pleased with the discussion of scenic qualit wherein rehabilitation of viewsheds is one of the primary visual managemen practices. We agree for the most part with the identification of viewshed that are important to the experience of Park visitors: Dosewallips Road Hamma Hamma Road, Lena Lake Trail, Lake Cushman Road, North and South Shor Roads, Soleduck Park Road, and Elwha Park Road. For most of these viewsheds designation as A1B and A2 is recommended, as depicted in Alternatives F and G but in the Canoe Creek drainage we recommend A1B for the entire area.

Two additional areas adjacent to the Park should be considered for mor rigorous protection and/or restoration of the viewshed. The first area i Lake Crescent, one of the most heavily visited areas of the Park. At thi area, clearcut units are visible from Highway 101 along the ridgeline north o the lake, and from the East Beach Road near Log Cabin Resort. The NF recommends that future timber harvest along this ridge be discontinued adjacen to the Park boundary or, at least, be limited to selective cutting with n slash burning. Restoration of the unbroken ridgeline would enhance th otherwise natural appearing hillside. The viewshed as seen from the Eas Beach Road would benefit from a Partial Retention or perhaps Modificatio treatment in the future.

The second additional area is the viewshed as seen from the Staircase area i the Skokomish drainage. Elsewhere in our comments we have recommended A1 designation in as much of the Four Stream watershed as possible in order t mitigate downstream impacts from logging. Similarly, we recommend th retention or restoration of the viewshed as seen from the Staircase area.

To summarize using terminology of the DEIS, we recommend the "Retention category for the Lake Crescent viewshed as seen from Highway 101. For area seen from the East Beach Road at Lake Crescent, "Partial Retention" would b most suitable. For Four Stream as seen from the Staircase area, we recommen "Preservation" or at least "Retention."

Page III-128, Wilderness. We recommend that the Final EIS discuss wildernes management planning for the five designated Wilderness Areas in the Forest Such discussions should emphasize coordination with, and adherence to recognized wilderness management principles. Additionally, the need fo coordinated or cooperative management of legislated Forest Wilderness an proposed National Park Wilderness must be emphasized. Such elements o wilderness management as application of limits of acceptable change, carrying

capacity estimates, joint permit systems, group size limits and campfire restrictions, the management of shared trails and the role of natural fire all should be discussed.

This section would be strengthened by a clarification that the policy of nondegradation can include improvement of conditions where wilderness values are degraded and where natural processes are not intact.

Page III-140, Wilderness, Future Trends: We have several questions about the information in this section. Can existing wilderness character be maintained while still providing a "standard quality Wilderness experience" at anticipated levels of use? Is it the Forest's intention to complete all potential trails? Will additional trails interconnect with the park's trail system? Is the theoretical capacity of 89,400 RVD's per year the objective for management? How was this figure derived? The Park has seen a leveling off and even slight decline in visitor use of parts of the backcountry; is the increased demand forecast in 1980 still valid for Forest planning?

Page III-143, Research Natural Areas: The term "control of excessive animal populations" requires further definition and provision of sufficient support data to warrant such determination.

Fire. The role of natural fire as part of the ecological process should be included. The Plan (IV-86) describes RNA's as "...land area where the ecological community is evolving through natural processes." Fire suppression precludes such process. Perhaps a distinction between natural fire and human-caused fire should be made.

Page III-164, Minerals. Utilization of the geologic time periods should be defined (i.e., Mesozoic - 65 to 225 million years before present, etc.) next to the term or in the Glossary.

Pages IV-20 through IV-23, Cumulative Effects on Water. It is clear, from the data presented, that existing high road densities contribute a significant sediment load to Forest streams e.g. Calawah and South Fork Skokomish Rivers. Steps should be taken to reduce this sediment loading by such measures as reclamation (revegetation) of secondary and spur roads. These aspects should be discussed in relation to protecting fish and wildlife resources and their habitat.

Page IV-31, Cumulative Effects Analysis. This discussion on the survival of northern spotted owls on the Olympic National Park needs to be revised. A study by Washington Department of Game, Washington Department of Natural Resources and the National Park Service, conducted on westside drainages of the Olympic Peninsula, has indicated that less acreage of suitable habitat is available on the Park than was previously thought. WDG conveyed that during field work for this study (1985-86), no owls were found above 2,500 feet elevation, indicating that owls were restricted to lower ends of drainages, of which only a small fraction occurs in the Park. Thus, the 323,000-acre figure on which the FS based the conclusions in Table IV-13 is in error. Given new acreage figures, the number of pairs which the Park can be expected to support is estimated to range from 20 to 30 pairs. Therefore, any reliance on the Park providing an adequate backup or "failsafe" for this species is not

warranted by available data. Survival chances of owls in lower elevations ar probably enhanced by proximity to the Park boundary, but the Forest apparentl supports more owl pairs than does the Park at this time.

The cooperative study report is expected to be available from the WDG in Apri 1987. We suggest the FS consider this report in preparing the Plan and fina EIS. By any measure, the population is small and because of its precariou nature, the NPS suggests the interagency spotted owl subcommittee revie comments on the FS Draft Supplementary EIS for Spotted Owl Management also b considered. The subcommittee concluded "the Olympic population [of norther spotted owls] may be isolated under all alternatives and even if all curren habitats were maintained, there is a high liklihood the population coul become extinct." For the Olympic Peninsula, the subcommittee recommended that all known pairs and all remaining suitable habitat be maintained and suitable habitat be managed to regain distribution.

Page IV-38, Effects of Alternatives on Fisheries. The FWS believes that enhancement activities should not concentrate on one habitat type such as pools. There should be a balance so that one species (e.g. coho) doesn't unduly benefit at the expense of another (e.g. steelhead). Other species, such as chinook, chum and pink salmon would benefit from enhanced spawning habitat and more stable winter flow. FWS can provide the Forest with additional information on this subject.

Page IV-44, Fire: There should be a discussion of the positive effects of prescribed natural fire in wilderness or other unroaded land classifications.

Page IV-46, Air. This section would be strengthened by a statement that all alternatives would meet the State objective for a 35 percent reduction of emissions by 1990 as well as the ban on weekend burning between July 1 and Labor Day. The Clean Air Act Amendments of 1977 state that Federal agencies must comply with all State and local laws and regulations regarding air quality.

Page IV-47, Cultural Resources. The DEIS states that the Forest's mission is the identification and protection of all cultural resources. Evaluation and data recovery are performed at sites only when it is clear that they will be impacted by "resource management activities." The evaluation process during survey will be progressively facilitated as historic contexts are developed via the preparation of research designs, overviews, and/or focused geographic and thematic studies. After surveying 50,000 acres, only a few prehistoric sites have been found. Because of this dearth of prehistoric sites, we support the idea that such contexts can and should be developed in cooperation with the Park, particularly given the greater number of prehistoric sites located by the Park.

Pages IV-60 through IV-65, Roads. The construction of new road systems can have a severe adverse impact on fish and wildlife resources. Comprehensive plans to reduce these impacts should be thoroughly discussed. This should include such measures as reducing road width, cutslopes and sidecast materials.

PROPOSED LAND AND RESOURCE MANAGEMENT PLAN

Page II-27, Inventory Needs. How will the Forest be able to inventory all historic and cultural resources by the midpoint of the first decade after implementation of the Plan? Will it involve systematic survey of areas other than timber sales, and be based on a Forest- or Peninsula-wide research design?

Page III-9, Wild and Scenic Rivers. It is stated that "current plans include a recommendation that the Duckabush River be included in the National System." Is this the current direction (no action alternative), or do the "current plans" already assume the preferred alternative?

Please clarify whether or not the Duckabush and Grey Wolf (including the part of the Dungeness River downstream from the Grey Wolf confluence) Rivers will be recommended for designation as components of the Wild and Scenic River System.

The Forest recommends against designation of the West Fork of the Humptulips because the West Fork does not represent the best of the desired characteristics. We are not aware of criteria requiring components of the Wild and Scenic River System to be representative of "the best" of a characteristic. If a river is eligible and suitable to be a wild and scenic river, its designation should be considered without regard for other rivers.

Page IV-2, Goals for Resource Programs. The goal for cultural resources, identified under Recreation, provides for all but their evaluation. It is difficult to see how decisions about proper protection, interpretation, and other management can be made without adequate evaluative information. It is important for discovered resources to be evaluated in terms of not only their physical context but also their historic or research context. Otherwise, such decisions are arbitrary and can result in many unnecessary or inappropriate expenditures.

Page IV-4, Goals for Resource Programs, Minerals and Energy. This section does note minerals and energy, but does not fully explain how the management goals will be accomplished or deal specifically with areas of moderate or high mineral potential as part of the Management Area Prescriptions.

Pages IV-35 through IV-46, Forest-Wide Standards and Guidelines. The Standards and Guidelines should be improved to conserve fish and wildlife resources and their habitat. For instance, the statement on the quality and quantity of fish habitat (page IV-37, no. 9) could be improved by adding information and numerical criteria on the rather exacting life requirements of anadromous and resident salmonids; i.e. adequate cover, good water quality, sufficient food, and clean gravel for spawning.

Standards and Guidelines could also be improved by strengthening land management criteria. For example, it is indicated (page IV-39, no. 2) that Forest activities should be designed so that no more than 20 percent of a treated area is compacted, severely burned, or actively failing. The FWS believes the 20 percent figure is extremely high and could result in catastrophic degradation of streams used by anadromous salmonids. The 20 percent figure should be reevaluated to protect wildlife and fish resources such as anadromous fish.

Page IV-36, Forest-wide Standards and Guidelines. Besides summarizing previou investigations and known cultural resources in the Forest, does the reference overview (a) provide a theoretical context, critically assessing the strength and weaknesses of the regional data and interpretations, (b) predict th occurrence of various resource classes, and (c) offer a strategy an priorities for investigating logical geographic areas and themes beyond th project level? Again we note that the Forest lists Cultural Resources unde Recreation, rather than as separate resouce with its own intrinisic value.

Page IV-41, Standards and Guidelines, Minerals and Energy. We suggest th Forest include the examination of claims and operating plans prior t challenging them. While this may be implicit to the preparers of the PLRMP it is not necessarily clear to the reviewers; the guidelines could b clarified in view of the mineral activity and claimants' rights which ar appropriately described on page IV-34.

Page IV-46 through IV-88, Management Prescriptions. This section did nc contain any prescriptions for migratory waterfowl, bandtailed pigeons, bi game animals, and anadromous and resident fish. The reasons for thes omissions should be thoroughly explained and corrected as necessary. Thi appears to require close coordination with the fish and wildlife resourc agencies.

Page IV-65 Standards and Guidelines, Wilderness. A desired future conditic within wilderness is that evidence of human activity would be "substantiall unnoticeable," yet continued stocking of Forest Wilderness high lakes would b allowed to continue and the presence of goats would continue to be tolerate Both exotic mountain goats and artificially established and maintained fis populations are significant human-caused disturbances: consideration of the elimination or control to prevent damage to wilderness values would b appropriate.

Page IV-73, Standard and Guidelines, Bald Eagle Habitat. The criterion of concentration of 10+ eagles to warrant identification as a roost (night roos area is too large. On the Skagit River or along the Pacific Coast the figur of 10+ may be warranted, but for the interior Olympic Peninsula 5 to 10 is more realistic range to ensure designation of adequate roost (night roost sites.

Index. As a subject, "Minerals" could be added to the Index as well as to th Reviewer's Guide. Cultural Resources should also be added to the index, sin the discussions are included under "Recreation" and therefore not easily found

APPENDICES

Appendix B, Page B-57 and B-58, Fishery Yields. The fish habitat capabili submodel was developed and used to predict changes in anadromous salmon production in relation to the various Plan alternatives. However, th submodel lacks the environmental variables necessary to simulate fie conditions and will, in our view, give unreliable results. Estimates changes in fish productivity were strictly tied to estimated sediment yiel that had been incorporated into the Forest's general model (Forplan Improvement in the fish production submodel could be obtained by including t following environmental parameters:

1. Large woody debris in the stream functions as cover and an instream scour agent to produce and maintain pools and undercut banks (valuable as cover), plays a part in sorting of substrate materials, and causes surface turbulence (which also serves as cover). The following references may be useful in assessing the value of large woody debris for inclusion in the fish habitat capability submodel: (a) Great, Glen. 1985. Role of large organic debris in juvenile salmonid habitat in small streams. MS thesis. U. of Wa. Seattle; (b) Bisson, P A., J.L. Nielsen, R.A. Palmason and L.E. Grove. A system of naming habitat types in small streams, with examples of habitat utilization by salmonids during low streamflow. In "Acquisition and utilization of aquatic habitat inventory information" (N.B. Armantrout, ed.). Am. Fish. Soc., Bethesda, Maryland.

2. The characteristics and quality of substrate materials should be considered. Appropriate sized gravel with low amounts of fine sediments is needed for optimal survival, growth, development of embryos and alevins, and emergence of fry.

3. Changes in channel morphology due to sedimentation processes and loss of large woody debris. Examples of changes in channel morphology include: percent pools during low flow period; extent of unstable substrate areas; degree of stream widening with associated depth reduction.

4. Changes in natural ponds and pond outlets that are connected to streams. Fish production may be affected if accessibility to the ponds and pond volume is altered. Natural ponds can provide exceptional rearing habitat for juvenile salmonids such as coho salmon.

5. Water quality (i.e. water temperature and inorganic and organic suspended sediment load and bedload). Logging-related elevation of stream temperatures does not have to be immediately lethal to fish in order to adversely impact fish populations. Sublethal temperatures may activate latent infectious diseases in fish and cause mortalities. The principle source of heat for small forest streams is by solar energy that strikes the stream surface directly. Thus riparian vegetation plays a pivotal role in the rate at which solar energy reaches the smaller Forest streams.

6. Particular attention should be paid to critical low flow periods.

Pages B-58, B-59 Elk and Deer. Population projections for deer and elk appear to be inappropriately based on a single environmental factor, i.e. seral stages within the Forest. There was no indication that the distribution of forage in relation to cover had been considered. An increase in forage acres due to clearcutting does not necessarily translate into more deer and elk. Forage areas need to be distributed so that adequate thermal and hiding cover are readily available for deer and elk use. There was no indication that the adverse effects of roads on deer and elk had been considered in developing their respective population projections. The Washington State Department of Game indicates that 4-8 acres of deer and elk habitat can be lost for every mile of forest road constructed. This is due to direct loss of habitat within the road path and road-avoidance behavior in deer and elk.

During the last few years FWS personnel have noticed a significant increase i the blacktopping of main haul roads in the Shelton Ranger District. Improvir a road surface with blacktop can increase the amount and speed of traffic This may produce a larger area of habitat that is avoided by deer and elk tha existed before blacktopping occurred. More traffic with faster speeds coul also result in increased road kills of deer, elk and other species. Thus road types should also be considered when calculating deer and elk populatic projections.

Page B-59, Old-growth. The fish and wildlife habitat values of old growt will vary from stand to stand. Consequently it would be helpful, in analyzir the various alternatives, if old growth was broadly categorized (into at leas three brackets) by age/size and other associated parameters.

Page B-59, Snags. We could not find any display of tree snag data in th Appendices and that which was displayed in the DEIS (page IV-34) wa inadequate. Snag data should be displayed in a manner that is relevant to th requirements of wildlife e.g. snag species, snag size, and decompositic stage. Snags are a highly important structural component in fores communities. They are used by numerous wildlife species for cavity nes sites, nesting platforms, feeding substrate, food cache, roosting, etc.

Page B-107, Table B-21. The stream classification system used here could b easily confused with the more traditional and vastly different method c stream classification developed by Strahler (see page 201 of E.R. Brown. 198 Management of Fish and Wildlife Habitats in Forests of Western Oregon ar Washington. USDA, Forest Service, Portland, Oregon). The discussion shoul include a comparison of the two classification systems for cross-referenc purposes.

It appears that the minimum management requirements for class III and I streams (Forest Service classification system) are inadequate to protect fis and wildlife resources because of the amount of logging allowed in th riparian zone. The management data presented here should be re-evaluated t meet fish and wildlife requirements. It should be noted that what happens i these small headwater streams (fishless according to FS) has disproportionate effect on downstream biological activity. First, becaus small steep gradient streams are major sources of sediment, any activity tha accelerates erosion from these streams increases turbidity and sedimentatic downstream. Second, logging practices which reduce the longterm recruitmer of large woody debris to small headwater streams, will diminish the ability c those streams to trap leaf materials, twigs, branches, etc. Under suc conditions aquatic insects, fungi and bacteria would not have time to proces the plant materials and break them down into particulate organic matter an soluble nutrients. Thus aquatic food chains in the downstream areas (wher fish exist) would be deprived of a usable energy source (persona communication R.H. Waring, Oregon State University; also see related materia on page 258, R.H. Waring and W.H. Schlesinger, 1985. Forest Ecosystems Concepts and Management. Academic Press. San Diego, Ca.).

Appendix C. For South Quinault Ridge Unroaded Area (Page C-98), the topic c Availabiltiy (page C-101) should have the subheading "Minerals" under Resour Potential to be consistent with the other section.

MAPS

The maps, for all of the Plan alternatives, appear to show that the eastside of the Forest is given greater habitat protection than is the westside of the Forest. More specifically, the maps contain management goals that benefit fish and wildlife on the eastside more than on the westside of the Forest. This should be thoroughly explained.

Maps - Management Areas

As a result of the 1986 boundary adjustments between the Park and Forest, it is very difficult for the public, as well as the Park, to review and assess impacts of the Proposed Plan with the maps provided for each alternative and in Appendix B of the Plan. We recommend that a supplemental set of maps depicting these changes be made available.

The NPS has provided comments on specific areas depicted on the maps, starting in the northeast and moving clockwise around the boundary of the park.

1. Deer Ridge: We have a strong preference for the A1A designation in the section adjoining the Deer Ridge Trail, rather than A1B. This trail continues into the park as a foot trail into a fragile subalpine area, and we oppose use of motor bikes on this trail. In the boundary areas north and east of Blue Mountain we prefer A1B designation as shown with alternative F and G rather than E1.

2. Dungeness drainage: In the section east of Tyler Peak, we prefer A1A to A1B designation, though it doesn't actually abut the park. In the area surrounding the Dungeness River/Royal Creek trailhead, we recommend redesignation as A1A. The new park boundary is even closer now to the trailhead and the whole Royal Basin Trail should be closed to motorized equipment to avoid public confusion.

3. Hamma Hamma: Boulder Creek appears to be an excellent area to encourage the restoration of more primitive conditions. Surrounded by *de facto* park wilderness, Forest Wilderness and forest management proposed as A1A, we believe this is a good area for road obliteration, restoration, revegetation and redesignation as A1A. We also support closure of the upper Hamma Hamma Road (as depicted for Alternatives F and G) and redesignation as A1A.

4. Cushman: The Four Stream area has been the subject of past discussions between the Park and Forest. Our major concern here is the degradation of park waters, as this is one of the few areas where timber harvest is directly upstream from the park. Elk Creek, Four Stream and Five Stream all enter the park and drain into the Skokomish River. Five Stream enters from a Wilderness area, but the other streams drain an area of active timber harvest. The Skokomish River in this area supports important fisheries resources, including a sensitive run of Dolly Varden char. We recommend more extensive application of A1A designation surrounding the Wonder Mountain Wilderness and the roaded area around Four Stream.

5. Skokomish: For the South Fork Skokomish we strongly disagree with th proposed A1B designation and recommend A1A. Here again, we believe that trail continuing directly into the park from the forest should be closed i its entirety to motorized vehicles.

6. Quinault: A4B designation is recommended for the South Shore Road. We se no adverse impacts to proposed Forest management goals if the A2 designatic were changed as in Alternatives F and G.

7. Quinault: The Canoe Creek drainage is another situation where timbe harvest occurs upstream from the park. We recommend designation of the entir area adjacent to the park as A1B. Just to the north in the upper Mathe Creek drainage, we similarly recommend A1A designation adjacent to the par and north to Sams Ridge.

Yet, despite these major economic shocks, the industry has managed to rebound from its lowest year, 1982, in both employment and production levels. Indeed, economic adversity and capital investment have produced a 56% productivity increase in this industry for these three counties.

Proposed Alternative C

The U.S. Forest Service has proposed a reduction in the timber harvest from 176.8 million board feet (MMBF), the average annual harvest for the past decade, to 138.1 MMBF. This is a reduction of 22%. The 138.1 MMBF is an average annual production amount, which may vary greatly from year to year. The planned annual harvest amounts have not yet been decided; however, the annual harvest is of keen interest regarding its flexibility to meet market conditions and its stability to minimize employment fluctuations.

In order to assess the economic impact of the proposed 22% reduction in the timber harvest, the U.S. Forest Service used its IMPLAN Input/Output Model. This model is regionalized for these three counties and is based on 1977 industry interrelations. Using the IMPLAN Input/Output Model, the U.S. Forest Service estimates the annual job loss at 210 and the income loss at $6.6 million for the Alternative C timber harvest level of 138.1 MMBF.

Past Three-Year Production Levels

In the past three years, the lumber and wood products industry has rebounded significantly from its low level in 1982. Employment has increased by 244, and industry total wages have risen by over $12 million. The three-year average timber harvest is 198.1 MMBF for the Wenatchee National Forest and 487.3 MMBF for the three counties.

Thus, the Forest Service Alternative C is a reduction of 60 MMBF from the past three-year average. Using the IMPLAN I/O Model, the resulting losses are 840 jobs and $26.9 million total income. These losses are four times greater than the Forest Service estimates.

Conclusions and Recommendations

1. The timber harvest levels proposed in Alternative C are too low, and the losses in jobs and income are unacceptably large. The loss of 840 jobs and $26.9 million in total income, four times the Forest Service's estimated losses, causes too great a harm to people and businesses. This is especially true considering the economic situation of the three counties. The U.S. Forest Service must select a harvest level closer to the 10-year average of 176.8 MMBF or the past three-year average of 198.1 MMBF. It should also provide the probable yearly timber harvest for the first decade.
2. In selecting a timber harvest level, the Forest Service must recognize that recovery has occurred in the lumber and wood products industry. It must not assume that the job and income losses have already occurred.
3. The Forest Service is already working on updating the IMPLAN I/O Model to 1982 industry interrelations. While it is unfortunate that 1982 was a recession year, the Forest Service should update the model and use the 1982 version to estimate job and income losses and other economic impacts *prior to releasing the final plan for public comment.* It is only fair that persons potentially affected by the losses, civic leaders, and elected officials know exactly what they are facing based on the best available information.

4. The Yakima Indian Nation is presently considering its planned timber harvest level. Uncertainty exists regarding the final decision.

5. The Forest Service Alternative C would result in a permanent reduction in timber supply. In addition, these three counties are net exporters of logs. Based upon available data for the years 1976, 1978, and 1980, net log exports were 9.6%, 5.0%, and 33.3%, respectively, of the counties' total timber harvest. A recent study has recommended that Yakima County, and Kittitas and Chelan Counties by implication, attempt to attract businesses which produce more finished wood products. However, supply reductions and log exports only serve to place these counties at a competitive disadvantage. Promoting economic development and diversity is a difficult task, made more difficult, if not impossible, by losing part of the historic economic base.

6. Yakima, Kittitas, and Chelan Counties are high unemployment counties. Since 1980, average annual unemployment has ranged between 10% to over 17%. Of the state's 39 counties, Kittitas and Yakima rank 32nd and 33rd, respectively, in per capita personal income, with Chelan ranked 15th. Their per capita incomes ranged between 66% to 77% of that for King County (ranked 4th). And for Washington State, average per capita income has now fallen below the national average.

7. The agricultural sector of the Washington economy and for the three counties has suffered reverses. During 1984, land values fell 4%. Total crop value fell 3% from 1983-1984. For the same years, cattle inventory fell 6%. For the years 1983 and 1984, production values fell 14% for wheat, 2% for milk, 5% for apples, 5% for hops, 27% for sweet cherries, 12% for sweet corn, 39% for grapes, and 7% for hogs. Since 1980, employment in the food processing and packing industry has declined by 4%.

8. Since 1980, the number of delegate days for Yakima County conventions has declined by 9.5%.

9. All of us share a common concern for the increase in population of endangered species. It is, however, to the benefit of all of us that the territorial land and nutritional needs of endangered species be scientifically documented.

10. A frequently held philosophical position is that when government official policy adversely affects people, that government should develop programs to ameliorate the impacts and to assist people to adjust to the changes. Additionally, today we must recognize that economic well-being does not depend on a "social safety net" but on a healthy economy and on economic development.

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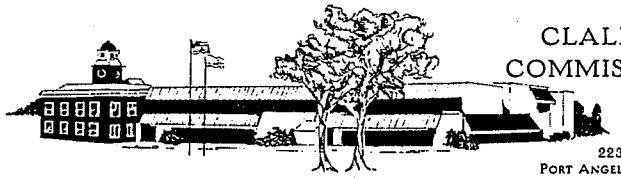

CLALLAM COUNTY
COMMISSIONERS' OFFICE

COURTHOUSE
223 EAST FOURTH STREET
PORT ANGELES, WASHINGTON 98362-3098

(206) 452-7831, EXT. 233
SCAN 575-1234

March 13, 1987

Ted C. Stubblefield
Forest Supervisor
Olympic National Forest

Dear Mr. Stubblefield:

I am writing in regard to the Draft Environmental Impact Statement for the Olympic National Forest Land and Resource Management Plan.

Of the nine alternatives under consideration, I support a combination of the Forest Service Preferred Alternative C and Alternative H as developed by the Washington State Department of Game. This approach would provide a sensible blend of the many important goals of successful forest management by combining substantial levels of timber harvest with the protection of fisheries, game animal winter range areas, watersheds, recreational areas and wildlife habitat.

Clallam County has a wide diversity of interests. At the same time, our local economy is greatly effected by the Olympic National Forest resource base in many ways: timber harvest, tourism and recreational activities, hunting and fishing. As pointed out in the Draft Environmental Impact Statement, the goals, values and lifestyles of Olympic Peninsula community members varies widely. The West End community group centered in the Forks area is largely oriented toward the timber industry. The East Side community group in Port Angeles, Sequim and the Dungeness Valley is demographically diverse. The DEIS points out that the population of this community group can be roughly divided into four principal components: (1) retirees and commuters, (2) persons whose employment is tied to recreation, fishing or aquaculture, (3) younger urban immigrants who have chosen to relocate on the Olympic Peninsula, and (4) persons whose employment and values are tied to the timber industry. Of these, the first three tend to be oriented toward recreation and conservation concerns, while the fourth is oriented toward timber production.

As a Clallam County Commissioner, I urge you to proceed with the long-term management and protection of the important and valuable resource base of the Olympic National Forest. More specifically, please consider:

- Combining the goals of alternatives C and H, with substantial emphasis on timber harvesting activities in the West End of Clallam County and more emphasis on resource conservation and recreational activities in the East End of Clallam County.

- Doing everything possible to protect watersheds and fisheries. Please avoid road building and logging in areas with unstable soils and steep slopes.

- Setting aside as many old growth forest areas as possible, especially low-elevation habitat areas. These areas are critical for watershed protection, game animal winter range, fisheries, and a wide range of recreational activities.

- Designate the Greywolf and upper Dungeness Rivers as Wild and Scenic Rivers (as recommended in alternative H).

I realize you are under a great deal of pressure from many groups and individuals representing a wide range of viewpoints. I hope you will be able to sift through the many suggestions and comments to help develop a plan that truly is in the best long-term interest of the Olympic National Forest, and the residents of Clallam County.

Sincerely,

BOARD OF CLALLAM COUNTY COMMISSIONERS

Evan Jones

Evan Jones

JEFFERSON COUNTY COURTHOUSE
NATIONAL HISTORIC SITE
PORT TOWNSEND, WASHINGTON

Jefferson County

BOARD OF COUNTY COMMISSIONERS

Port Townsend, Washington 98368

• Phone (206) 385-2016

LARRY W. DENNISON, DISTRICT 1 B.G. BROWN, DISTRICT 2

GEORGE C. BROWN, DISTRICT 3

March 13, 1987

Mr. Ted Stubblefield
Forest Supervisor
Olympic National Forest
P.O. Box 2288
Attn: Land Management Planning
Olympia, Washington 98507

Re: Proposed Land and Resource Management Plan

Dear Mr. Stubblefield:

The proposed land and resource management plan is a bold attempt to deal with a complex set of needs and concerns for the Olympic National Forest. We applaud and support your efforts to prepare a management plan for our forest lands.

The primary concern to Jefferson County upon reviewing the proposed plan and draft environmental impact statement (DEIS) is that of potential economic impacts. The complexity of these impacts and the controversy surrounding them warrants a county-specific economic analysis. Greater detail for the economic impacts to Jefferson County resulting from the proposed plan should be provided through independent analysis.

We request that such an analysis be prepared to give clarity to potential job and income losses in our county. For example, proposed reductions in timber harvests within the next decade are expected to result in a loss of jobs. The increase in recreational opportunities is expected to create an increase in jobs. The DEIS (page IV-79) states that the combined result is a loss of 200 jobs in this first decade. This loss is significant in relation to the size of our county's workforce and available work opportunities.

The value of jobs within the timber industry versus the value of recreational jobs needs to be defined by the analysis. How this difference in value affects our economy must be included to give full understanding to the proposed plan. Additionally, the socio-economic impacts from the loss of traditional logging jobs to small communities such as Brinnon and Quilcene should be identified. This analysis must be done before we can completely respond to the proposed alternatives.

A major concern with Alternative C is the proposal to eventually limit timber cutting in the Quilcene-Hoodsport District to ten million board feet (MBF) within the first decade of the plan. Greater harvest levels are allowed in subsequent decades. We urge that the proposal be modified to allow for a greater averaging of the timber harvests over the fifty year period than currently proposed. The ten MBF limit is considered extreme in relation to historic timber harvests in the district.

Alternative C includes designating a portion of the Duckabush River in the Wild and Scenic Rivers classification. As described in the plan, 100 acres of this area is privately owned, may remain privately owned and may continue to be managed for timber. We support this aspect of the plan provided any future attempts to add lands within this designation undergo close scrutiny for it's property tax impact on the county.

The plan proposes significant reduction of old growth forests. Missing from the document, however, is any discussion on the provision to replace old growth type habitat. It is our understanding that the forest service does manage forest lands for the replacement of this habitat, but no information was made available in the plan or DEIS.

Thank you for the opportunity to comment.

Sincerely,

Larry W. Dennison, Chairman

B.G. Brown, Member

George Brown, Member

LD:mkh

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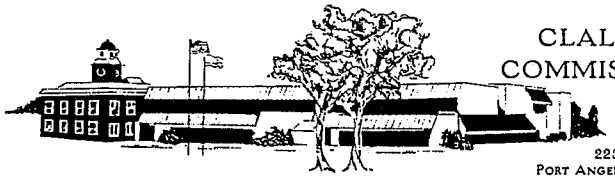

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COURTHOUSE
223 EAST FOURTH STREET
PORT ANGELES, WASHINGTON 98362-3098

(206) 452-7831, EXT. 233
SCAN 575-1234

BOARD OF COUNTY COMMISSIONERS

EVAN JONES, DISTRICT I
DOROTHY DUNCAN, DISTRICT II
LAWRENCE GAYDESKI, DISTRICT III

March 13, 1987

Ted C. Stubblefield, Forest Supervisor
Olympic National Forest
P. O. Box 2288
Olympia, WA 98507

Attention: Forest Planner

Dear Mr. Stubblefield:

As Clallam County Commissioner for District 3, I would like to go on record as being in complete agreement with our State Legislative delegation's position (copy enclosed) relative to the proposed Olympic National Forest Land and Resource Management Plan that is currently open for public review.

I would like to point out the signs in the Sol Duc District Ranger Station stating the purpose of National Parks and National Forests:

NATIONAL PARKS are administered by the National Park Service, a U. S. Department of the Interior. A Park Superintendent, with headquarters in Port Angeles, Washington, is responsible for the management of the Olympic National Park. The National Park Service was established by Congress in 1916 "to promote and regulate the use of the ... national parks, monuments, and reservations" in accordance with their purpose which "is to conserve the scenery and the natural and historic objects and the wildlife therein ... by such means as will leave them unimpaired for the enjoyment of future generations."

NATIONAL FORESTS are administered by the Forest Service, Department of Agriculture. A Forest Supervisor, with headquarters in Olympia, Washington, is in charge of the Olympic National Forest. The Supervisor, along with District Rangers, is responsible for managing the Forest's renewable resources - water, forage, timber, recreation and wildlife, as directed by Congress, under the principles of Multiple Use and Sustained Yield. Multiple Use means that resource management is coordinated so that areas of land produce a combination of values that best serve the American people. Sustained Yield means that resources are managed so as to provide services and products at a level of supply as high as can be sustained without harming the land's ability to produce.

Let us take a moment to define these two statements:

The key phrase in The Purpose of National Parks, is the portion in quotation marks; "conserve scenery, natural and historic objects, and wildlife."

The key words in The National Forest Purpose are renewable resources, multiple use, and sustained yield.

I would ask that these definitions be used in arriving at a decision on which alternatives will be utilized for the future direction of the National Forest.

The Olympic Peninsula has historically depended upon timber production as its major economic resource. Any further reduction from the current acreage in production would be detrimental to the local entities of government and the citizens which they represent.

I feel that there is an adequate amount of diversified land set aside for conservation purposes under the auspices of the National Park. I recognize the need for parks, wilderness, recreation opportunities, and aesthetic qualities, but we must also recognize the need for the commodities produced from forest lands for the benefit of the general public and the associated jobs created in the production of these commodities.

Whatever the ultimate decision on The Management Alternative, there must be some assurance that there shall be no further encroachment on the allowable yield for a specified period of time, and that that commitment is honored.

Sincerely,

BOARD OF CLALLAM COUNTY COMMISSIONERS

Lawrence Gaydeski

Lawrence Gaydeski, District 3

WASHINGTON STATE LEGISLATURE

Senate • House of Representatives • Legislative Building • Olympia, Washington 98504

February 19, 1987

Ted Stubblefield, Forest Supervisor
Olympic National Forest
P.O. Box 2288
Olympia, WA 98507

Dear Mr. Stubblefield:

We, the members of the Coastal Caucus, wish to express our concern on the Draft Environmental Impact Statement and Proposed Land and Resource Management Plan currently open for public review.

In our view, the Forest Service preferred alternative will not adequately meet the economic and employment needs of the communities dependent upon the timber supply from the Olympic National Forest. For example, a dramatic cut of 80% in harvest levels from the Quilcene and Hood Canal Ranger Districts. We believe that suitable land is available to sustain at least the current timber consumption of 250 million board feet. This level of timber supply is clearly warranted for the timber industry. The domestic industry has suffered severely in the State. Since 1979 employment in the timber industry has dropped by over 60% from 56,000 to only 36,000. Now, due to the settlement of the Canadian lumber dispute, improved lumber prices, increased markets, greater productivity, lower interest rates and increased demand for Pacific Northwest wood products, the State has an opportunity to regain some of tis employment losses and improve the economic stability of its timber dependent communities rather than further economic decline.

Your willingness to recognize the timber industry needs is critical to maintaining an important local and regional industry, improving our overall economic base in the state and on the Olympic Peninsula while protecting the livelihoods of many men and women. We hope you will agree with our concerns and make every effort possible to meet the economic and employment needs of our timber dependent communities.

Sincerely,

Arlie M. deJarnatt

THE HONORABLE ARLIE DeJARNATT
State Senator
19th Legislative District

Jim Hargrove

THE HONORABLE JIM HARGROVE
State Representative
24th Legislative District

FEB 25 1987

Bob Basich

THE HONORABLE BOB BASICH
State Representative
19B Legislative District

Paul H. Conner

THE HONORABLE PAUL CONNER
State Senator
24th Legislative District

Richard E. Fisch

THE HONORABLE RICHARD FISCH
State Representative
24th Legislative District

Brad Owen

THE HONORABLE BRAD OWEN
State Senator
35th Legislative District

Douglas S. Sayan

THE HONORABLE DOUG SAYAN
State Representative
35th Legislative District

Max Vekich

THE HONORABLE MAX VEKICH
State Representative
35th Legislative District

cc: Dan Evans
Brock Adams
Don Bonker
Al Swift
Tom Foley
Mike Lowry
Rod Chandler
Sid Morrison
John Miller
Norm Dicks

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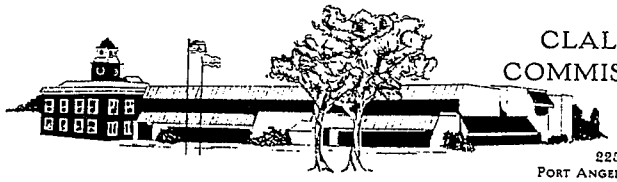

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COURTHOUSE
223 EAST FOURTH STREET
PORT ANGELES, WASHINGTON 98362-3098

(206) 452-7831, EXT. 233
SCAN 575-1234

March 13, 1987

Ted C. Stubblefield, Forest Supervisor
Olympic National Forest
P. O. Box 2288
Olympia, WA 98507

Dear Mr. Stubblefield:

As Commissioner for Clallam County District 1, I would like to express my concern regarding the Draft Environmental Impact Statement/Olympic National Forest Land and Resource Management Plan. Managing the Forest's renewable resources under the sustained yield and multiple use principles is very important to the economic health of our County.

A balance must be struck within the wide diversity of our county's economic interests that reflects the importance of these resources to our economic health. In order to protect the long-term interests of both the National Forest and Clallam County, we must have predictable resource yields that allow sustained planning throughout the industries dependent on them.

I must concur with the Clallam County Economic Development Council that there is a need to better understand the impacts and trade-offs of all the proposals and so join them in requesting an extension of the comment period for that purpose.

Sincerely,

BOARD OF CLALLAM COUNTY COMMISSIONERS

Dorothy Duncan

Dorothy Duncan, District 1

SQUAXIN ISLAND TRIBE

WEST 81 HIGHWAY 108
SHELTON, WASHINGTON 98584
(206) 426-9781

March 8, 1987

Ted Stubblefield
Forest Supervisor
Olympic National Forest
P.O. Box 2288
Olympia, Washington 98507

RE: Olympic National Forest Resource Management Plan and Draft Environmental Impact Statement

Dear Mr. Stubblefield:

The Squaxin Island Tribe is a federally recognized Tribe that has treaty rights in the state of Washington. Those rights provide for us to hunt and fish at all "usual and accustomed areas". As determined in Federal Court, the Tribes have the interest, the expertise and the right to be co-managers of the salmon resource within the state, and Federal agencies have a trust responsibility to protect the treaty rights of Indian Tribes. This United States trust responsibility is interpreted as taking no actions which adversely affect tribal interests.

The usual and accustomed area of the Squaxin Island Tribe includes South Puget Sound and the watersheds which drain into the Sound. Of particular concern are the drainages which form the lower inlets of Puget Sound. In most cases these watersheds are adjacent to the Olympic National Forest, but lie within the delineation of the Shelton Cooperative Sustained Yield Unit. The Tribe has a legal right to a portion of certain resources, such as fish, wildlife, roots and berries that occur on lands regulated by the United States Forest Service. This includes the SCSYU as it is affected by USFS management.

Within the context described above, the Squaxin Island Tribe has reviewed the proposed management plan and the DEIS for the Olympic National Forest and we offer the comments and discussion that follow.

The planning document for the Olympic National Forest includes areas within the forest which are part of the Shelton Cooperative Sustained Yield Unit. The Unit was created in 1946 as a result of the Sustained-Yield Forest Management Act passed in 1944. The SCSYU contains a large amount of acreage outside of the National Forest boundary which is owned by the Simpson Timber Company. We

believe that the intent of the act was to manage the unit as a whole, not just for timber harvest, but "in order to secure the benefits of the forests in maintenance of water supply, regulation of stream flow, prevention of soil erosion, amelioration of climate, and preservation of wildlife. . ." as stated in the text of the Act. This contention is supported by the history that led up to the passage of the Sustained-Yield Forest Management Act of 1944.

The Olympic National Forest staff officers insist that the only thing they are empowered to manage or regulate on the private properties of the SCSYU is the volume of timber harvested and silvicultural practices. They maintain that they have no power to impose management constraints such as MMRs, clearcut size, rate of cut within a specific area, adjacent tract regeneration requirements, etc. on the portion of the SCSYU outside the National Forest. They contend that Washington State law applies in those areas. We believe that in this case Federal law was intended to supercede state law and that management perscriptions should be applied on the SCSYU as a whole. This should be obvious, as there were no State Forest Practices laws in place at the time of the agreement or for many years thereafter.

While we are seeking to have this concern clarified outside of the confines of responding to this Resource Management Plan, we could not help but notice that the United States Forest Service failed to include impacts on the private portion of the SCSYU in their Draft Environmental Impact Statement. Various alternatives presented in the plan represent differing levels of harvest activity on the Coop Unit within the Forest. This results in different harvest levels on Simpson lands as the Unit is managed on the principle of non-declining flow. These harvest levels result in varying impacts on resources of importance to the Tribe. Though the DEIS includes consideration of impacts on Simpson Timber Company's harvesting levels, which are brought about directly from the management choices made by the USFS for the SCSYU, it fails to address the concomitant impacts on other natural resources which result from the same decisions. We can only conclude that this ommission was intentional based on the general failure of the USFS to consider management options for resources other than timber on the private lands of the Coop Unit. The Federal Environmental Policy Act does not limit the consideration of environmental impacts to those which are within boundaries where an agency chooses to exercise jurisdiction. Whether or not the USFS exercises management jurisdiction over all the resources within the SCSYU, they are still bound by Federal Law to consider those environmental impacts which result from their management decisions. Should an adequate review of those environmental impacts mentioned here not be forthcoming, we shall be forced to seek other recourse.

Development of the fisheries production models used in the FORPLAN program raises a number of questions that have not been explained. It appears that there are at least two key ingredients of the fishery value that are not included directly in the

FORPLAN model, but rather as discrete adjustments. One is the set of fishery enhancement projects contemplated by the plan. Another is the incorporation of off-forest fisheries values in an overall evaluation of Forest resources.

The Plan includes a range of habitat enhancement activities proposed for the river systems of the Forest, in order to improve the survival rates of fish. The types of enhancement improvements contemplated are directed at rearing habitats, suggesting that these are the limiting factors in fish production. There is no substantiation for this approach. Gains attributed to this approach are estimated at roughly 20% over the current level of fish production. This is a sizable enhancement gain yet no documentation has been provided for it. We would suggest that since relatively little has been accomplished in the way of enhancement on the Olympic National Forest in the past, your sucess rate may be overstated. In addition, this program would be reliant on future funding from the Federal Government, which is normally unreliable for non-timber resources. We see no guarantee that this will in fact take place. Perhaps the program would be better served by dedicating a portion of timber sales receipts to it. In any case, we do not understand why this program has not been treated within the same planning model as other impacts. Since this is the instrument that you propose to use to keep fish production up to current levels, after timber harvest level associated losses have been incurred, we feel a much better substantiation is in order. We will not acquiesce to your assertation that maintaining current production levels is adequate. However, you still should provide documentation as to the credibility of your proposal.

Another example of an inaccurate assumption used in the plan is treatment of off-forest fisheries impacts. They have been treated as changes in costs rather than changes in benefits. That is, if an alternative decreases the fisheries production off-forest, it is treated as an increased cost associated with that alternative. The USFS model for determining economic impacts -- IMPLAN -- relies on the direct values of the FORPLAN results to produce its economy wide impacts. If off-forest fishery impacts are considered an 'Alternative' cost rather than a fisheries benefit then it appears that this will not be considered in the economic valuation of the fishery resource. This will understate the costs, in terms of recreational and commercial fisheries losses, of high harvest prescriptions, and will understate the overall benefits of fisheries related benefits.

The Olympic National Forest Plan uses an estimate of sediment loadings to determine the tradeoff for fishery production. No justification is provided to demonstrate that this method is accurate on the Olympic Penninsula. Indeed, no information is provided as to where this method was derived. Sediment loadings are often construed to be detrimental to fish spawning activity. However, in this report smolt production potential as indicated by quantification of rearing habitat is used to delineate fishery production. We fail to see how a direct correlation was

established between fisheries production and sediment loading. An accurate accounting of the impacts of sediments on fish production is necessary. This should include the effects of sediment loading on all phases of fish production, i.e. life stages, and an analysis of what fish habitat parameters are limiting to each species' production potential. It would be helpful if this was developed by watershed.

Estimates contained in the DEIS indicate that forest wide sediment will be reduced in the first ten year period of the plan as a result of the decreased activity on the Shelton District. There is no accounting for where this decreased activity will be displaced to. Since extensive roading has already been completed in the Shelton District it is hard to imagine that decreased harvesting will result in decreased sediment input to the waterways in such a short time. It is further postulated that the projected decrease in sediment will result in increased fish production within the ten year time period. We know of no substantiation that the fishery will recover in this short period of time. When asked this question your staff responded that it was their professional judgement that this would be so. In this case that judgement is not adequate to address our concerns since the result would be a decrease in over all fish production on the Forest. Evidence will have to be presented to support your position. We desire an accounting of where sediment loading will occur in your plan, both on-forest and off-forest including the SCSYU. It is apparent that if the USFS Preferred Alternative is adopted that significant harvest activity will be displaced from the Shelton District to other areas of the Forest and other areas within the Sustained Yield Unit.

The Plan determines the maximum fisheries output potential by assuming the elimination of all non-natural sediment production and calculating the impacts. It appears that this potential is based on current conditions. This fails to account for the historical fish production levels that occured in the area before extensive logging and other habitat losses. This is seen by the Tribe to be a failure in addressing cummulative impacts of USFS practices. Furthermore, by determining maximum production levels based on current conditions, you have vastly underestimated the economic value of the fisheries. The Tribes with fisheries that are impacted by Federal forest lands have been subjected to a continual degradation of the resources that are important to them. Now you presume to adopt a policy of no further degradation without addressing the losses of the past. We manage our resources based on the potential to restore the environment to the conditions that have supported the Northwest Tribes for thousands of years. The USFS must have accountability for the resource losses you have created. We remind you that this is an area where the Federal Courts have determined that Tribal treaty rights can be enforced. This is but one example of your under-valuation of the fishery resource.

The valuation of the fisheries resource suffers another serious setback in the development of the sports value assessment or

WFUDs. Most experts in the field consider the development of values based on the Travel Cost Method to be a conservative estimate of the benefits gained from the recreational experience. This is directly at odds with the contentions in the plan that rationalize a 37.5% reduction in those already conservative values. This is the same impertinant theory developed by the Forest Service for the RPA Program which suggested a 5% decrease in price for each of the 7.5% points that the Forest Service claims is the portion of total recreation that they provide. Yet, we do not find anywhere in this report an accurate description of what is the true share of recreation provided by the Olympic National Forest. This is understandable if you consider that the reduction of valuation is actually irrational. The implication is that, if the Forest Service produced 20% of the outdoor recreation, it would have zero value.(5 x 20 = 100% reduction) Any such adjustment as contemplated here is totally inappropriate. A better approach to the valuation of the recreational fisheries resource would be to compare values with others derived for similar activity in the Northwest. One such method is the Contingent Valuation Method.

Fishery values are assumed to remain constant over time, that is, they are not considered to gain any real value over their inflation adjusted value. This reasoning is flawed considering that fish are not an unlimited resource. Because they are a finite resource, as the demand for fish products rises their value will increase. In fact, the demand for fish products is currently undergoing a rapid expansion. This has been widely demonstrated within the United States. What makes this reasoning particularly unacceptable is that while fish are not projected to increase in real value, timber is. We do not believe that the arguement for increase in timber value can be made as strongly as for fishery values. But, in any case, to attribute an increase to one and not the other is ludicrous. In fact, nearly all resources considered in the Forest Plan should be considered to increase over time relating to the relative scarcity of land that can be managed for any particular resource. The combination of assumptions used in your valuation argument clearly accentuates the relative values of timber outputs over time. This disparity should be rectified.

There does not seem to be any consideration of the value of Tribal subsistence fishing in the Plan. It is not clear from the documents whether direct consumption values are excluded all together, or simply understated by inclusion with the other commercial values. In either case there is a degree of underestimation of the fisheries benefits to Native American fishermen. In this case, as in the many other cases mentioned here, there is a systematic bias in the Plan's analysis. This bias is toward selecting more timber-intensive resource use prescriptions. We suggest you conduct an analysis that accurately weights the value of the fishery resource as an assumption. That is, use inputs to the FORPLAN and IMPLAN models that realistically reflect the importance of the fishery resource on the Olympic Penninsula. We specifically request that you develop

an alternative that maximizes true fishery resource values at the expense of all other values. Though this would be somewhat the same idea as Alternative I, it would prioritze fishery values above any others, amenities or timber. We would be interested to see what recommendations such a portrayal would suggest.

We find the consideration given to big game habitat in the Plan to be lacking in its approach. The relationship between Forest Service jurisdiction over habitat and Tribal/State jurisdiction over actual fish and wildlife has lead to some conflicts in the management suggested by the USFS for their lands. We have questioned the destruction of winter range habitat for elk resulting from accelerated cutting of old growth on Forest lands. The response we got from the Forest Service was that the range is not being reduced, it just won't serve as high a quality habitat value as it did before. At least that much is clear. However, the unwillingness to accept that destruction of the total habitat value within the Forest will result in decreased big game populations, is deplorable on the part of the Forest Service. We cannot seperate the animals from the environment they occupy. At the same time your planning team insists that regeneration of the winter range will solve the problem, they admit that this second growth will not be as high a quality of habitat as old growth. The reestablishment of thermal cover takes decades, and the habitat will not serve as winter range until that time. For all practical purposes the winter range is 'lost'. The implication here is that the Forest Service can manage the habitat so as to make tribal or state management ineffective. This is simply unacceptable. You must develop a management plan that clearly protects the habitat of animals the Tribes are entitled to hunt, a right established by treaty. We are sure you are aware that the USFS, as a Federal agency, has the responsibility to protect Indian Treaty rights. This would include taking no action that would serve to harm the interests protected by those treaties.

At this point we would like to raise the issue of the way Minimum Management Requirements are being applied to the Forest Planning Process. Within the context that MMRs are now required by law, the USFS has arbitrarily developed to what extent these guidelines shall be applied. Without benefit of prior public review, the Forest Service has independently adopted the specifics of what MMR perscriptions shall be. It appears that although the degree to which they are applied is open to discussion, the substance of the requirements is not. The Squaxin Island Tribe would like to go on record as stating we have not had the opportunity to review the content of MMR perscriptions and that as they are currently formulated, they are unacceptable. They do not provide the necessary protection for fish and wildlife resources. This results in a major flaw in the Resource Management Plan for the Olympic National Forest. Broad assumptions were made by the Forest Service in the formulation of MMR requirements and these were applied directly to the Forest Plan. Because these assumptions are not founded and reviewed by appropriate mechanisms, they tend to undermine the acceptability of the Forest Plan. We suggest that the Forest Service provide a

means for public review of MMRs so the impact of these perscriptions can be assessed before applying them to the plan.

Mention is made in the DEIS of the Forest Service protection of Tribal Archaeological and Cultural Resources. However, we can find no specific reference to such a plan being instituted or incorporated into the Forest Plan. Statements that the USFS will cooperate with the Tribes are weak offerings. We are willing to cooperate. The burden is on the Forest Service to provide specific protections for Native American Archaeologoical and Cultural Resources. Old Growth is one such resource that requires protection from a cultural standpoint, as well as for its habitat value. The nature of these resources is such that it requires extensive trust and involvement on the part of both parties to secure the necessary protection. We have not seen such a process instituted by the USFS, even though they were put on notice in 1981 that this would be required. To this point the Forest Service has simply paid lip service this concern without substantively addressing the Tribal needs. We hope that you will be more forthcoming before you proceed with adopting any plan.

In conclusion, the Squaxin Island Tribe has serious concerns about the adequacy of this Draft Environmental Impact Statement for the Olympic National Forest. These concerns stem not only from the substance of the report, but from the way in which the report was prepared. Perhaps our greatest problem is with what has not been included in the DEIS. Serious gaps exist in a document that purports to reflect all the issues relating to management of the Olympic National Forest. Many clarifications will need to be made before this can begin to take the form of a Final Environmental Impact Statement. Several questions remain to be answered, if not by the Forest Service, then by the appropriate authority of whatever recourse we choose to take. We implore you to reconsider the management decisions you have made which have eliminated subjects from consideration. We urge you to give an accurate evaluation of the fisheries resource. We demand that you face your responsibility as a agent of the United States Government to protect those rights that were granted by treaty to the Native Americans of this region. We shall all be better off when you have recognized your duty to the people and the Tribes of this region as well as the timber interests.

Thank you for this opportunity to review and comment on your planning document.

Sincerely,

David Lopeman, Chairman

cc: James Torrence, USFS
Dennis McDonald, NWIFC
Russ Busch, Evergreen Legal Services
Steve Ralph, Point No Point Treaty Council
Marcy Golde, Washington Environmental Council

Point No Point Treaty Council
Port Gamble Klallam • Lower Elwha Klallam • Jamestown Klallam • Skokomish

March 13,1987

Mr. Ted C. Stubblefield, Forest Supervisor
Olympic National Forest
801 S. Capitol Way
Federal Building
Olympia, WA 98507

Re: Review of the EIS and Proposed ONF Plan

Dear Mr. Stubblefield,

The Point No Point Treaty Council is providing the follwing comments on behalf of the Port Gamble Klallam, the Jamestown Klallam, the Lower Elwha Klallam and the Skokomish tribes, which form the Council's constituency. Council staff have reviewed the DEIS and proposed land management plan and have a number of concerns that are presented in the following discussion.

General Comments

The management of public and tribal resources managed under the responsibility of the Olympic National Forest is of great interest to our Tribes because of their long and consistent connection with and dependence upon these renewable resources. These Tribes have rights reserved by treaty with the United States to take fish and wildlife that occupy their usual and accoustomed places. To our Tribes, these treaty resources are not seen as an amenity, but are integral parts of their cultural identity. Lands comprising four of the five ranger districts that make up the Olympic National Forest in part constitute these places. Because the USFS plays a stewardship role in management of these various treaty resources, there is both the responsibility as well as a legal and moral obligation to ensure that extraction/utilization of one resource (eg. timber) does not significantly diminish others (eg. fish and wildlife).

Because of the overall emphasis on production of timber from national forests in Region 6, the management of fish and wildlife habitat resources and water quality has received what amounts to token consideration. Our hope was that the various alternative strategies detailed in the ONF Plan would remedy this long standing deficiency. We are disappointed that it has not done so.

7850 N.E. Little Boston Road • Kingston, Washington 98346 • Kingston (206) 297-3422 • Seattle (206) 6-

Fish and Water Quality

The DEIS/Plan, although laudable in several respects, has a number of dubious assumptions and shortcomings. For example, it generally discusses anadromous fish without separating any of the various species. Spring chinook are totally ignored in the analysis, despite ongoing federal (US Fish and Wildlife Service priority species), State, and Treaty Council efforts to inventory remaining stocks and implement restoration programs. Similarly, on-forest fish habitat that is above a natural barrier to upstream migration by salmon and steelhead, but that receives substantial annual plants of juvenile chinook and coho salmon (eg. the Hamma Hamma system), is counted as contributing solely to resident trout production.

Although it is generally recognized that the various species and their respective life stages have distinct habitat requirements, the Plan assumes that for all species, rearing is the primary habitat component that limits the productive potential, ie. the ability of a particular stream to produce fish. Our state of knowledge regarding density dependent and density independent factors limiting anadromous fish populations is insufficient to categorically and blindly accept this assumption. Spawning and adult holding habitat, as well as spatial and temporal partitioning of rearing habitat among various species is largely ignored in the overall strategy to provide for suitable habitat.

The DEIS and Plan reflect the assumption that all on-forest and off-forest river habitat (indirectly subject to the consequences of on-forest timber harvest activities), would be fully seeded if current adult salmon/steelhead escapement goals (1983-84) were achieved. This assumption has been difficult to test; and providing only for these levels of adult escapement may foreclose future options to sustain greater populations or allow for recovery of species not factored into the analysis, such as spring chinook.

It is acknowledged that timber harvest activities on the ONF affect fish populations and their habitats is two ways: 1) by increasing the amount of sediment entering streams from roading, mass soil failures (mass wasting, culvert sluice-outs, etc.); and 2) by reducing the amount of large organic debris (LOD) recruited into stream channels that stabilize the channel and provide structural complexity to the important habitat.

Sediment

Increased sediment entering surface waters is considered by some to be but a minor consequence of industrial forestry. The construction, maintainance and use of roads is a major contributor to increased erosion leading to increases in both turbidity in the water column and the percent of fine particles that clog the spaces between gravel that harbor incubating eggs and alevins. An incremental increase in sediment entering a

stream above that input expected from natural levels (the background level) has a consequent direct relationship to the decrease in the suitability of the instream fish habitat to support fish. The probable consequences of increased sediment related to timber harvest on specific drainages and their respective fish resources were assessed, but not all site specific information is provided to the reader of the DEIS/Plan. The projected sediment loadings were combined and averaged over the entire forest. This masks the true impact for a particular drainage, and misleads the casual reader into thinking that the sediment related impacts to fish resources will be reduced an average amount on each river. The stated reduction in sediment "forest-wide" after the first decade is claimed to benefit fisheries resources. As noted, this reduction in sediment is primarily attributable to reduced road construction and use and timber sales on the Shelton Cooperative Sustained Yield Unit, which affects the South Fork and a portion of the off-forest mainstem Skokomish River. What is acknowledged is that Simpson Timber Co. instead of harvesting federal timber, will in the next several decades, be harvesting on their own lands within the SCSYU. This will undoubtedly result in increased road construction/use, with a consequent increase in sediment entering surface waters. Since the SCSYU has the dubious distinction of having the highest road density of any forest in R-6, this increase in harvest on Simpson lands may negate or exceed any sediment "savings" claimed in the Plan. To keep the timber output from harvests on-forest at current or anticipated levels, other areas will have to take up the slack from reduced SCSYU sales.

Using the Forest Service's own figures, the current forest wide estimated sediment load is 241,400 tons/yr., with an estimated 90,140 tons/yr attributable to natural background levels (pp. IV-19 of DEIS). This means that the past and current timber harvest activities have increased the sediment levels entering Penninsula rivers and streams above natural levels by an average of 170%.

The Plan assumes that this level is an acceptable benchmark from which to judge the costs and benefits to fisheries resources under the various alternatives. The past and current timber harvest strategy has in effect, been subsidized by sediment induced losses in commercial, sport and Indian treaty fisheries. Using a relationship provided by the Forest planning staff (origin unknown) between sediment yield increase (over background levels) vs. decrease in fish biomass production, this 170% increase amounts to a 25% loss of fish from smaller streams and a 53% loss from larger, moderate gradient streams. These impacts have never been mitigated for and have been dismissed by the USFS as merely part of the cost of doing business.

No specifics were presented in the DEIS/Plan for individual rivers, but upon request your staff provided the Council with the details of the in-house analysis of sediment yield percentages for all the on-forest rivers entering Hood Canal and the Strait of Juan de Fuca, under each of the alternatives considered in the DEIS/Plan. Each of the alternatives has its own anticipated sediment level, all of which greatly exceed background; even though some alternatives improve on the existing situation for specific rivers. Looking at the preferred alternative "C", in terms of the associated sediment yields for particular rivers: sediment entering the west Strait streams (ie. the Elwha, Lyre, Twin and Pysht rivers) would increase to levels estimated at 333% greater than natural levels, and 208 % over existing levels. These rivers are now at only 67 % of their original capacity to produce fish, and the projected impact levels on fish habitat in these rivers would further reduce the productive capacity by about 25 % more. These rivers have been the subject of considerable interagency discussion concerning a coordinated strategy to restore fish habitat quality and quantity. All of the alternatives would negate any benefits from such rehabilitation efforts, because all would increase sediment in these rivers above existing levels.

Granted, the sediment projections for rivers draining into Hood Canal look better, with some even enjoying a reduction below current levels, but we are not inclined to take additional losses in some areas for merely a diminished loss (masked as a overall inprovement) in others.

Riparian Standards and Guidelines

The LOD issue is assumed to be adequately provided for in the updated riparian management standards and guidelines (pp. IV-80 of the Plan), although these are so vaguely defined that they provide little assurance to the reader.

Critical habitat areas for anadromous fish (in particular chinook salmon) and for species of special concern should be identified on maps. It would be most useful for these maps to be indexed by management area designation so that the standards and guidelines that apply to these habitats can be easily found and understood. Eliminating or minimizing adverse water quality impacts and providing for critical fish spawning and or rearing habitat for species of concern such as chinook should be a key element of the Final Plan. Standards and guidelines for all activities which could affect these areas should afford considerable protection and should be clearly described.

The existing quality of fish habitat in individual drainages should also be presented. This could be accomplished by preparing a listing and standards that apply as an appendix to the final documents. This would present the existing habitat condition of individual streams, along with the

standards which would be applied to them, measured as percent of biological potential. Presenting the information in this way would make readily apparent whether a stream is to be managed forrecovery versus a specific acceptable level of degradation. By showing whether existing conditions are above below the fisheries-related standards by drainage, this approach would eliminate the possibility of masking water quality impacts by averaging among affected and unaffected drainages. It would also help describe both the basis and the need for such potential management decisions as deferring particular drainages from timber harvesting or other activities. Since the DEIS describes fish (in terms of habitat condition only) forestwide, we cannot determine whether the proposed Plan adequately protects this beneficial use.

Coordination

The National Forest Management Act (NFMA) requires close coordination by the USFS with the various key players in the complex arena of Pacific salmon and steelhead management. Yet little evidence of either coordination or awareness of ongoing management efforts is reflected in the DEIS and Plan. For example, there seems to be no recognition of the impetus and policy directive for habitat and water quality protection under the US-Canada Salmon Interception Treaty, the Salmon and Steelhead Conservation and Enhancement Act, the Puget Sound Water Quality Authority's Plan, the Pacific Fishery Management Council, the Clean Water Act, to name a few. Also, as stated, the USFS does not attempt an analysis of the management situation off-forest, assuming that impact levels to fish, wildlife, water quality, etc. will remain static. No mention was made of the pending implementation of Puget Sound-wide efforts to reduce non-point sources of pollution, of which sediment is a major component. This ignores possible cumulative impacts, and possible opportunities to institute a coordinated watershed approach to minimize overall impact levels. There is no mention of the Salmon and Steelheaad Management Plans for Hood Canal, the Strait of Juan de Fuca and the Coastal areas (that are in effect, Federal Court orders), nor of the Comprehensive Resource Production and Management Planning (CRPMP) initiative now underway to further satisfy both court ordered co-management directives and Federal legislative mandates. The temptation to manage habitat in a void is strong, but the Forest Service can no longer isolate its activities from the larger arena of fish and wildlife management.

Enhancement/Rehabilitation

In the DEIS the role of enhancement of fish habitat is credited with having the potential to increase on-forest fish habitat capability and persumably fish production forest-wide by approximately 20% per year by the end of the first decade (see DEIS p. IV-38 par. 3). Unless this is a misprint, this projection is nothing short of fantastic, resulting in a 100% increase in habitat carrying capacity after the first decade.? Yet, there is no attempt at substantiation, nor description of the specifics of the program.

Not to argue semantics, but we must differ with the use of the term "enhancement" which seems to imply that the fisheries resource and the tribes are benefiting in excess of what has been lost. We would suggest that this program include the reference to rehabilitation, in recognition of reducing the compensation debt already incurred through past and current forest practices.

On the down side of the program... we learn in reading the Plan that implementation of the "enhancement" program is dependent upon adequate funding, which seems to imply that in reality implementation may fall far short of the ideal of a 20% per year increase in fish production. It further implys that there will competition among various projects for funding. What criteria would be used to make these determinations? What existing information about the condition of on-forest streams now exists, how old is it and what level of detail does it involve? To our knowledge neither a comprehensive inventory of rehabilitation needs/enhancement opportunities, nor the necessary coordination with the tribes and state management authorities has been completed. Such an exercise would take some time and more than likely would postpone start up of the program.

Soils/Slope Failures

The Draft EIS presents a general discussion of high hazard soil and slope conditions on the ONF, stating that those areas with a known high risk of mass wasting and soil erosion potential have been removed (through the suitability stratification process) from the inventory of lands suitable for timber harvest. The Forest's soil inventory provided the basis for this determination, but no details are given in the discussion as to the criteria for "high risk". This should be summarized in the FEIS in such a manner that readers can easily compare the soils information and relative risk of mass slope failure with information on harvest rates and the nearness to critical habitats such as spawning and rearing areas for anadromous fish and other species of concern. Maps that show these various boundaries would be helpful. The effort to

identify specific areas having even a moderate risk of mass failure, and to identify and require special management direction for those lands, is important for two primary reasons. First, one large mass failure can in a short time result in more water quality and fish habitat degradation that a wide variety of other activities occuring in a watershed over several decades. Second, to the extent that high to moderate hazard areas are known and can be managed appropriately, mass failures or excess erosion resulting from planned activities on the Forest would have to be considered avoidable. As is correctly stated, ..."those alternatives with the highest harvest levels are assumed to have the highest probability for increasing slope failures...", because "they entail more road construction and more acres on which trees are removed" in areas of steep, unstable soils (see p IV-17 of DEIS). Obviously, these alternatives would have a consequently greater impact on fisheries resources than the lower volume alternatives. Any increase in fisheries habitat degradation is unacceptable.

Cultural Resources and Indian Communities

The Appendix (pp.B-102 & 103) implys that a Tribal member's free exercise of his or her treaty fishing right is merely the expression of "traditional values and beliefs". It further states that many individuals within a given tribal community reley on timber harvest and its spinoff industries for employment and income, which is true. The suggestion is made that these two lifestyles are inherently in conflict, and if Indian communities wish to reduce this conflict, they shoud endorse the alternative that would "not change the existing balance between [timber related] employment-oriented and tradition [fishing]-oriented values", ie. vote for the preferred alternative or the status quo. We might suggest that there is a fundamental misunderstanding on the part of staff responsible for this statement. Consistently throughout both the social impact and economic valuation sections of the DEIS, the role and importance of treaty fishing has been grossly understated. It is the policy of the four Treaty Council Tribes that any activity done by others that significantly diminishes either the fisheries resource directly or the free exercise of the treaty right, is an affront to that right. The USFS has been repeatedly reminded of its trust responsibilities in this regard, but has been less than vigorous in their fulfillment. Individual tribal members are employed in the forest products industry by choice or by necessity. But few would elect to trade off their treaty guaranteed fishing right for the vague assurance that their job might be more secure. Further, the Forest Service cannot assert that treaty Tribes need make this choice. Fish and the taking of fish is more

than an amenity, it is integral to the identity, sovereignty and cohesion of the Tribe.

There has been little direct effort on behalf of the ONF to consult with or inventory the cultural and religious areas and forest products within its domain that may be significant to Indian communities. The Native American Religious Freedom Act requires consideration of such values in the formulation of long range plans for management of federal lands, yet no suggestion is made as to when, in the process, such efforts may begin.

Economics

Because of the complexity of the economic component of the DEIS/Plan and because the Tribes are not always in a position to review and respond to what are typically culturally biased assesments of the valuation of various resources, the Northwest Indian Fisheries Commission contracted for an independent review of this aspect. The attatched report identifies certain inconsistencies and apparent shortcomings in the analysis and characterization of the fisheries. This report should be considered as part of this formal comment, and as such we would appreciate incorporation of a response in the FEIS.

Wildlife

Practices that lead to protection of fish resources and water quality generally provide additional benefits to wildlife communities. The maintanence of a diversity of wildlife habitats in sufficient spatial and temporal distribution is an important and necessary part that the Forest provide. Old growth in particular, is now largely confined to federal lands. Not only do old growth forests provide necessary habitat requirements for those species dependent wholly or in part on it, but it preserves management options for the future, provides stability to hydrologic cycles that affect water quality and quantity, and preserves places that by there nature are culturally significant to tribal members. The management prescription for old growth is too low.

Treaty Tribes have a reserved right to utilize wildlife species for subsistence, religious and ceremonial purposes. The exact allocation of this right is now the subject of discussion with the State of Washington. We are concerned that the high timber yield options will by their very nature forclose opportunities to have flexibility in the management of deer and elk, because such harvest intensity will not provide for adequate winter range (primarily old growth forests) needed to sustain and rebuild localized populations.

In the discussion of bald eagles on pp. IV-29 of the DEIS, there is no mention of provisions for providing either winter habitat or night roost habitat for these federally classified threatened raptors. This oversight should be corrected in the FEIS. Old growth conifer forest has been shown to be used as night roost habitat by wintering bald eagles in Western Washington.

Monitoring and Evaluation

The monitoring of the environmental effects of timber harvesting and related resource extraction activities forms the core of our ability to judge the efficacy of the standards and guidelines intended to protect these important resource values. We would encourage the Forest Service join with other resource management agencies in an effort to coordinate the individual monitoring elements outlined in the Plan. To the extent that methods and parameters can be agreed upon and sampling stations and schedules coordinated, a forest-wide data base could be developed that would aid effective management decisions. Such an effort is now developing in the TFW agreement that sets policy for timber harvest on state and private lands within Washington.

Monitoring cannot in itself be of much use unless there are mechanisms to use the information gleaned from the program to change the way activities are carried out. A discussion is needed on how the monitoring information is to be used in this adaptive management strategy. [You might refer to Dr. Kai Lee's recent paper on the application of adaptive management to the efforts at restoring fish and wildlife populations to the Columbia Basin]. For example, at what threshold would observed monitoring information trigger a change in management prescription? At some point in time would certain options be precluded, such as in the case where it was found that not enough old growth forest was provided?

Additionally, we have some problems with elements of particular monitoring protocols as follows:

1) Fish habitat

There is no provision to monitor the success of the enhancement projects. There is no point in continueing with a program of instream habitat improvement unless it can be demonstrated that they are being used by the fish resource they are intended to benefit. Also, using 100 m observation reaches that are undefined in their proximity to areas of active logging/roading would seem to provide little useful information in which to base future management prescriptions.

2) Water quality

What justification is there for using the existing sediment levels found in on-forest basins as an acceptable standard by which to measure relative increases or decreases in sediment load? As stated earlier, these levels are several

times in excess of natural levels in some cases. What water quality standards will be used? Some effort to quantify streamflow would also seem appropriate.

3) Wildlife

The methods suggested seem to allow for considerable individual variation because they involve a subjective evaluation of habitat quality. The approach seems rather simplistic and inherently risky in terms of species management. Close coodination with interested Tribes and the WDG would appear quite important to the success of this effort.

In conclusion, we believe that much of the information and analysis that were not in the draft documents does exist, and that the Final EIS and Plan can adequately and reasonably address our concerns. In doing so, some important revisions tothe preferred alternative may be necessary. Once you have had a chance to consider these comments, we would welcome the opportunity to assist during the revision process. We are hopeful that the Final EIS and Plan will afford prioity protection to those fish, wildlife and water resources that are critical to our Tribal constituents.

Sincerely,

Stephen C. Ralph
Habitat Management Biologist

THE PROPOSED U.S. FOREST SERVICE OLYMPIC NATIONAL FOREST PLAN:
REVIEW OF THE ECONOMIC ANALYSIS RELATED TO FISHERIES ISSUES
FOR
THE NORTHWEST INDIAN FISHERIES COMMISSION
by
Gibson Economics, Inc.

Introduction

The Olympic National Forest Plan covers a multitude of issues that will be affected by the planning and use of the Olympic National Forest over the next 150 years. Due to the nature of the Forest's resources, and the management focus of the U.S. Forest Service, the majority of the analytical attention has been devoted to the timber management and valuation aspects of planning. Other values, including fisheries, have been discussed at fair length, but the specificity of their values, and their interrelations with timber in producing the overall economic and social values of the Forest's outputs, have not always been addressed at a comparable level of detail or sophistication.

This review describes key fisheries elements of the Plan and their strengths and weaknesses. This discussion is divided into issues of methodology, assumptions, and aspects of fisheries values that are not adequately addressed in the Plan.

I. Methodology for Assessing Fisheries Values

FORPLAN. This is a "linear program" type of model, used by the Forest Service to analyze choices involving a wide range of resource output types. It incorporates interrelationships among those outputs, values assumed to apply to the various outputs, and constraints that affect one or another of them.

FORPLAN is a very sophisticated model, with variants of it used by many forests. It is capable of producing "optimal" results for various problems posed to it, and the key to its use is reasonable selection of the inputs, resource values and constraints that make it run.

In the context of fisheries of value to the tribes of the Olympic Peninsula, there are certain key ingredients of an integrated analysis that are not encompassed within the FORPLAN model. One in particular is the set of fisheries enhancement activities contemplated by the Plan. Another is the incorporation of off-Forest fisheries values as benefits in an overall valuation of Forest resources. Neither is reflected as it actually occurs in the optimization routine of FORPLAN, and it is unclear how much their inclusion would affect the results if they were incorporated directly, rather than treated as discrete adjustments (see below).

Fish Response Model and Estimation of Maximum Output Potential. The fish response model is the basis for selecting coefficients used in the Plan to assess the quantitative tradeoff between sediment loadings and fish production in the ONF. ("A Method for Predicting Fish Response to Sediment Yields", USDA Forest Service Intermountain and Northern Region working draft, 1980). FORPLAN explicitly incorporates these tradeoffs, using as assumptions the specific tradeoffs estimated in the paper. Applying this to the case of the Olympic National Forest, it determines the maximum fisheries output potential by assuming the elimination of all non-natural sediment production and calculating the impacts.

Since this sediment/fish-response model is the only basis for directly assessing the tradeoffs between timber and fisheries in the Plan, its basis should be analyzed carefully. In this review, that analysis has not been possible. It appears, however, that the paper used is one that calibrated its relationships on the Idaho batholith. The accuracy of its application to the ONF is thus highly questionable. Furthermore, the sediment degradation of fisheries estimated seems small, compared to the coefficients in the Idaho paper.

IMPLAN. IMPLAN is a second major Forest Service model used in the ONF Proposed Plan's economic analyses. This model produces estimates of employment and income impacts associated with various prescriptions and their sets of resource outputs. The model is an "input/output" type of model designed to capture the effects throughout the economy produced by various changes in final demand or production. To do this, it relies on estimates of the interdependencies among sectors of the economy. With this information, it produces "multipliers" that indicate the increase in the total economy's employment and income impacts associated with the direct impacts described in the Plan. The total impacts include indirect and induced economic activity as well.

The USFS model used for this purpose (IMPLAN) is reasonably designed, and has been reviewed extensively. The main question concerning its use for producing estimates of social and economic impacts is its completeness.

In terms of completeness, there are two specific issues for the Olympic National Forest fisheries. First, the Plan treats off-Forest fisheries impacts as changes in costs rather than as changes in benefits. That is, if an alternative decreases the fisheries production off-Forest, it is treated as an increased cost associated with that alternative. IMPLAN, however, relies on the direct values of the FORPLAN results to produce its economy-wide impacts. It is not clear that the impacts of off-Forest fisheries enhancement or degradation associated with various alternatives are picked up by the Forest Service's methodology. If not, the effect would be to understate the costs, in terms of both commercial and recreational fisheries losses, of high harvest prescriptions, and to understate the fisheries benefits.

Since the social and economic impact analysis presented in the Draft EIS and Appendices estimates severe employment losses associated with some of the alternatives that have high fisheries values (particularly Alternative I), this sort of bias could change the relative desirability of the alternatives, although it is not clear to what extent.

Second, IMPLAN is not designed to weigh benefits to the Indian tribes affected

by the Proposed Plan. It is a "neo-classical" economic model that is geared to the quantifiable values of the non-Indian economy. As such, it cannot effectively describe socio-cultural impacts on tribes of its own economic tradeoffs. Further, it does not appear even to acknowledge in its own terms any value of subsistance fishing by the tribes.

Adjustment for Enhancement Activities. The Plan includes a specific range of habitat enhancement activities on all the river systems of the Forest, in order to improve the fish survival rates and eventual harvests. The types of enhancement improvements offered are geared to rearing habitats. This suggests that rearing habitat, rather than spawning grounds or escapement, is the limiting factor in fish production, or that all are contributory. There is no empirical substantiation offered to support this approach.

The gains attributed to this enhancement program (which does not involve a cost in terms of reduced timber harvest) are roughly 20% over the current level of fish production. With small costs entailed for the program, it is reported that there would be a high Benefit:Cost ratio, and that this program would be very cost-effective. The 20% gain in fish production is very sizable, and should be documented, but has not been.

Aside from the fact that this program is not treated within the same overall planning model as other impacts, its cursory economic analysis is puzzling. If the program does, as suggested, have a high Benefit:Cost ratio, and given that it is potentially expandable, why is there not an even greater devotion of resources to this enhancement program?

Treatment of Off-Forest Fisheries Impacts as "Costs". The off-Forest fisheries impacts of Plan alternatives are reflected in the FORPLAN model, but as costs rather than resource benefits. This peculiarity has two potentially troublesome ramifications. First, it makes it more difficult to assess the magnitude of the direct fisheries benefits associated with each alternative relative to other resource values, since the direct benefits reported only involve on-Forest fisheries production. Second, it may introduce bias into the approach the Forest takes to estimating the calculation of employment and income benefits with its

IMPLAN model, subsequent to the FORPLAN direct impacts (see above).

II. Assumptions Concerning Fisheries Values

Value of A WFUD-Anadromous. The Plan assigns a value of $33.00 per WFUD for recreational anadromous fishing. This value is arrived at through a judgmental review process described in Appendix B (pp. B-73,74). It is derived from a base value estimated using the Travel Cost Method (TCM) of valuing non-market goods associated with Forest management, a method that is acknowledged by the U.S. Water Resources Council.

To derive specific values with this method, the Plan reports that:

> "In-service experts and academic specialists reviewed the activity values and adjusted initial values to achieve methodological consistency in applying them to regional conditions." (DEIS Appendices, p. B-73)

However, it is then reported that "these values were subsequently adjusted downward" by 37.5%, based on the Plan drafters' contention that TCM estimates tend to overstate actual values. The $33.00/WFUD figure is the result of this adjustment.

By way of background, the TCM focuses on travel costs of those engaging in recreational activities, deriving implicit revealed demand curves on that basis. As pointed out by Darryll Olsen (in "Hydroelectric Power Development on the Hamma Hamma River System: Economic and Institutional Factors Affecting The Indian, Commercial, and Sport Fisheries", FERC No. 3178, February 1987):

> "It is generally accepted that the TCM provides a conservative estimate of benefits gained (or the value thereof) by those enjoying the recreational experience."

This is directly at odds with the Plan's statements that TCM values, "represent total willingness to pay...and [must be adjusted downward] to make recreational values more compatible with values used for other resource outputs", and that TCM values "may be on the high side when applied to average situations on a region-wide basis".

Even after the Plan makes this decision, its basis for implementing it is arbitrary. It is assumed that there is a market price and demand for non-Forest recreation, and that to "sell" the additional recreation associated with the Forest lands, it would be necessary to lower the price (or, in the USFS interpretation: value) of that recreational experience. This is not logically consistent with their method of valuation, and introduces a sizable downward bias in estimation of fishery values in the Plan.

Value of A WFUD-Resident. The same basic approach is taken here. After enlisting the "in service experts and academic specialists" for selecting a base value based on the TCM, the Plan discounts the result of that review by 37.5% again. The result is a value of $15.00/WFUD.

The same objections can be raised with respect to this derived value. To readjust for the arbitrary ad hoc adjustment, it would be possible simply to increase the two values by 60% each, to return them to their corresponding directly estimated values of $52.80/WFUD for anadromous fishing and $24.00/WFUD for resident fishing, values which Olsen's commentary suggests are still conservative, since they are based on the TCM approach.

Another approach is to compare these values with others derived for similar activity in the Northwest. In Olsen's study, he derives values of $72.09 using the TCM approach, and $126.80/WFUD using the alternative Contingent Valuation Method (CVM), which is also accepted by the U.S. Water Resources Council. These alternative values represent further increases of 37% and 140%, respectively, relative to the original unadjusted anadromous fishing value developed for the Plan, in addition to the logically necessary 60% increases.

In summary, this review suggests that there could be considerable understatement of the non-commercial fisheries values, based on the points discussed here.

Commercial Fish Value. The Plan assumes that there will be a constant value of $1.05/lb for commercially harvested fish produced on-Forest or off-Forest as a result of the management prescriptons of the Plan. One basic question

concerning the commercial fishery output value is whether it amply reflects the full range of commercial values. This is discussed from the consistency standpoint below. A second question concerns the value of the subsistence fishery to the tribes who have Treaty rights to certain harvest shares and maintenance of runs. This is also discussed below.

Change in Values Over Time. There are different assumptions for the rate of growth in unit values of timber versus other resource outputs over time. Timber values are assumed to increase in real value (i.e., inflation-adjusted value) at 1% per year over the planning period. Other values, including fishery values, are assumed to remain constant in real terms -- or in other words to increase at the same rate as general inflation.

This combination of assumptions places a high premium on timber output values in the economic comparisons made by the Forest Service's planning models. To gain some perspective, the differences in relative values, starting now, at ten-year intervals would be the following:

Year	Timber	Fisheries
Present	1.00	1.00
1997	1.10	1.00
2007	1.22	1.00
2017	1.35	1.00
2027	1.49	1.00
2037	1.64	1.00

This combination of assumptions clearly accentuates the relative values of timber outputs over time. A possible rationale for increasing real timber values (although not presented in the Plan) is that there will be increasing relative scarcity of timber-growing land as the population increases. If that is the basis for the Forest Service's assumption, however, it would apply equally to fisheries, as illustrated by the Plan's discussion of the "supply" and "demand" for fisheries resources presented on pages III-78 through III-82 of the Draft EIS on the Proposed Plan. The increased population pressure on a fisheries system with physically defined limitations suggests that there would

be similar increases in the real value of this resource.

The effect of this Plan assumption is to further bias values for any alternative in favor of timber production relative to other values.

III. Aspects of Fisheries Values Not Adequately Addressed

Fish Values Beyond Dockside. The Plan uses ex-vessel prices of salmon as the valuation unit for assessing the economic benefits from commercial fishing. Obviously, this is not a complete measure of the economic value attributable to the fishery. The appropriate questions concerning this approach, however, are (1) whether timber and other sources of value have been treated comparably, and (2) whether there is any bias imparted to the Plan's economic results as a result of this treatment.

On the first question, timber values are adjusted by logging costs within the FORPLAN model, so that the net value that enters into the PNV analyses are stumpage values. These are comparable to the ex-vessel values of fish, which covers the first requirement for comparability.

On the second question, the total value to the economy of a type of economic activity depends on the pattern of its interrelationships with other sectors of the economy. This is one of the aspects of the IMPLAN model described above. Depending on the accuracy of the IMPLAN parameters, this criterion may also be met.

Differentiation Among Anadromous Fish Values. The values per pound for various species of salmon differ considerably, which poses a question as to the validity of the $1.05/lb uniform value used by the USFS in the Plan. A recent study of the effects of Hamma Hamma hydroelectric development estimated that ex-vessal prices for Puget Sound salmon ranged from $0.34 to $2.74/lb, depending on the species. The weighted average, based on Puget Sound catches (in 1984 $) was $0.99, while that from the Hamma Hamma was $0.57 and the Indian Allotment of the Hamma Hamma catch was $0.61. Based on this limited corroborative evidence, it appears that the Plan's average ex-vessel price is reasonably accurate.

It is less clear how uniformly it applies to the various rivers affected by the Olympic National Forest's management. If the management prescriptions were to imply particularly significant harvest activity in rivers that produce the more

valuable species, there would be a significant change in the value using the Plan's value approach. Since the Plan does not provide any information on the distribution of the sedimentation losses by river, nor of the commercial salmon mix by river, it is difficult to tell how accurate the estimates of economic value and loss presented in the Plan may be.

Subsistence Fishing. Tribal fishing includes a subsistence element in addition to the commercial and sport fishery elements that are addressed more extensively in the Plan. This Treaty-granted right involves a different sort of benefit from those modeled for other fishery elements, and one that does not fit as easily into the Forest Service models.

It is implicitly assumed that all tribal fisheries benefits are "commercial" and valued at $1.05/lb. Yet, to the extent that fish are retained for consumption by Indian fishermen, that fact alone indicates that there is a higher value than the available $1.05 associated with that consumption. It is not clear from the Plan documents whether such direct consumption values are excluded altogether, or simply understated by inclusion with the other commercial values. In either case, there is some degree of underestimation of the fisheries benefits to Indian fishermen, which biases the Plan's analysis in the direction of selecting more timber-intensive resource use prescriptions.

Indian Tribes' Role in Recreational Fishery. The recreational fishery is addressed extensively in the Plan, although there are apparent problems with some of the assumptions underlying its valuation (see above). An aspect of the recreational fishery not addressed is the role of Indians as market participants in the recreational fisheries. There are recreational activities such as fishing services, in which the Peninsula's tribal populations play a part; there are also impacts on tribal revenues from licensing for fishing on tribal lands, whose productivity is affected by the Forest's management. The Plan does address the issue of off-Forest fisheries benefits (with some potential shortcomings described above), but not the role of tribal members in the direct and indirect benefits of off-Forest fisheries.

QUILEUTE FISHERIES
Quileute Indian Tribe
POST OFFICE BOX 187
LA PUSH. WASHINGTON 98350
TELEPHONE 206-374-6163
Extension 226 and 227

Forest Planner
Olympic National Forest
P.O. box 2288
Olympia WA 98507

Dear Sir/Mada

The Quileute Fisheries Department appreciates the opportunity to comment on the Management Plan for the Olympic National Forest. Our comments will be limited to areas related to the fisheries resource since this resource is basic to the lifestyle, and the heritage of the Quileute Tribe. General observations on the DEIS are:

1. The methods used for evaluating the fisheries effects need to be detailed since adequate review of the results cannot be obtained without knowing the methods used to generate the data.

2. The fisheries effects for each river system need to be analyzed, and detailed in the DEIS since each river system affects a different population.

3. The minimum management requirements for fisheries habitat are not detailed to allow proper evaluation of these requirements. If the forest is to be managed for minimum habitat requirements, then a review of these criteria are required.

4. The protection of riparian habitat is mentioned in the DEIS, but the criteria for riparian protection are not detailed. These criteria must be available to allow an outside evaluation.

5. The Forest Service has acknowledged their responsibility to protect the habitat required for the tribal fishery with the formation of the "no harvest" corridor on the South Fork Skokomish and the West Fork Humptulips Rivers, yet has not provided this protection for all systems with a treaty fishery. The protection of one or two rivers does not protect the fishery resource nor does it

protect the tribal right to a fishery. This type of protection should be applied to all river systems with a tribal fishery.

6. The promise of fisheries enhancement work continues throughout the DEIS, without any mention of dedicated funds for this work. With the current trend of reduced Federal spending, funding for enhancement work should come from dedicated funds to increase the probability that this work will be completed despite budget cuts.

7. No mention of a monitoring program to detect immediate, and cumulative effects of timber harvest is mentioned, yet this is required to insure that only minimal habitat damage occurs from timber harvest activities before it is detected and corrected.

8. The Soleduck and Calawah river systems are managed for maximum timber harvest in Alternatives A through D with the related habitat damage. Despite the changes in timber harvest in these different management plans the fisheries effects on the Quileute River system will remain unchanged since the forest management remains static in this drainage, although the estimated fisheries production for the National Forest increases with the decreased timber harvest in Alternatives C (departure), C (preferred), and D (departure). The predicted increased fisheries production in these Alternatives are achieved despite the probable decline in fisheries production in the Quillayute River. It appears that the Quileute Tribe will suffer a decreased fishery in order to protect the scenic, and recreational values on the Eastside of the Olympic Peninsula. This violates the trust responsibility of the Forest Service to protect the habitat required for Tribal fisheries.

9. The data provided in the DEIS does not support the extensive timber harvest planned for the Soleduck, and Calawah Rivers. Page III-20 states that adjacent non-National Forest lands "have much lower erosion rates and gentler topography" while on page III-21 the Calawah River is listed as a river for which "broad-level mitigatation on National Forest land may be necessary in the future" due to its high potential for adverse cumulative effects. These statements support a reduced cutting in both the Soleduck and Calawah drainages, yet this is not proposed in any alternative which provides even a moderate timber harvest for the forest as a whole. While admitting that mitigation may be needed, there is no monitoring program, nor is there a guarantee that needed mitigation will be accomplished. In addition, should the habitat destruction require mitigation, the management plan must be altered for a reduced timber harvest to protect the remaining habitat. The management plan should not require mitigation for habitat loss, and the need for mitigation is sufficient

cause to rewrite the management plan on the affected drainage. Any mitigation expenses should come directly from timber sales, and should be considered as an expense of intensive timber management. Timber sales where this expense eliminates the profitability should be reconsidered. The public should not have to pay to have the public resources destroyed in the name of timber management.

10. As part of the evaluation for inclusion in the Wild and Scenic River System, the Soleduck River is listed on page III-149 as possessing "fish" as an "Outstandingly Remarkable Value." The National Forest controls approximately fifty percent of the total anadromous reach of the Soleduck river, and affects approximately seventy percent of the anadromous reach, yet the drainage is managed for maximum timber production with only minimum habitat protection for fisheries production. The Forest Service should manage the Soleduck drainage to protect this "Outstandingly Remarkable Value."

11. The Calawah River drainage is nearly totally enclosed within National Forest, and is acknowledged as being susceptible to damage from timber management activities. The river provides substantial wild fish production, yet it is managed for maximum timber production. Again this is done without any monitoring program described within the DEIS.

12. The statement on page III-22 concerning the temperature data for the South Fork Skokomish River is of questionable value for predicting the cumulative effects of timber harvest for the entire Olympic Peninsula. The Skokomish river is an Eastslope river, and thus receives less solar heat in the afternoon hours than a Westslope river due to the shading of the topography. In addition, while 45 percent of the National Forest land had been cut, no mention of the age of the cuts was made, nor was the total percent of the drainage controlled by the National Forest given, thus comparisons to Westslope rivers in general, and the Quillayute system specifically are very questionable.

13. Statements are made throughout the DEIS concerning the increasing demand for Forest Service timber, yet no mention is made describing any long term planning with private or State timber managers which would shift the harvest to the National Forest at this time. Without a longterm commitment to a sustained yield harvest throughout the Peninsula, the timber industry is only a temporary industry. If private, and State lands are not managed for a sustained yield, then the Forest Service is not responsible for sustaining the timber industry alone. The volume of land in private, and State possession is equal to, or greater than that of the National Forest, and the timber industry depends on all of these sources. To rely on National Forest timber at an increased rate due to a reduced supply from other sources is a departure from historical timber management of the

National Forest for a sustained yield and will only provide temporary life for a timber industry destined to fail due to a lack of cooperative sustained yield management, and an accelerated cutting schedule for economic gains.

14. On page III-77 the statement that "Many coastal communities and Native American Tribes on the Peninsula rely somewhat on recreational and commercial fishery revenues" is misleading and boarders on being entirely false. The Native American Tribes rely on the fishery resource for a substantial part of their income while the fish are a major part of their culture. The importance of the fishery resource to the Indian Tribes cannot be minimized as is done in the above statement. In addition, the reliance of the fishery resource for many coastal communities is near total.

15. In the analysis on page III-80 the Hoh and Bogachiel Rivers are combined although they are separate drainages. In order to properly evaluate the effects of the Management Plan on the Quileute system, and for the Hoh system, these two distinct rivers should not be combined in the analysis.

16. There are some areas where the DEIS contradicts itself:

1. On page II-110 it is stated that a "lower quality " of habitat occurs from Alternative A (current direction) and from Alternative B (departure) compared to Alternative C (preferred), yet the predicted anadromous fish returns from these Alternatives differ only minimally. The vast differences in harvest level between the alternatives and the subsequent degradation in habitat quality make these estimates hard to accept.

2. The admitted habitat degradation from maximum timber harvest are not reflected in Table II-3a where the estimated fish and wildlife use in the year 2030 for Alternative B exceeds the estimates for both Alternatives A and C. This estimate is not consistent with the admitted additional habitat degradation and indicates that there may be some errors in the model used to predict this data.

3. Table II-3a also contains estimated anadromous commercial harvest for Alternative A which exceeds the estimates for all Alternatives except H and I in the year 2030 and this also contradicts the known effects of extensive timber harvest on fisheries habitat. To imply that fisheries production increases with increased timber harvest illustrates an error in the model which must be examined.

The Olympic National Forest is in a position of affecting a majority of the andromous reach of the Soleduck, Calawah, and Sitkum Rivers. These rivers contribute a major portion of the fisheries production in the Quillayute River, and are destined for timber production management through most of the proposed Management Plans. While the Forest Service admits that they "determine the quality of fish habitat through their management practices" (page III-101), they are managing the Quillayute drainage with only minimum habitat protection for fish production. The potential habitat degradation from the cumulative effects of timber harvest on the Soleduck and Calawah Rivers are admitted, yet steps are not taken in the Management Plan to prevent this damage.

In summary, the proposed Management Plan as described in the DEIS appears to place an undo hardship on the Quileute Tribe since most of the listed alternatives manage the Quillayute River system for maximum timber harvest. This management will result in a reduced quality, and quantity of habitat for fisheries production on the Soleduck, Calawah, and Sitkum Rivers which are major producers of anadromous salmonids. A management plan which reduces the fisheries production of the Quillayute River violates the trust responsibility of the Forest Service to protect the treaty right of the Native American Tribes. The Management plan appears to sacrifice the Soleduck District in order to protect the recreational and scenic uses of the Eastside of the Peninsula while maintaining the full timber industry. Additional protection for the Quillayute River system must be implemented in the final management plan for the Olympic National Forest.

The Quileute Fisheries Department does not endorse any of the given alternatives. The management plan should allow a sustained yield harvest of timber to protect timber related jobs, but must provide more protection for the Quillayute River System than is currently provided since the Quillayute drainage is managed for timber production in all alternatives allowing even moderate timber harvest.

Sincerely,

Mark W. Mobbs
Fishery Biologist

cc: Mel Moon

Dear Forest Supervisor:

Please consider my comments below as a response to the Olympic National Forest Plan.

1. I want the Olympic National Forest to be managed under the following alternative (check one):
   - [ ] Community Stability Alternative
   - [ ] Forest Service Preferred Alternative C
   - [x] Other
2. The Forest Service should provide land base needed to meet the timber supply needs of Olympic Peninsula communities:
   - [ ] Yes
   - [x] No
3. I think the Forest Service should rely more on the Olympic National Park to supply roadless type recreation, rather than using National forest land for this purpose:
   - [ ] Yes
   - [x] No
4. I [x] DO [ ] DO NOT support seasonal road closures for big game.
5. Recreation and visual land allocations on the east side of the forest should be:
   - [ ] Increased
   - [ ] Decreased
   - [ ] Kept the same [illegible]
6. I [x] DO [ ] DO NOT support recommending the Dungeness Gray-Wolf river system and Duckabush River for inclusion in Wild and Scenic River System.
7. The Environmental Impact Statement offers the alternative to terminate the Shelton Sustained Yield Unit (check one):
   - [ ] I think it should be terminated.
   - [x] I think it should remain the same.
   - [ ] I think it needs to be modified.
   - [ ] I need more information.

COMMENTS: Please consider writing a personal letter or comment below on specifics of how *you* think the Olympic National Forest should be managed and *why.*

The Community Stability Alternative appears to be based on false data and/or assumptions within the model. Indicator species dependent on old growth timber cannot increase with higher harvest levels as the [illegible]. Nor can fisheries production increase with the admitted habitat destruction from an increased harvest. This plan is essentially unchanged from the Forest Service Alternative A (No Action).

c/o Quileute Fisheries

(Signature)

P.O. Box 187
(Address)

LaPush WA 98350
(City, State, Zip)

PUBLIC COMMENT DEADLINE IS MARCH 14, 1987

Forest Supervisor
Olympic National Forest
P.O. Box 2288
Olympia, WA 98507

Attention: Forest Planner

10015

Quinault Indian Nation

POST OFFICE BOX 189 ☐ TAHOLAH, WASHINGTON 98587 ☐ TELEPHONE (206) 276-8211

April 14, 1987

Mr. Ted Stubblefield
Forest Supervisor
Olympic National Forest
P.O. Box 2288
Olympia, Washington 98507

Attention: Forest Planner

Dear Mr. Stubblefield:

Thank you for the opportunity to review and comment on the draft environmental impact statement evaluating alternatives for managing the Olympic National Forest. The Quinault Nation has elected not to take a position favoring any single alternative, but instead offers some general comments on the DEIS and the future direction for timber management on the National Forest. I recognize that our comments are being provided after the due date but I'm sure you'll find them helpful to your process.

As you know, the Quinault Nation is keenly interested in the fisheries resources of the region. Quinault people rely on the salmon and steelhead runs produced in a number of major rivers draining the Olympic National Forest; the runs have a vital role to the livelihoods and traditions of Indian people living along the coast.

The fishing rights of Quinault people are preserved through treaty with the United States, requiring federal agencies to protect fish habitat under their management which can affect treaty fishing. As such, the U.S. Forest Service has a legal responsibility to carry out forest management in a manner compatible with the maintenance of high quality fish habitat. Whichever alternative is finally selected must be implemented to achieve this objective.

The DEIS states that an overall goal of the forest plan is to maintain and improve fish habitat of species of concern. Your preferred alternative (C) appears to achieve this goal, as do several of the other alternatives (A and E-I). Summary analysis is presented in the DEIS, based on a sediment output model and effects of habitat enhancement projects, to support conclusions that the goal would be achieved under these alternatives.

We would hope that your conclusions are correct, but unforunately the Fish Habitat Capability Index is much too simplified to reflect what would likely occur under any of the alternatives. The DEIS states that actual fishery outputs could vary from estimates derived from the model, but given the com-

plexity of the stream ecosystems, the dynamic nature of fish populations, and our current level of understanding, this likelihood is greatly understated. Too little is said about how little is really known about fish populations on the Olympic Pennisula and factors regulating their abundance. Statistical confidence limits placed around the point estimates provided would necessarily be large, if such analysis could actually be performed which is unlikely.

An assessment of whether an alternative would actually achieve the stated goal, in this light, becomes exeedingly difficult if not impossible. The final EIS should be more transparent in this regard. It should also provide in appendix form the details of the model used and assumptions implicit in the analyis. Presentation of results of the analysis for a particular watershed would be helpful.

Under the Forest Service's preferred alternative, on-going habitat enhancement is required to achieve the stated goal of maintaining or improving existing habitat capability. Benefits of such projects are assumed; any analysis of real data would necessarily have been based on projects conducted elsewhere, likely in Oregon, because no such evaluation work has been conducted on the Olympic Pennisula. Because of the apparent importance being placed on habitat enhancement to achieve the fisheries goal of the plan, a well planned and consistent program should be instituted on the Olympic Forest to monitor and evaluate results of enhancement projects.

The final forest plan should identify criteria for both planning and evaluating enhancement projects and whether these criteria will be measured against data collected on the Forest or elsewhere. We recommend strongly that the criteria be measured against data from the Forest. The monitoring and evaluation program necessary to do so would also allow potential negative effects of forestry management on fish stocks of concern to be assessed, and to implement mitigation measures if needed.

I should add that the Quinault Nation supports the concept of habitat enhancement; we believe that natural production can be increased with judicious placement of structures to increase the amount of quality fish habitat. All habitat enhancement within a watershed, however, needs to be coordinated between the various management agencies and included as a part of overall watershed plans now being formulated by the tribes and State.

Finally, I would like to point out that the Quinault Nation recognizes the need for timber production on the National Forest and what it means to the economy of the area. Jobs for Indian people are being provided by logging and forest management as well as for non-Indians. We do believe that the two resources, timber and fish, can be jointly managed. We look forward to working with you as part of the management process for the Olym-

pic National Forest.

Thank you again for the opportunity to comment on your DEIS and proposed plan.

Sincerely,

Joe DeLaCruz, President
Quinault Indian Nation

HOH INDIAN TRIBE
HC 80, BOX 917
FORKS, WASHINGTON 98331

2 c

March 10, 1987

Forest Supervisor
Olympic National Forest
P.O. Box 2288
Olympia, Washington 98507

Subject: Hoh Tribe Comments on The Current Proposed Olympic National Forest 10 Year Plan--Forest Service Plan Impacts to Tribal and Other Fisheries Resources

Dear Forest Supervisor,

During our review the Tribe has concluded that the report is seriously flawed due to the Forest Service's lack of prior consultation with the appropriate entities who have specific vested interest and rights where water, fisheries and wildlife are expected to be impacted. Sufficient reference to known acceptable analytical procedures involving fisheries impacts could not be identified by our staff upon review of this volumnous report. The seriousness of these flaws is reflected by the inability to separate impacts so that separate entities with vested interest and rights could relate your plan directly to those interests.

The Forest Service must identify and resolve problems where their proposals will result in significant fishery losses for even a single Treaty Tribe. Below, we have identified more specific aspects of your plans which need to be addressed or which you need to respond directly to the Hoh and Quileute Tribes:

1. The Forest Service in its report fails to recognize the separate Treaty Rights of individual Tribes. The report only recognizes Indian people in the context of a minority group of some minor proportional economic concern. Economic benefits derived from Treaty protected fisheries have only been depicted in your report as part of the total economic benefits, all of which apparrently, may be subject to alteration under unilateral Forest Service actions.

   Does the Forest Service consider Tribal Indian economic benefits derived from individual Treaty Protected Tribal resources to be justifiably subject to change under unilateral Forest Service actions? What does the Forest Service consider its responsibility to individual Tribal Treaty Rights?

2. The report fails to address habitat productivity impacts on a run by run, river by river basis. What are the individual impacts? It is apparrent that the Forest Service proposes protections on the eastside of the Peninsula while allowing heavier cutting in the Solduc and a net fish loss there. Significant fish losses in the Sol duc of coho stocks for instance, could result in larger losses of fishing opportunity in the ocean, both on Quillayute River and other stocks of fish when the Quillayute River's fish runs limit overall ocean harvest rates. These losses would significantly impact all Indian and non-Indian troll fisheries in addition to the Treaty Indian and sport river fisheries.

3. The Forest Service fish impact analyses are strictly in-house with no discernable outside peer review. There has been no consultation with the affected fish management entities to gain agreement of analytical procedures or accompanying assumptions. Inability to provide sufficient background on your fisheries analyses for our review and suggested refinements prior to development of options prevents timely evaluation and resolution of conflicts with outside entities.

4. The Forest Service falsely implies that it has made an extensive effort to consult with the Quileute, Hoh Tribe and all other affected Tribes regarding planning for activities which impact fisheries. They have had no contact with the Quileute Tribe nor Hoh Tribe at a policy level regarding any planning aspects of this report.

5. The report's fish impact analysis admittedly only accounts for the impact of sediment generation from road construction. The tact taken in order to simplify the planning model that one needs only take the factor considered to have the highest impact into account is in serious error. Such a tact suggests that if there are multiple factors one may be only considering a small proportion of total impact. Steep slope erosion and mass slope failures are ignored. The report states that temperature regimes will increase above an optimum range even approaching or exceeding a level where fish have a directly attributable temperature related stress. The report fails to address the larger relative habitat areas affected by cumulative temperature increases downstream.

   The subtle yet significant decrease of fish survival which will occur when temperature fluctuates above a normal range for specific populations of fish within the habitat to which they are naturally adapted was ignored. This aspect of the report implies that the Forest Service will purposefully ignore temperature impacts which are any less severe than observable fish mortality events. Fish migration to more desirable areas increasing population density losses there is ignored.

   The most critical limiting summer low flow periods when density dependent losses are greatest coincides with those periods when increases in the temperature range above optimum also decrease fish production potentials. The stated views on the Skokomish temperature information are very argumentative since those views fail to acknowledge benefits of temperature levels maintained below the maximum survivable, the relative habitat strata amounts impacted to various levels or the effect of changed drainage aspects.

6. In a similar manner other impact factors such as large organic debris are only mentioned in the text as being set to achieve a mininum level. The Forest Service seems bent on denying the subtle yet signficant population and survival shifts which occur when habitat is maintained to a less than optinum quality. Fish populations naturally adapted as coho are to streams located in pristine forest areas will understandably have higher overwinter survival rates when the largest of root wads or stablest of debris jams (with large trees) occurs to provide good quality and quantities of hiding and cover habitat. Again managing to achieve mininum decreased levels of quality for all fish impact factors will cause additive losses of production which must be addressed in total. A significant proportion of fish populations must be maintained for strictly conservation purposes. Subtle losses to the total population will be taken strictly from the remaining surplus harvestable portion of the population.

7. Where the report admits fish habitat production potential may decrease dependent upon factors under Forest Service control but not foreseen or covered specifically by this plan, we have found no provisions to monitor the production potentials, the factors affecting production potential, re-evaluate impacts based upon updated information or any committment of Forest Service action to assure the pre-existing or proposed production levels.

8. The report's fish impact analyses is suspect because of the major contradiction that increasing timber harvest and sediment loads are coupled with decreasing fishery impacts in your options on one hand while increasing sediment loads were identified as increasing fishery losses on the other hand.

What fishery potential losses can the Quileute Tribe expect for its summer coho, fall coho, summer chinook, fall chinook and winter steelhead fisheries stocks from the Forest Service preferred options? We suspect they are major and critical to the Quileute Tribe and potentially to ocean fisheries. Each particular Tribal Government with its Treaty secured fisheries, fish habitat, and usual and accustomed areas encompassing federal land has been recognized as a co-equal partner to the federal government in respect to fisheries protection in those particular areas. The federal government and its agencies also maintain a trust responsibility to each individual Tribal Treaty Right. Large losses to Quillayute River fishery stocks may unacceptably impact ocean fishery levels where the Hoh Tribe maintains its Treaty Rights and it may impede comprehensive management planning efforts by reducing present incentives to invest in Hoh River Enhancement. Measures would need to be addressed to counteract potential impact losses.

Sincerely,

Lisa Ashue

Lisa Ashue, Vice-chairperson
Hoh Indian Tribe

cc. Sue Hvalsoe, Tribal Attorney
Mark Mobbs, Quileute Biologist

HOH INDIAN TRIBE
HC 80, BOX 917
FORKS, WASHINGTON 98331

2952

March 10, 1987

Forest Supervisor
Olympic National Forest
P.O. Box 2288
Olympia, Washington 98507

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Sincerely,

Lisa Ashue

Lisa Ashue, Vice-chairperson
Hoh Indian Tribe

cc. Sue Hvalsoe, Tribal Attorney
Mark Mobbs, Quileute Biologist

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JACK S. WAYLAND
Director

STATE OF WASHINGTON
DEPARTMENT OF GAME
600 North Capitol Way, GH-11 • Olympia, Washington 98504-0091 • (206) 753-5700

March 12, 1987

James F. Torrence, Regional Forester
Pacific Northwest Region
USDA Forest Service
Post Office Box 3623
Portland, Oregon 97208

RE: PROPOSED LAND AND RESOURCE MANAGEMENT PLAN AND DRAFT ENVIRONMENTAL IMPACT STATEMENT: Olympic National Forest

Dear Mr. Torrence:

Washington Department of Game staff have reviewed the proposed plan and DEIS; comments follow.

It is evident that a great deal of work has gone into developing the plan documents. We believe that several areas are very well done and that you should be commended for them. Particularly helpful are most of the discussions in the affected environment section of the DEIS. In addition, your monitoring section is strong, and your explanation of modeling processes is very detailed, compared to that in the other forest plans we have reviewed. This is far from an exhaustive list.

However, we feel that impacts on fish and wildlife would be significantly higher than projected. Because of this, we cannot support your preferred alternative as formulated, nor do we specify another alternative as optimal. Instead, the attached comments should be seen as recommended changes to your preferred management. It is our hope that the detail provided will help you arrive at a final plan that meets our concerns as well as other resource needs.

Thank you for the opportunity to respond to your proposed plan and for consulting with us each step of the planning process. We would be pleased to discuss further any of the points we made.

Sincerely,

THE DEPARTMENT OF GAME

Jack

Jack S. Wayland
Director

JSW:cv
Enclosures
cc: Agencies
Region

WASHINGTON DEPARTMENT OF GAME COMMENTS ON OLYMPIC NATIONAL FOREST PROPOSED LAND AND RESOURCE MANAGEMENT PLAN AND DRAFT ENVIRONMENTAL IMPACT

General

For improved fish and wildlife management, a number of changes should be made. We have serious reservations about your deer and elk model; its use to generalize wildlife and wildlife recreation outputs compounds our concerns. Your sediment/fish model is a good start, but we feel that you should aim for more detail. Your old growth management appears to ignore the results of studies of spotted owls in the state of Washington. We also have concerns with your treatment of big game, wildlife economics, roads, and roadless areas.

There are additions that we believe would strengthen the plan. First of these is development of standards and guidelines for wetlands, natural forest openings, caves, cliffs and talus. These are special habitats needing forest-wide protection. Similar specific attention should be given to snags and down wood requirements. Each management prescription should contain constraints for numbers and sizes of these components to be retained. Although clearcuts are generally more cost-effective for timber harvest, we feel that greater consideration should be given to uneven-aged management methods for achieving other resource goals. For ease of comparison, we also suggest that your maps be edited to show the boundaries of wildlife management areas (C1-C4). Finally, we strongly recommend that you strengthen the language in your wildlife oriented standards and guidelines.

Modeling mechanics are not always clear. As stated above, we recognize that you have described model relationships with greater detail than in other forest plans. However, it would be helpful to show assumptions, coefficients and functions numerically in the appendix volume. This would allow us to reconcile differences between what you project as outputs and what we would expect to occur. Ideally, this expansion would show model mathematics and output tables for each indicator species across the full planning horizon.

Fish

We support your inclusion of sediment levels in your fish production model, and appreciate the verbal description (Appendices, pages B-57, B-58) of the way they enter the calculations. However, we believe that other important factors should be included as model parameters to extend confidence in output projections. Existing information on large organic debris, based on Jeff Cederholm's work in the Clearwater drainage, may be sufficiently detailed to use for coefficients. Data on other parameters, such as stream temperatures and pool/riffle ratios, are not currently available. Still, we believe that they are important enough for fish production that information gathering should be started to calibrate their influence. They should be included in future

modeling efforts. Another improvement would be to disaggregate your sediment model from drainage to analysis area. This would allow specific problem areas to be tracked, and appropriate action planned for mitigation of impacts on fish habitat.

Your assessment of current production levels also appears to be lacking in detail. We do not disagree with basing this estimate on biological potential of stream habitats, but the assumptions and mathematics of your calculations are not shown. Of greater concern is your estimate that unspecified enhancements could give 20 percent increases in fish production forest-wide. The uncertainty of attaining such gains is critical, because your preferred alternative would only meet the goal of maintaining fish populations if enhancement were successful. Basing management intensity decisions on unproven mitigation seems particularly unwise.

Big Game

We do not believe that your deer and elk model is sufficiently accurate to give reliable projections. Road density is a well-researched parameter affecting habitat carrying capacity for big game, but you do not incorporate it. Brown et al (1985) summarizes research on the effects of roads on deer and elk use. At the current forest-wide density of 3.29 mi/sq mi, habitat effectiveness for elk is about 30 percent. Because this is such a significant factor on big game production, we strongly urge you to develop a coefficient of reduction per mile of road constructed, or increase per mile of road closed, for inclusion in your model.

Another critical factor for deer and elk on the Olympic Peninsula is supply of old growth on winter range. Old growth serves as survival cover, in that it provides forage as well as snow interception. You cite Taber and Raedeke (1980) for derivation of deer and elk density coefficients. They also state that winter range carrying capacity is dependent on the old growth forest. They expect periodic winter die-offs to increase in the future if old growth on winter range is logged.

Output projections for deer and elk show population declines in all alternatives over 50 years. We are concerned that no alternative meets our goal of maintaining elk numbers and increasing those of deer. These concerns are heightened because we believe you have underestimated the adverse effects of old growth harvest and road building; most alternatives would cause even greater losses than you project.

In this context, we strongly feel that the big game model should incorporate parameters for survival cover and road density. Constraints for the latter should be applied by drainage and elevation. Projections for deer and elk should be shown for the entire planning horizon, so that the long term effects of shorter term management intensities can be examined. Allocations of the big game management prescription should be made so that at least one alternative

meets Washington Department of Game goals for deer and elk. Such management areas should feature a mix of habitat elements, and should be formulated on a scale appropriate to the species, in sub-drainage blocks of 3,000-6,000 acres. They should make increased use of long rotations, delayed reforestation, and wider spacing during thinnings to meet habitat needs. Old growth should be maintained on winter range, and large reductions in open road mileage should be attained, to 2 mi/sq mi forest-wide and 1 mi/sq mi in winter range.

Spotted Owls

Spotted owl is a species of extreme concern to this agency. You use it as an indicator species, reflecting the health of old growth habitats and ecosystems, but its continued existence in Washington, and particularly on the Olympic Peninsula, is in doubt. In recent years, we have conducted and participated in a great deal of research on spotted owls. We have personnel who are among the most knowledgeable spotted owl specialists in the scientific community. Based on agency recommendation, the Game Commission has listed this species as threatened in Washington. We strongly believe that your proposed management of old growth would give spotted owls only a low probability of long-term survival.

We are troubled by the mismatch between management guidelines and study results. You state that occupied areas will be incorporated into SOHAs, yet several sites with confirmed presence of spotted owls are not protected, while other SOHAs have no record of owl response. Secondly, proposed SOHA size does not conform to prevailing spotted owl use in Washington. Average territory is 4,200 acres, not 1,000 or 2,200 acres. With habitat areas of smaller size, occupancy rates would likely decrease.

These concerns mirror those we expressed in our response to the Amendment to the Pacific Northwest Regional Guide - Spotted Owl Guidelines DSEIS. A copy of that response is attached for your information, and to provide detailed recommendations on choosing and managing SOHAs. We would be happy to provide you with a list of sites having confirmed spotted owl presence. For current management, we ask you to declare a moratorium on further cutting of spotted owl old growth forest habitat below an elevation of 3,000 feet on the west side of the Olympic Peninsula, and 4,000 feet on the east side, until an adequate final SEIS is adopted and all legal challenges are resolved.

Roads and Roadless Areas

Roads are the most impacting features of forest management. Four acres of wildlife habitat are directly removed for each mile of road. Increased access leads to more poaching, harassment, and vehicle/animal accidents. Many species

of wildlife avoid roads; habitat carrying capacity and wildlife numbers are reduced. Excessive road densities decrease high quality viewing and hunting opportunities. In addition, roads are the greatest source of increased sedimentation of forest streams, which can significantly impact fish production.

To mitigate these adverse effects on Olympic National Forest, we urge that the following measures be adopted as standards. New road construction should avoid key habitats, including riparian zones, wetlands, meadows, and places with special uses, such as deer and elk travel corridors and calving areas, or spotted owl habitat areas. These critical features should be screened by buffers of natural vegetation. When stream crossing is necessary, it should be done at a right angle, to minimize the area of impact.

We also believe it important to limit open road densities to be compatible with prevailing wildlife use. As discussed above, the current forest-wide average is 3.29 mi/sq mi. Road mileage would increase under every alternative. To mitigate adverse effects, we urge you to minimize new road construction, and to adopt goals to reduce open road densities to less impacting levels. We feel that appropriate targets are 2 mi/sq mi generally, and 1 mi/sq mi on big game winter range. We would be happy to work with you to plan and prioritize closure areas.

In regard to management of currently roadless areas, the same impacting factors apply, as does our list of important features to avoid. Because we believe that eight of the fourteen areas are particularly valuable for wildlife, we recommend that they remain roadless. These are Quilcene, Jupiter Ridge, Jefferson Ridge, Lightning Peak, Upper Skokomish, Moonlight Dome, South Quinault Ridge, and Rugged Ridge.

Economic Value of Fish and Wildlife

We are concerned that your economic efficiency calculations seriously underestimate the value of fish and wildlife. These are public resources; enhancements represent real benefits and impacts produce real losses. Both affect present net value (PNV). Where the resource is enhanced, benefit is measured by the public's net willingness to pay (WTP) for extra outputs. When losses occur, or when mitigation is being valued, the proper measure is net willingness to accept payment (WTA) to do without the resource.

We believe there are several ways that PNV figures are biased away from fish and wildlife values. First, an arbitrary reduction of 37.5 percent was made from the numbers derived by Loomis and Sorg for the 1985 RPA documents. We strongly believe the justification for that reduction, which you give in the Appendices, page B-73, is not correct. With Travel Cost Method (TCM), an implicit demand curve is mathematically derived, and consumer surplus

determined. Net, not total, willingness to pay is measured by consumer surplus. We agree that TCM studies are highly site-specific. However, the conjecture that study locations are typically high quality sites should be substantiated and quantified by sensitivity analysis before value reductions take place.

In fact, there is more reason to believe that the Loomis and Sorg data underestimated applicable wildlife values. TCM measures only the use component. Other sources of value involve existence of the resource, option to make future use of it, and opportunity for increased knowledge to lead to new or enhanced use. For some species and ecosystems, especially those that are well-recognized or whose existence is threatened, we would expect these components to add significant value.

Another factor is that no attempt is made to incorporate fish and wildlife losses as costs in PNV calculations. As stated above, WTA is the proper measure of value for this purpose. WTA magnitudes are typically higher than thosae of WTP. In addition, losses should be measured from current conditions, not current direction.

A bias is introduced through attributing a one percent real growth rate in timber prices, while holding other resource values constant over time. Taking into account the relative growth of demand for fish and wildlife oriented recreation over the past 10-20 years, and your assessment of future trends in the timber and recreation sectors (Appendices, page B-82), we feel that timber values are unjustly favored by your assumption.

A final concern is with your use of deer and elk model projections to estimate total wildlife user benefits. As we stated above, we feel that, to be sufficiently accurate, your model should take into account additional habitat parameters. Moreover, other uses involve different animals, with differing habitat needs, and can be affected by separate quality of opportunity considerations. Use of big game numbers ignores these factors. Therefore, we ask you to make specific evaluations for other big game, small game, furbearers, waterfowl and nongame.

Proposed Management Plan

Page II-9, Conclusions (Old Growth Forest), 1. We strongly disagree that current management direction would maintain sufficient old growth to assure the survival of viable populations of spotted owl.

Page II-14, Conclusions (Sediment), 2. It would seem likely that, even under generalized model conditions, at least minor reductions in habitat capacity would result from increased sediment.

Page II-15, Current Management, paragraph 2. Supply of large organic debris, pool/riffle ratios, and water temperatures are also factors that should be taken into account. We believe that data are available on large organic debris. Collection of information to develop coefficients for the other factors could begin now for future use in your model.

Page II-16, Conclusions, 1. In your model, increased sediment levels over the first decade would seem to imply fishery reductions.

Conclusions, 2. We believe that other factors are important enough to merit mention here, amount of large organic debris, for example.

Page II-17, Bald and Golden Eagles. Bald eagles are also sensitive to management of old growth and mature stands in the vicinity of riparian and shoreline areas. Old growth is also used for roosting, and is more conducive to nesting than mature forest.

Page II-18, Northern Spotted Owl. Seventeen of the designated SOHAs have confirmed occupancy. Overall, more than 50 owls have been located on the National Forest.

Threatened, Endangered and Sensitive Species. Recent observations indicate some use of the Forest by wintering peregrine falcons.

Page II-19, Current Management, paragraph 2. It appears that WFUDs apply only to deer and elk hunting. If so, this seriously underestimates wildlife-oriented recreation on the Forest, which includes a good deal of non-consumptive use as well.

Demand, paragraph 1. It seems unrealistic to assume quality and success components for fishing recreation, but not for non-consumptive wildlife recreation.

Page II-20, Conclusions (Wildlife Habitat), 1. We disagree that viable populations of spotted owl would be maintained under current management direction.

Opportunities for Change in Management Direction, 1. Other techniques for habitat improvement would be delayed reforestation and wider spacing of seedlings during replanting. Both would increase forage production.

Page III-3, Management of Old Growth, Response. We disagree that retention of old growth under the preferred alternative would be sufficient to assure survival of viable populations of spotted owl.

Page III-6, Response, paragraph 1. It would be helpful to include mileage of open non-system roads.

Paragraph 3. We believe that closures should be used to reduce open road densities to no more than 2 mi/sq mi forest-wide, and no more than 1 mi/sq mi in critical deer and elk winter range.

Page III-8, paragraph 5. The conclusion that deer and elk habitat carrying capacity would not change much under the preferred alternative contradicts findings by Taber and Raedeke (1980).

Page III-9, paragraph 1. Depending on the distribution of roads, the remaining area may not appear to be roadless, and may have significantly reduced habitat value.

Page IV-3, Wildlife Habitat. We suggest you add the goal: manage for recovery of wildlife populations federally or state listed as endangered or threatened.

Page IV-4, Vegetation. We strongly recommend that you formulate a goal for retention of snags and down wood.

Page IV-9, Old Growth. We believe that it would be appropriate here to acknowledge wildlife impacts from reduced old growth acreages. Net effect of the loss of 40,000 acres would be a decline in old growth dependent species and lowered carrying capacity on deer and elk winter range.

Soil and Water, paragraph 1. The statement that the amount of soil displacement and erosion from construction is decreasing is misleading when compared to the table entry for sediment on page IV-12.

Page IV-10, Fish and Wildlife Habitat. If carrying capacity for deer and elk will remain stable, and herd health will improve, why do populations show a drop of 18% from 1986 to 2030 in Table IV-1?

Page IV-11, Table IV-1, Wildlife & Fish Use. Are these figures based solely on deer, elk and fish?

Management Indicator Species. It would be helpful to explain your derivation of figures for pileated woodpecker and marten.

Page IV-15, paragraph 1. The reference to an overall reduction in sedimentation seems to contradict the table entry for sediment on page IV-12.

Page IV-16, Table IV-4, footnote 1. It would be helpful to break out fish and wildlife allocations in this table, for purposes of comparison.

Page IV-20, Table IV-10. The connection between this table and Table IV-12 is unclear. Are old growth allocations of suitable forest land not included in these figures or are the allocations to come almost entirely from unsuitable acreage?

Page IV-21, Table IV-12. Please add a column to show percentage of forest land remaining as old growth at the end of each decade.

Page IV-22, Riparian Areas, 1. We believe that Class III streams should also be protected.

Riparian Areas, 3. We recommend that you specifically include wildlife travel corridors in the protected habitats.

Paragraph 3. On page V-7 you outline riparian area monitoring by project review. It is not clear what standards will be applied to assure that fish and wildlife goals of this management prescription are being met. In addition, we question whether 45.7 percent harvest over the next 50 years is consistent with maintaining well-distributed, diverse habitats.

Wildlife Habitat. It would be helpful to include targets for snag and down wood density in this listing.

Page IV-23, paragraph 2. We believe that your projected decline of 18% in deer and elk populations represents more than a moderate loss. In addition, based on Taber and Raedeke (1980), we feel that even these predictions are optimistic.

Fish Habitat, paragraph 1. This appears to fall short of your forest management goal on page IV-3 to maintain and improve habitat for anadromous fish.

Page IV-24, paragraph 2. We are concerned with the claim that such increases can be accomplished through enhancement measures. If this is based on creating passage for anadromous fish into resident-only reaches, we ask to be consulted in the planning stages of such projects.

Page IV-33, Table IV-19. Given the current open road density on the Forest of 3.29 mi/sq mi, we feel that your projected changes are too small. We propose a forest-wide goal of 2 mi/sq mi, with 1 mi/sq mi on critical winter ranges.

Page IV-37, Wildlife and Fish, 8, 9 and 11. We ask that the standard be changed to "shall" in these guidelines.

Page IV-39, Timber, 10. Please add that biomass removal shall be subject to maintenance of sufficient dead and down wood for wildlife needs and soil productivity.

Water, Soil & Air, 4. We recommend changing "should" to "shall".

Page IV-40, Water, Soil & Air, 7. We suggest that you add: "Where unavoidable, such adverse impacts shall be mitigated."

Pages IV-62, IV-63, Wildlife and Fish. We strongly support these guidelines, however, we ask that you change "should" to "shall" in all of them.

Page IV-63, Wildlife, 4. For projects involving Hydraulic Project Approval, please change "should" to "shall".

Timber, 3. We believe you should add that taking snags for fuelwood shall not be permitted.

Page IV-66, Wildlife and Fish, 1. Please change "may" to "shall".

Water, Soil & Air, 1. We feel the stronger standard denoted by "shall" is appropriate here.

Page IV-69, Wildlife and Fish, 1. This guideline would give a low probability of spotted owl survival.

Page IV-71, Management Intensities. We suggest that you replace "may" with "should".

Page IV-72, Wildlife and Fish. We believe that these guidelines should be more detailed in relation to elevation restrictions and distribution distances. In addition, associated foraging habitat requirements for pileated woodpecker should be discussed.

Timber, 1 and 3. Please add to these guidelines that dead and down wood shall be maintained.

Timber, 2. Designation of suitable replacement stands should be specified.

Minerals and Energy, 1. We suggest changing "should" to "shall".

Page IV-80, Applicable National Forest Area. It would be helpful from an ecosystem standpoint to allow site-specific widening of the riparian management area to include hydraulically connected wetlands and other associated features.

Program Element. Because the primary goal of this management area prescription involves protecting and improving wildlife and fish habitat, we believe that language in these guidelines should be strengthened - i.e., change "should" to "shall".

Page IV-81, Timber, 1. Compatibility is problematic; great care should be taken in programming harvest.

Page IV-82, Timber, c. We recommend that a 200-foot minimum buffer be used for clearcuts. In addition, certain Class III streams would also be appropriate for this harvest restriction.

Timber, 7. Sensitive soils on slopes over 65 percent would be appropriate areas to avoid in harvest operations.

Water, Soil & Air. We believe both guidelines ought to use "shall" rather than "should".

Minerals and Energy, 2. We strongly urge you to take an active part in developing appropriate mitigation and conditioning provisions for FERC licenses and permits.

Page IV-83, Facilities, 2. Please change the wording of this guideline to state that work shall be done at times suitable to fish life cycles unless an emergency situation exists. In addition, all work shall conform to timing and provisions specified by Hydraulic Project Approval from this agency or Department of Fisheries.

Page IV-83, Facilities, 5 and 6. Stronger guidelines are needed to lessen road construction and associated impacts in riparian areas. We suggest limiting crossings to the minimum necessary, and then requiring them to take place at a right angle to the stream course. Parallel construction within the riparian area should be prohibited.

Page IV-87, Timber, 2. Natural processes of decay would seem to fit the goal of a Research Natural Area.

Page A-7, Wildlife Improvement Projects. We question the need for 220 bald eagle and peregrine falcon nest platforms, and the sufficiency of 750 snags to cover problem areas over the next ten years. As a general comment, it would seem that there is a need to redirect activity after the first year or two, to add money for structure maintenance and refertilization of forage seeded areas. We look forward to future consultation with you under the Sikes Act.

Page A-13, Soil and Water Management. This is a well-formulated program.

Page C-1, Monitoring. We compliment you on your monitoring program. However, on page C-2, item 7, we suggest that 10-15 years storage of data may be insufficient to determine trends in fish and wildlife parameters.

Page C-13, Wildlife Habitat. This monitoring plan is well done. Under Suggested Methods/Information Sources, D., we suggest you use data from your annual report to evaluate population trends and compare them with model projections. By locating a district which is close to annual report levels, you could factor in forage/cover ratios and road densities to refine your model assumptions.

Page C-19, Monitoring Questions, A. It might be more useful to sample sediment in fish reaches, combining monitoring programs by incorporating other important parameters for the fish model, such as quantity of large organic debris, and then comparing to miles of open road, acres clearcut and acres burned.

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Page II-6, Maintenance of Adequate Habitat for Key Wildlife Species, 2. Several areas where spotted owls have been located are not specified as SOHAs.

Page II-22, Utility Corridors. We recommend that you add a provision to use existing corridors to the maximum possible extent for future needs.

Page II-67, paragraph 2. As we have pointed out above, recent research in Washington indicates that management proposed in the Supplemental DEIS significantly underestimates the habitat needs of spotted owls in this state. The problem of survival is especially acute for the isolated Olympic Peninsula subpopulation.

Page II-72, Table II-1, Fish and Wildlife Habitat, Snag Dependent Animals. It would be helpful here to show model outputs of numbers and sizes of snags by alternative. We would also like to see what level of management would be maintained by analysis area for each alternative.

Page II-80, Table II-2, Footnote 2. We suggest you add a column to this table, to show wildlife prescriptions which are not incorporated in other no-cut management areas.

Footnote 3. Because C4 and F2 prescriptions have different standards and guidelines governing their management, it would be more accurate to show applicable acreages, even if there is no difference across alternatives.

Page II-86, Table II-3a. It would be helpful to provide more detail on your model parameters and assumptions, so that anomalous numbers could be verified. In addition, surveys performed 1978-85 indicate that the Forest can support only about 50 pair of spotted owls at existing levels of habitat. This would imply that your spotted owl model is incorrect.

Page II-88, II-89, Table II-3a. We believe that animal numbers are incorrectly modeled here, as well.

Page II-123, Table II-3d, Allowable Sale Quantity. The variation among alternatives appears not to follow that given in Table II-3a, page II-96.

Page III-17, Water, paragraph 1. It should also be mentioned that high quality wildlife habitat occurs near water.

Page III-21, paragraph 2. We believe that reduction in fish numbers constitutes unacceptable resource damage from stream sedimentation. In this regard, Cederholm's work relating sediment levels to fish survival would be of use.

Page III-22, paragraph 2. We have two concerns with these statements: first, local anadromous and resident fish populations may be adapted to lower than

normal stream temperatures; second, openings may cause lethal low temperatures to occur more frequently.

Paragraph 3. We are not sure whether S.F. Skokomish River is a good model for low gradient westside streams.

Page III-24, Historic Trends, paragraph 2. A helpful bit of information to supplement this paragraph would be a comparison of miles of road closed or rehabilitated and miles of new road construction over the last five years.

Page III-25, Water Yield and Runoff Timing, paragraph 4. If peak flows increase so significantly when 10-12 percent of a watershed is compacted, why do your standards and guidelines allow 15 percent of an area to be compacted?

Page III-27, paragraph 1. For completeness, you should also discuss winter stream temperature decreases due to devegetation, and the associated potential for fish mortality.

Wildlife. We ask that you consult us on any animal control issues.

Page III-28, paragraph 2. As stated above, we support an expanded road management program on the Forest. It should be stated that contractors can also enter road management areas.

Page III-29, Roads, paragraph 2. The 25 percent figure contradicts the 30 percent cited on the previous page.

Page III-30, paragraph 1. How many acres of cut and fill slopes are seeded per year?

Page III-33, Soil Stabilization Activities, paragraph 2. It would be helpful to describe the magnitude of your erosion control program.

Page III-37, Recreation. Use of recreational vehicles can also accelerate erosion of roads and trails.

Page III-40, Threatened, Endangered, or Sensitive Plants, paragraph 2. You state that Forest Service policy requires management to prevent state-listed plants from needing to be federally-listed. Does the same policy apply to state-listed wildlife species?

Page III-41, Dead and Down Woody Material. We strongly urge you to describe the distribution of dead and down wood by size and by seral stage.

Page III-42, paragraph 3. Your statement that Shelton CSYU is essentially a mature forest disagrees with age class distributions given in Table III-6. Is the difference made up on Simpson Timber Company land?

Page III-47, Threatened, Endangered, or Sensitive Plants. It would be helpful to describe any historic trends associated with distribution of the three listed plants.

Noxious Weeds. Another method of importation that may be worth noting is inadvertent inclusion in seed mixtures used for erosion control and big game forage production.

Dead and Down Woody Material. Again, it would be helpful to quantify historic trends of snags and down wood.

Page III-48, Timber-Trees, table. Perhaps special mention of western red cedar should be made, given the precipitous decline it has had on the Forest over the last twenty years.

Page III-51, Dead and Down Woody Material. As above, we strongly urge you to describe quantity and size of dead and down wood that can be expected in each seral stage and in each management prescription.

Diversity, paragraph 2. We recommend that you discuss the effects of blowdown on isolated patches of old growth, in addition to your treatment of recurring major events.

Page III-62, paragraph 1. We believe it would be worth adding that over 130 species of wildlife make use of dead and down wood.

Page III-62, The Role of Special Areas, paragraph 2. Because pika do not occur on the Forest, we suggest using a different species in this description.

Paragraph 3. Gentle slopes near major streams at low elevations provide year-round habitat.

Page III-63, Riparian Areas, paragraph 1. We strongly suggest that your riparian area definition be site-specifically expanded to include associated wetlands and flood plain zones in excess of 200 feet from the stream.

Wetlands. We understand that Soil Resource Inventory maps include only wetlands over a certain size. Total wetland acreage on the Forest is likely to exceed 7300 acres by a significant margin.

Page III-65, paragraph 3. We disagree with two statements in this paragraph. First, we believe that increased levels of access and disturbance by people has lowered the quality of cave habitats for bats. Second, we feel that the sizes of road gravel and talus are often quite different.

Future Trends, paragraph 2. All streams need woody material.

Paragraph 3. Activities adjacent to wetland areas should be planned to avoid impacts on those habitats.

Page III-66, paragraph 1. It is unclear what measures are proposed to eliminate blowdown of riparian leave strips adjacent to recent clearcuts. We suggest adequately wide strips be left.

Roads. We suggest that roads be placed outside the riparian zone to the maximum extent possible.

What Affects Wetlands. This section should discuss the negative impacts of activities on wetland areas, not only the ways wetlands are created.

Page III-67, What Affects Cliffs, Caves, and Talus? We disagree that management activities are likely to have little effect on these environmental components. Talus is often used as road construction material. In addition, forest roads increase ease of access to these features. Disturbance levels increase accordingly.

Current Situation. Is there a Forest-wide goal for game and nongame species of wildlife that goes beyond minimum management requirements? If so, it would be helpful to describe it here.

Page III-69, paragraph 1. It does not appear that all of these unique habitats will receive special management.

Wildlife Diversity, paragraph 1. Is recreation use value based on all species or just deer and elk?

Page III-70, Bald and Golden Eagles, paragraph 2. Historic occurrence data show at least five active nests.

Northern Spotted Owl. Recent surveys have evoked owl response at about 50 separate locations.

Primary Cavity Excavators. As indicator, woodpeckers represent over 100 species of wildlife. We believe this should be stated. Also statistics on snag densities should be included here.

Threatened, Endangered and Sensitive Species, paragraph 1. Northern spotted owl is a state-listed threatened species.

Paragraph 2. There have been recent observations of wintering peregrine falcons on Forest land.

Page III-71, paragraph 1. We recommend that you obtain more recent data from your annual report and reevaluate recreation use.

Historic Trends. We feel that this discussion should cover more than deer and elk. Trends in populations of other animals, particularly indicator species, are important factors.

Page III-72, Future Trends. The primary question left unanswered by this section is whether wildlife populations will increase or decrease. Growth or decline of each indicator species should be covered.

Future Trends, paragraph 4. Because we feel that winter range is the limiting factor for deer populations, and old growth is an important component of winter range, we disagree that the tradeoff situation exists as you descibe.

What Affects Wildlife? Water should be a factor discussed in this section. Aquatic and semi-aquatic species are especially affected by water quantity and quality issues.

Page III-73, Vegetation, paragraph 3. Mammals, reptiles and amphibians also make use of dead and down material.

Special Areas. It would be helpful to summarize the number of species using each of these special habitats.

Page III-75, Roads, paragraph 1. Forest habitat guidelines for Western Washington and Oregon (Brown et al, 1985) show a 50 percent reduction in elk use at a density of 2 mi/sq mi. Current average road density (non-wilderness) on Olympic National Forest is 3.29 mi/sq mi, with habitat effectiveness reduced to 30 percent of the unroaded value. Fewer animals can be supported by the land base. As stated above, we strongly urge that road management be used to lower open road densities to 2 mi/sq mi forest-wide, and 1 mi/sq mi on critical winter range.

Page III-76, Plans of Others, paragraph 4. Competition for habitat leads to wildlife loss, not simply displacement.

Page III-78, Nongame Fish Species, paragraph 2. Olympic mudminnow also occur in the Puget Trough region. Records show them in tributaries to Puget Sound and to Chehalis River.

Page III-80, Existing Habitat Capabilities, paragraph 1. We strongly believe that fish production models should be based on more than sediment projections. Parameters for large organic debris may be available through Cederholm's work on the Clearwater River. In addition, initial collection of pool/riffle and temperature data could begin, so that your model could be extended in the future.

Page III-81, Table III-16. It is unclear how enhancement figures were quantified for individual drainages.

Page III-83, paragraph 2. We suggest that you discuss the potential for lethal low winter temperatures in devegetated areas, and the possibility that local populations of fish are adapted to the generally lower stream temperature regimes.

Page III-158, paragraph 4. According to Brown et al (1985), this average road density reduces habitat effectiveness for elk to 30 percent that of unroaded forest.

Page III-160, Future Trends, paragraph 3. We strongly agree with your statement on the importance of road closures for mitigating impacts on wildlife habitat. However, it is not apparent in your standards and guidelines or in your preferred alternative that the Forest has a road closure goal. We believe such a goal would be appropriate.

Page III-178, Wildlife and Fish. Another resource conflict we feel you should mention here is the vulnerability of snags and down wood to fuelwood cutting.

Page IV-4, Table IV-1. It is not clear that the figures given for alternative C-dep are accurate. They do not appear to meet the definition of a departure.

Page IV-5, Table IV-2. Commercial thinnings do not appear to be related to harvest levels. It would be helpful to explain the differences among alternatives.

Page IV-7, Timber-Volume, paragraph 2. This discussion is somewhat confusing when taken with Table IV-4. It might be clearer to add commercial thinning ASQ to Table IV-6 and eliminate Table IV-4.

Page IV-9, Timber-Trees, paragraph 2. We feel that diversity is a more complex concept than shown here. Within-stand diversity of species and structure is also quite important. It should be noted in this regard that the old growth condition is structurally and vegetatively the most diverse of forest age classes. Because of this, we disagree with your judgment of Alternative I in paragraph 3 of this section.

Page IV-11, paragraph 2. As with the previous comment, we disagree with your view of diversity. We believe that Brown et al (1985) gives a more accurate description of diversity than you are using here.

Page IV-12, paragraph 1. We understand it is estimated that managed stands of Douglas fir would take an average of 240-260 years to exhibit old growth characteristics, and that silver fir would take even longer. Could this discrepancy indicate an overestimation of future old-growth inventories?

Dead and Down Material, paragraph 1. It would be extremely helpful for this discussion if you would include a breakdown of amounts of dead and down material for each zone by seral stage. We understand that such estimates were made.

Paragraph 2. You might add that proportionally less dead and down material would be produced under Alternative I.

Paragraph 4. We believe that more specific information is needed to assess impacts on dead and down wood habitat. Important factors are existing amounts

of this material, percentages removed and remaining under each alternative, and projected size differences by alternative. We recommend that you expand Table IV-8.

Page IV-25, Special Areas, paragraph 1. Disturbance in the course of recreation is another impacting factor that should be mentioned.

Page IV-26, Riparian Areas, paragraph 1. Large organic debris is important for habitat creation in small streams as well as those in classes I and II.

Paragraph 3. We recommend that you be more detailed here. Over 290, or 70 percent of the species present in the Pacific Northwest, make use of riparian areas. In addition, 16 percent of the mammals, 37 percent of the reptiles and amphibians, and 24 percent of the birds are dependent on riparian habitat for survival.

Paragraph 4. Breakdowns of harvest along different stream classes would be helpful here.

Page IV-28, Wildlife, paragraph 2. Quality of habitat is an equally important factor which varies by alternative.

Page IV-29, paragraph 2. Virtually all species of wildlife are used by recreationists. Non-consumptive uses are important.

Page IV-31, Cumulative Effects Analysis, paragraph 1. Research indicates that spotted owls require elevations of less than 3000 feet on the westside of the Olympic Peninsula, and 4000 feet on the eastside. Do all 323,000 acres of "suitable" National Park land meet this criterion?

Table IV-13. This table should be expanded to include 4200 acre SOHAs indicated by research to be necessary in Washington.

Pileated Woodpecker, paragraph 1. It would be helpful to show how current carrying capacity was calculated. Another concern we have involves minimum management requirements, which specify an additional 300-acre block managed to provide foraging habitat. This provision does not appear to be discussed here or elsewhere in your documents.

Page IV-32, Table IV-9. It is unclear whether HCIs in this table are based on total acres of mature and old growth forest, or on the presence of intact, contiguous 300 acre patches. We recommend that current situation be plotted as well.

Page IV-33, Table IV-10. As with our previous comment, we feel that you should clarify your derivation of HCIs, and show current level for marten.

Primary Cavity Excavators. We ask you to expand this discussion to consider distribution problems and size differentials.

Page IV-34, Table IV-14. These figures should be broken down by size category and seral stage.

Cumulative Effects Analysis. Two other important factors that we ask you to mention are the burning of snags during site preparation and permitting snag cutting for firewood.

Page IV-35, paragraph 1. The primary function of old growth on winter range is that of optimal or survival cover, not thermal cover.

Paragraph 2. We ask that you show those changes in specific drainages.

Figure IV-11. We strongly question the accuracy of these figures. Effects of road densities must be included in your calculations.

Cumulative Effects Analysis, paragraph 2. Percentage changes in deer and elk populations by alternative should be discussed.

Page IV-36, Figure IV-12. Even more than with deer, road densities must be factored into your elk habitat capability calculations.

Page IV-37, Overview, paragraphs 4 and 5. We feel that it is important to incorporate all critical factors into the modeling process. Cederholm's work on Clearwater River may provide coefficients for the large organic debris component. In addition, data collection could start now to calibrate the contribution of temperature and pool/riffle ratios.

Page IV-38, paragraph 1. We strongly urge that full funding be given for your fish habitat monitoring plan. Even better would be its extension to cover other important parameters such as supply of large organic debris.

Effects of Alternatives on Fisheries, paragraph 3. Your quantification of habitat enhancement is unclear. It seems unwise to base harvest levels in your preferred alternative on the success of unspecified projects.

Page IV-39, Table IV-15, Footnote 1. Please describe your derivation of baseline fish habitat capability.

Page IV-40, Cumulative Effects of Alternatives on Fisheries, paragraph 1. We ask you to state your assumptions regarding habitat capability for resident fish.

Page IV-41, Figure IV-13. Under the preferred alternative, existing habitat capability is surpassed only by application of enhancement projects. However, allocation of money for enhancement is not certain. Because of this, Alternative C may fall short of the stated requirement to "maintain or increase" fish habitat.

Page IV-43, paragraph 5. We ask you also to discuss the positive effects of insects and diseases (e.g., creation of snags and small openings which contribute to habitat diversity). In addition, alternatives H and I would provide higher populations of insect eaters, which would help keep insects at endemic levels.

Page IV-60, Roads, Overview, paragraph 2. Wildlife needs should be included as an important factor in developing road management strategies.

Page IV-62, Table IV-27. We feel that the volume increases shown for all alternatives substantiate the need for further road closures in critical wildlife habitats at appropriate times of year.

Page IV-63, Road Management: Maintenance Levels and Road Closures, paragraph 1. We understand that maintenance and closure policy also covers protection of other forest resources, such as wildlife.

Page IV-69, Energy, Overview. For proper perspective, we feel this discussion should include the importance of waste material for 130 species of wildlife, and its role in nutrient recycling and maintaining soil productivity.

Page IV-89, The Relationship Between Short-term Uses and Long-term Productivity. We strongly urge you to consider more than timber productivity in this discussion. Wildlife and fish are also important resources with long-term components.

Page IV-90, Irreversible and Irretrievable Commitments of Resources. With proposed management, we believe that survival of spotted owl on the Olympic Peninsula would be seriously threatened.

Page IV-92, Wildlife Habitat (other than old growth). We strongly disagree with your negative assessment of Alternative I. By definition, old growth is not even-aged. In addition, 65 percent of suitable forest land would still be managed by clear cut under this alternative. Your statement also completely contradicts your model outputs showing higher numbers for all indicator species except deer with Alternative I.

Appendices

Page A-24, paragraph 1. Old growth always provides habitat for specific animal and plant communities.

Opportunities, 5. Clear evidence is lacking that all old-growth characteristics can be reproduced through such management efforts.

Page A-27, Opportunities, 2. This appears to be an opportunity to mitigate past impacts, not enhance original conditions.

Fish and Wildlife Habitat, paragraph 3. Additional activities that ought to be mentioned here are construction, maintenance and management of forest roads.

Page A-28, Opportunities, 6. We suggest changing "enhance existing habitat conditions" to "mitigate impacts of management actions."

Opportunities, 8. Where such projects would benefit anadromous fish at the expense of resident fish, we ask to be involved at the planning stage.

Opportunities, 9 and 11. The improvement you refer to is only with respect to Alternative A. Compared to current conditions, even reduced harvest levels are impacting.

Page A-36, Fish and Wildlife Habitat. This indicator relates only to fish habitat.

Page B-5, Capability Areas, Riparian Character. We recommend expansion of your riparian area definition to encompass the entire floodplain where it exceeds 200 feet in width.

Page B-21, first full paragraph. We feel strongly that your FORPLAN modeling of big game was inaccurate. The lack of variation among alternatives indicates that outputs were driven primarily by forage availability. Important factors left out were road densities and supply of optimal cover on winter range. Your further reliance on deer/elk outputs to represent total wildlife has given misleading results.

Page B-28, Table B-2, Level 5 - Access. Habitat effectiveness for deer and elk decreases significantly as road densities increase. This factor is an appropriate addition to Table B-2.

Page B-32, Spotted Owl Habitat Area (SOHA) Prescription. As stated above, we believe that these standards and guidelines would give a very low probability of spotted owl survival.

Page B-33, Mature Forest Habitat Prescription. Pileated woodpecker require an additional 300-acre area with snags for foraging.

Page B-55, paragraph 1. We strongly recommend that you include road density information in your deer and elk model.

Page B-56, paragraph 1. It is unclear whether current average reconstruction frequency adequately treats the change in emphasis on commercial thinning.

Sediment, paragraph 3. We note that the chosen level of aggregation loses the ability to tie outputs to analysis areas and to alter management accordingly.

Page B-58, paragraph 2. As with your sediment yield model, information has been lost through aggregation to whole drainages.

Page B-59, paragraph 1. Road density effects should also be used to develop a coefficient of reduction per mile of road constructed, or of increase per mile of road closed.

Wildlife-related Recreation, paragraph 1. Changes in deer and elk recreation use among alternatives should also take into account relative road densities.

Paragraph 2. Small game and nongame species do not use habitat in the same ways as big game. We would expect independent responses to the various management strategies, affecting the accuracy of your WFUD calculations.

Old Growth. We understand that your forest ecologist estimates that managed stands would need 240-260 years to become old growth.

Snags. We suggest that a constraint be added to meet snag goals by analysis area.

Page B-63, paragraph 1. Your use of assigned dollars for fish and wildlife recreation disregards several sources of value; your numbers do not represent full economic value of these resources.

Page B-64, Opportunity Costs. Decrease in PNV would provide a measure of opportunity cost if all costs were included in its formulation. Specifically, impacts on fish and wildlife resources, valued at net willingness of the public to accept payment (WTA) for their loss, are proper parts of your economic efficiency analysis.

Page B-66, paragraph 3. We strongly disagree with differential treatment for timber resource price trends. This introduces a separate bias in your PNV calculations.

Page B-73, paragraphs 3 and 4. Travel cost method is used to derive net willingness to pay figures. We believe that discounting the Loomis and Sorg figures by 37.5 percent was arbitrary and incorrect.

Page B-108, paragraph 1. It would be very helpful to show model parameters and quantitative relationships.

Maintenance of Adequate Habitat for Key Wildlife Species, 1. We recommend that you add area definitions and constraints to this discussion. In addition, it is our impression that the 21 established sites are nesting, not wintering, areas.

Maintenance of Adequate Habitat for Key Wildlife Species, 2 and 3. There are occupied areas not designated as SOHAs. As stated above, we believe these guidelines are inadequate for the survival of spotted owl populations.

Maintenance of Adequate Habitat for Key Wildlife Species, 4. With the planned overlap in indicator species management areas, it is unclear whether minimum management requirements for distribution distances would be met.

Page B-109, paragraph 1. We support your use of dedicated areas for old growth and mature forest indicator species.

Page B-114, Table B-23. We question why figures given in this table do not match those from Table B-22.

Page B-127, Acres Unroaded. It would be helpful if you would analyze the potential for reducing open road densities to 1-2 mi/sq mi.

Page B-128, Acres Old Growth. Are there second growth stands that could become old growth within the time frame of your analysis? If so, existing old growth acreage may not be the maximum potential level.

Page B-130, Table B-26. We feel that your use of deer and elk as a wildlife optimization tool, and your failure to account for road density effects, discounts the positive influences on wildlife numbers from retention of old growth, unroaded acreage, visual quality objectives, etc.

Page B-141, Constraints Common to All Alternatives. We strongly believe there should be constraints relating to size and numbers of snags, and road densities by drainage and elevation.

Page B-177, Constraint (fourth heading). Do the particular harvest areas mentioned here require road building, or are helicopter units planned?

Page B-184, paragraph 2. As stated above, we question the accuracy of this lack of variation across alternatives.

Page B-190, Table B-31. It is unclear whether open road miles entries include non-system roads. Calculating road densities points out the need for road management program emphasis in all alternatives.

Page C-7, Special Features. To our knowledge, no spotted owls have been located in this area. Given that only two percent of the acreage is old growth or climax forest, it is not an ideal SOHA.

Page C-27, Wildlife. At least two pair of spotted owls use the Mt. Zion area.

Page C-37, Wildlife. One spotted owl response has been elicited in this area.

Page C-39, Wildlife. We believe that road construction and timber harvest would lead to wildlife impacts in the first decade for all alternatives except H and I.

Page C-47, Special Features. The Dosewallips and Duckabush corridors provide the only paths for elk seasonal migration. We consider this area to be very important for big game, spotted owls, and anadromous and resident fish. We urge that it remain unroaded.

Page C-68, Current Uses, paragraph 1. Your statement that hunting is limited in the area is contradicted by the last sentence on this page.

Page C-71, Wildlife. No spotted owls have been located in this area.

Page C-73, Wildlife. Elk are very vulnerable here when snow forces them out of the roadless area to Lake Cushman. We strongly recommend that all new roads be closed to public use during winter and spring.

Page C-81, Wildlife. Please note the contradiction between this discussion and that under Special Features on the previous page.

Fisheries. We suggest that you mention the lake fishery of this area. Some of the lakes feature excellent food sources which complement this agency's stocking program.

Page C-84, Wildlife. We feel that it is extremely important to maintain the continuity of elk movement corridors in this area. Because of previous cuts in other drainages, these animals heavily use Rule Creek and South Fork Skokomish River for migration and transition range. We prefer that the area remain roadless. To minimize further impacts, we strongly urge that, as a minimum, Rule Creek be left intact, and a no cut corridor be left along the S. F. Skokomish River bottom. In addition, no new roads should be open to public access.

Page C-108, Table C-18. Under the preferred alternative, it appears that new road density could be quite high. We ask that this area remain roadless, and urge that new roads not be open to public use if harvest does occur.

Page C-117, Table C-20. If roads must be built in the Rugged Ridge area, we strongly recommend that none be placed within the spotted owl habitat area, and that open road density be limited to less than 2 mi/sq mi.

Page C-133, Roads, paragraph 3. New roads should avoid the spotted owl habitat area.

Page C-142, Roads, paragraph 1. New roads should avoid the spotted owl habitat area. In addition, open road densities should be limited locally to less than 2 mi/sq mi.

Page D-3, Wildlife and Fish, 2. It is our understanding that Forest Service policy is that state-listed species shall be treated the same as federally-listed ones, so that eventual federal listing can be avoided.

Page D-4, Timber, 1. In blowdown areas, we recommend the following criteria be added: reserve at least 2 logs (minimum 20 feet long, 20 inch diameter) per acre; leave trees in streams, except where they may create an obstacle to fish passage or increase sedimentation.

Timber, 4. Please modify this guideline to retain snags at Forest policy level.

Page D-5, Timber, 10. A sufficient number of snags should be retained for wildlife and to provide for future soil productivity.

Water, Soil & Air, 4. Does use of the word "should" violate the Executive Order on riparian protection?

Page D-6, Water, Soil & Air, 5, d. We suggest you specify that appropriate sizes and amounts of residue be left for wildlife and for future soil productivity.

Water, Soil & Air, 7. Does the Executive Order on protection of floodplains and wetlands set a more stringent standard?

Water, Soil & Air, 8. It is our understanding that the NFMA requires monitoring.

Page D-7, Lands, 3. We believe it would be appropriate to add lands with special plant or wildlife features to the list of desirable acquisitions.

Page D-9, Facilities, 8. Please add that road management be consistent with wildlife needs.

Page D-10, Facilities, 10. We commend you for including subitems c and d.

Page D-11, Protection, 6. We fully support this guideline.

Page D-14, Timber, 3. We ask to be consulted in such environmental assessment processes.

Page D-15, Facilities, 4. Facilities should not be constructed in or adjacent to wetlands, habitat areas for spotted owl, marten or pileated woodpecker, or elk movement corridors.

Page D-18, Facilities. Please add: "5. Trails and campsites shall not be constructed in or adjacent to meadows, wetlands, habitat areas for indicator species, or elk movement corridors."

Page D-20, Timber, c. V-3 sites will not grow large enough snags. Additional management will be needed.

Page D-21, D-22, Recreation, 4. Please add: "e. Lack of conflict with incompatible uses."

Page D-23, Facilities. Please add a provision that facilities shall not be developed in or adjacent to meadows, wetlands, habitat areas for indicator species, or elk movement corridors.

Page D-27, Facilities. Please add: "3. All trails and facilities shall not be constructed in or adjacent to meadows, wetlands, habitat areas for indicator species, or elk movement corridors."

Page D-29, Wildlife and Fish, 3. We suggest using a stronger standard in this guideline.

Page D-30, Facilities. Please add a provision that facilities shall not be constructed in or adjacent to meadows, wetlands, habitat areas for indicator species, or elk movement corridors.

Protection, 1. We support this standard, but feel that it should be extended to the entire management prescription.

Page D-32, Water, Soil & Air, 1. It would be appropriate to phase out livestock use of wilderness areas.

Page D-33, Facilities. We recommend adding a guideline requiring facilities placement to avoid important wildlife habitat areas.

Page D-35, Applicable National Forest Areas. We strongly urge you to specify that capable areas not be substituted for existing old growth unless none of the latter occurs within the required distribution distance of spotted owls.

Recreation, 2. Existing roads and trails should be reevaluated in light of conflicts with spotted owls.

Wildlife and Fish. We strongly urge you to reformulate these standards in accordance with recent spotted owl research in Washington. Parameters are explained in our response to the SEIS (attached), and in the main body of this letter, above.

Page D-36, Timber. Please specify retention of snags and down wood in this guideline.

Page D-37, Applicable National Forest Areas. As with old growth, we urge you to specify that capable areas not be substituted for existing mature forest unless none of the latter occurs within the required distribution distance of the selected indicator species.

Recreation, 1. Existing roads and trails should be reevaluated in light of conflicts with marten and pileated woodpecker.

Page D-38, Wildlife and Fish, 1. Minimum Management Requirements for pileated woodpecker also specify an additional 300 acre block for foraging, with special provisions for snags and down logs. Using pileated woodpecker sites for two marten must take into account the different dispersal distances for the two species.

Timber, 1. Harvest should be timed to avoid the breeding season of the selected indicator species.

Timber, 2. Please specify retention of snags at Minimum Management Requirement levels.

Timber, 3. We ask that you eliminate this guideline.

Timber. Please add a guideline for identification of suitable replacement stands.

Page D-43, Wildlife and Fish. Please add a provision to meet or exceed Forest Policy on snags and down wood management.

Page D-48, Applicable National Forest Areas. We urge you to expand this area boundary to include the entire floodplain.

Wildlife and Fish. We recommend that standards and guidelines be published for streams that do not bear fish.

Wildlife and Fish, 1. Please change "with consideration for" to "to allow."

Wildlife and Fish, 2. We consider expansion of anadromous passage into resident-only stream reaches to be major projects, and ask to be involved at the planning stage of such proposals.

Wildlife and Fish, 3, 4 and 5. We ask you to define corridor widths in these guidelines, and to specify vegetation types.

Page D-49, Wildlife and Fish, 6. Please specify meeting optimal habitat needs in this management area.

Page D-50, Timber, 5, c. Certain Class III streams should also be covered by this guideline.

Timber, 6. Amounts of windthrow per 1000 feet of stream to be retained for wildlife and fish should be prescribed in this guideline.

Water, Soil & Air, 1. We recommend that you change "should" to "shall" in this guideline.

Page D-51, Facilities. We urge the addition of two guidelines: that no new roads shall be constructed within 200 feet of a stream except for a necessary crossing, and that the departments of Game or Fisheries shall be consulted and

Hydraulic Project Approval obtained for work within the ordinary high water mark of any stream.

Facilities, 1. Please specify that crossings be constructed at a right angle to the stream course.

Page D-54, Wildlife and Fish, 2. We ask you to specify coordination with Department of Game for animal control issues.

Page D-56, Wildlife and Fish, 1. We ask you to specify coordination with Department of Game for animal control issues.

Page F-8, Wildlife. Bald eagles winter above the fish hatchery.

Page F-11, paragraph 3. Fish are also trucked above the dam to spawn.

Page F-12, Wildlife. Osprey also occur here.

Page F-28, Wildlife. This is also a major bald eagle wintering area, and is used during nesting season.

Page F-35, Fish and Wildlife, paragraph 6. There are identified elk calving areas here.

Page F-48, paragraph 1. This area is also valuable for elk calving and seasonal migration.

Page F-55, Wildlife. Bald eagles regularly winter in this area.

Page F-72, paragraph 6. We consider this a major hunting area.

Page F-87, Fish and Wildlife, paragraph 6. High concentrations of wintering bald eagles occur here.

Page G-8, Bald Eagle Habitat, paragraph 2. U.S. Fish and Wildlife Service guidelines, as well as those on page D-40 of this document, prohibit timber harvest.

Page G-10, paragraph 2. It is unclear how standards and guidelines for the riparian management area can be met with even age harvest.

Wildlife and Fish, 7 and 8. It would be helpful to indicate numbers to be left per 1000 feet of stream.

DEPARTMENT OF GAME

November 7, 1986

Andrea Beatty Riniker, Director
Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504

RE: Draft Supplement to the Environmental Impact Statement for an Amendment to the Pacific Northwest Regional Guide - Spotted Owl Guidelines

Dear Ms. Riniker:

This Draft Supplemental Environmental Impact Statement (DSEIS) was reviewed by agency staff as requested. The following summarizes our involvement, concerns, findings and recommendations. Following this summary are also in-depth, categorical and specific comments, and itemized technical evaluation and analysis.

The spotted owl is a species of wildlife of extreme concern to our agency. It is a critical "indicator species" which reflects the environmental health of old growth forest habitats and ecosystems, but its continued existence is in doubt.

The Department of Game has worked hard for many years to prevent the extirpation of the spotted owl. We have conducted a large amount of research, organized cooperative surveys, provided membership on the Interagency Spotted Owl Subcommittee, and participated in various other committees. We have also provided formal review of national forest plans, and other land management plans and actions potentially affecting spotted owls. As a result our agency has a vast amount of expertise and personnel which include some of the most knowledgeable and experienced spotted owl specialists within the scientific community.

While this DSEIS presents voluminous technical information, elaborate analysis of population trends, habitat relationships, and various management alternatives for spotted owls and timber management, we find the document seriously flawed and inadequate particularly in the following areas:

- The overall emphasis of the document appears to focus on impacts on timber harvesting rather than spotted owls

- With the exception of alternative L, which is not the preferred plan, it appears all alternatives are sufficiently limited so as to eventually result in the extirpation of spotted owls in Region 6

- The viability analysis is based on erroneous biological assumptions and fails to include current research in Washington

- Manipulation or distortions of models and parameters yield inaccurate conclusions, and

- The persistence data, and tables and figures are often misleading, unclear, and unreliable.

In regard to complying with and meeting the intent of the National Forest Management Act (36CFR 219.19), which calls for ensuring the continued existence of spotted owls, we feel this document is inadequate. The proposed standards and guidelines will not accomplish this. As such, we recommend that the DSEIS be rewritten with alternatives which will provide for a viable population of the northern spotted owl in Region 6.

The emphasis of the Preferred Alternative is to provide the minimum number and size of habitat areas for spotted owls and maximum flexibility for timber harvest during the planning period. The assumption is that there will be no impact on spotted owls during the planning period.

The situation, in fact, is exactly the opposite. The SEIS analysis shows that if the Preferred Alternative were implemented, the spotted owl population would decline and many management options would be foreclosed during the planning period. There would be no reduction in timber volume available compared to current cut levels.

With a species that is declining and has a low probability of survival under the preferred management option, we feel it would be most prudent to reverse this philosophy. The options must be preserved for the spotted owl - managing at maximums, not minimums - during the planning period. This will allow time for research and monitoring. Then, if significant new information becomes available, the options will still exist to adjust management strategies.

With this in mind, we also request that the U.S. Forest Service declare a moratorium on any further cutting of spotted owl old growth forest habitat below 3,000 feet on the west side of the Olympic Peninsula and below 4,000

feet on the east side, and an interim direction for other national forests in Washington to use 4,200 acres of old growth per each spotted owl area until an adequate final SEIS is adopted and any legal challenges have been resolved.

The attached comments are more detailed and specific.

The intent of this position is to fulfill the department's statutory responsibility to "preserve, protect, and perpetuate wildlife" as required under RCW 77.12.010.

Sincerely,

THE DEPARTMENT OF GAME

Jack S. Wayland
Director

JSW:jt
Attachment

2950

ANDREA BEATTY RINIKER
Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

March 13, 1987

Forest Supervisor
Olympic National Forest
P.O. Box 2288
Olympia, WA 98507

Dear Sir:

Attached are the comments of the State of Washington on your Olympic National Forest draft Plan and EIS. The department of Ecology's comments are in three parts: overall comments by Doug Rushton, an addendum by Dick Wallace, and Shorelines/CZM comments by Terra Prodan. Other comments come from the Office of Archeology and Historic Preservation, the Interagency Committee for Outdoor Recreation, the Department of Fisheries, the Department of Natural Resources, the Division of Emergency Management, and the Department of Community Development's Local Government Services Division.

Our comments are numerous and detailed, commensurate with the thorough detailed effort you have made. Since we interpret your documents as evidence that your planning effort is a genuine iterative attempt to move from fact-finding to conclusion-drawing, we have not drawn conclusions or made State-of-Washington policy statements at this stage in the process. Please understand, however, that we do wish to be part of the conclusion-drawing process when that is appropriate. We will examine your final documents closely, particularly with regard to the comments of citizens and local government. At that time we will articulate our state position as appropriate. In addition, since Washington contains all or part of seven National Forests, we reserve the right to examine the cumulative effects of all the plans. Our conclusions may lead us to make further comment on individual plans including the Olympic.

Implementation of several of the alternatives, including the preferred alternative, would decrease the cut on federal land and, we believe, increase pressure for accelerated cut on non-federal land. Environmental impacts could thus be shifted, vice eliminated. Impacts to other landowners need to be clearly identified, evaluated and mitigated. There needs to be thorough coordination with other landowners, including Tribes, before plans are made final.

The degree of economic impact on local economies, including on specific mills, needs to be more finely defined. Part of our concern may be due to different views which you and we may have of what constitutes fine-scale analysis. To us this means specific communities, to you it may mean Counties, or major Forest segments.

We sincerely appreciate what you are doing. Your management plans affect us just as our actions affect you. We are ready to expend the effort to make sure that your conclusions are as mutually beneficial as possible. Please feel free to contact our individual commentors directly. Of course, you may contact me at (206) 459-6019 for any coordination issues. Thank you.

Sincerely:

T.L. Elwell
Environmental Review

Enclosures

cc: EPA Region X
State Agencies

P

OLYMPIC NATIONAL FOREST
DRAFT ENVIRONMENTAL IMPACT STATEMENT and PLAN

COMMENTS FROM
Doug Rushton

Washington State
DEPARTMENT OF ECOLOGY

Page

I. GENERAL and ENVIRONMENTAL QUALITY

Comments on the Plan

A. II-8. There is not mention of managing stands for old growth timber. Managing stands to maintain some semblance of long-term sustained yield of old growth dependent values *and* products would contribute to community stability. Certain products cannot be produced from substitutes, *e.g.* tight ring, knot-free veneers. Managing certain stands on an extended rotation (a rotation of 250 years, for example and depending on site characteristics) to achieve the desired results could provide old growth values.

B. II-9. 485,000 acres are classed as tentatively suited for timber production; but the timber management plans include 507,930 acres. Which is the correct acreage?

C. II-19. It is pointed out that the Roosevelt Elk population on the Peninsula is declining and that this decline may be due to timber harvest by various landowners. The causes for this population decline and the Forest Service contribution, if any, to it need to be examined. This should be included in the Information Needs section on page II-25.

D. II-21. The statement is made that the "total" supply of unroaded lands on the Olympic National Forest is 87,700 acres. The preferred alternative would substantially reduce this acreage. It is stated that there is some unquantified demand for unroaded areas on the Forest. By reducing the acreage available on-Forest for unroaded area activities, (particularly those like hunting which cannot be shifted to Olympic National Park), impacts may be shifted to other landowners or those "demanding" unroaded areas may be cut off. This potential shifted impact needs to be examined as do the implications of unmet demand.

E. III-3. The planning horizon in the last paragraph is 150 years; elsewhere throughout the document it is 50. Why the difference?

F. III-6. If existing trails are not maintained (paragraph one) and with 134 miles of new construction proposed,

the Plan needs to describe maintenance of these capital improvements. It does not make sense to make the investment and then not maintain the trails. One of the listed goals (page IV-5) is to provide and maintain capital improvements, including trails.

G. In the section on Environmental Analysis, categorical exclusions and public review of project files are mentioned. It is not clear from this description how the public and other agencies are going to be made aware of a project for which they might like to examine the file. What sort of appeal procedure is there should someone disagree with the Forest Service findings that a project may cause "...little environmental change...beyond those...in the Forest Plan"? There needs to be a process, at the local level (District, not Forest), where interested individuals could be made aware of these excluded projects. Posting in public places and newspaper publication would be two ways to accomplish this.

H. The upper South Fork of the Skokomish River (Geographic Area No. 8, page B-9 of the Plan) is designated as semi-primitive recreation with motorized use permitted (A1B). The boundary of this management area is roughly 13 miles long. Adjoining land on one of the sides of this tract is designated as Wilderness, one side abuts Olympic National Park, and one side adjoins lands designated for non-motorized primitive/semi-primitive recreation; approximately three miles on the downstream side of the area is designated for timber production emphasis. It appears, based on this map, activity within this management area will impact the surrounding "non-motorized areas". Is this true? Has it been evaluated? What would be the likely impacts; noise, smell? How will these activities impact recreationists and others in the Park, the Wonder Mountain Wilderness? Are there other areas with similar management prescriptions where adjoining area management might conflict?

Comments on the DEIS

A. S-7. In the description of modification and maximum modification, examples of these categories of visual quality objectives (VQOs) would be helpful to visualize

impacts. Additionally, the acres dedicated to these two types of management are needed for comparisons. (The acreages are given for "low level VQOs.)

B. II-133. The demand for Wilderness is expected to increase 36% over the next 20 years. The opportunity to meet expected demand for Wilderness in currently undeveloped non-Wilderness does not presently exist on the Forest. The opportunity exists, however, to do more to meet this projected demand (which is probably a low estimate) than in the preferred alternative. It is much easier to shift demand for the commodity resources than for the unroaded resources. The demand for unroaded areas and Wilderness cannot be met *anywhere* else or by any substitute.

C. III-40. Two unusual vegetation associations are described (Pat's Prairie and along the South Fork of the Calawah River) and mention is made that there are more. Has any consideration been given to designating these areas as research natural areas or of giving them some other form of special management to protect the unique attributes?

D. III-51. Are any areas going to be managed primarily as natural old growth? Where will these areas be and what criteria will be used to select and manage them?

E. III-104. In the discussion of the current situation on recreational use, the statement is made that 98% of the use is during the six months from late spring through early fall. Part of the reason the use is distributed in this way is because many campgrounds are closed during the rest of the year. Closing these campgrounds shifts use to other agencies.

F. III-117. Forest Service management activities have a tremendous impact on recreational use and need to be included in this discussion. Activities which could eliminate recreational use from an area (and possibly shift it to other locations) would include roadside

spraying, timber harvest, road construction, timber stand improvement activities, among other activities.

G. III-119. Private landowners provide additional recreational opportunities. There are many private campgrounds located around the Olympic Peninsula. Many of the large timberland owners allow access by recreationists for fishing, hunting, sight-seeing and other activities. The interrelationships between these others and the Forest Service's recreation management

warrants discussion.

H. III-155. Further additions to the Wilderness System will be only from the 14 areas identified in Table III-28 when the Forest Plan is revised. How will these unroaded areas be managed until the next planning cycle? Will they be managed so as to not preclude these currently unroaded areas from designation as Wilderness? As with The Brothers Wilderness, which has an area within it that has been harvested, are there additional areas in similar condition which could be recommended for Wilderness designation?

I. IV-16. There is discussion that alternatives containing Forest Service harvest flows that counterbalance reductions from state supplies could be beneficial to local economies. The implicit assumption is that if harvest from non-Forest lands is reduced, then, if necessary, harvest from the National Forest should be increased to meet the demand. This is a reasonable approach toward stabilizing economies of timber-dependent communities. Additionally, though, the Forest needs to give other resources "equal time". For example, if recreation demand is not met due to a reduction or inactivity of the state, then the Forest should evaluate filling the gap. The most vivid example of this approach would be that virtually no other unroaded areas exist off-Forest that could conceivably become Wilderness. If the Forest Service does not recommend areas within its jurisdiction for inclusion into the Wilderness System, it is likely no other landowner will since no other entity manages significant tracts of land that could have nearly the potential to meet projected demand for Wilderness. Other resources need to be evaluated on a footing equal to that of timber management.

J. IV-58. Roading is the only factor used to determine consequences on unroaded areas. Helicopter logging has been done on at least the Soleduck District. Realizing that helicopter logging efficiency is related to volume and turn distance, some of the currently unroaded areas could be precluded, by this management, from future consideration as Wilderness due to timber harvest. While the timber market in the foreseeable future suggests that helicopter logging probably will not be feasible, it is a possibility and the precedent has been set.

K. B-17, Appendices. FORPLAN was designed to help the interdisciplinary (ID) team analyze the economic and

production trade-offs associated with alternative management strategies. The key element described are all quantitative measurements. How these were integrated with qualitative aspects of the resources needs to be more clearly brought forth.

L. B-20, Appendices. The last paragraph on this page says, in effect, that when the result yielded by FORPLAN were not acceptable to the ID team, that they manipulated and modified alternatives until there was a satisfactory outcome. To what extent did these modifications affect the statistical reliability of the model? How was the reliability tested?

General

M. The Forest needs to consider land exchanges with the National Park Service in those cases where a straight-line boundary does not fit with either agency mandate. Exchanges that would alter the common boundary to follow topographic features, such as ridge tops, would be beneficial to both agencies' management and the public, as well.

N. Does the calculation of PNV factor in, in some way, a massive change in public perceptions, something like the environmental movement of the late 1960's?

O. What would be the advantages and disadvantages of transferring or not transferring management of designated Wildernesses from the Forest Service to the Park

Service?

P. The Forest needs to examine the possibility and ramifications of "land-locking" intermingled ownerships. A scenario could be the designation of an area to be unroaded thus possibly precluding an adjacent landowner from obtaining right of way to cross the Forest to gain access to their own land.

Q. Cumulative Impacts. While it is true that the Olympic National Forest is not responsible for off-Forest uses of water, the cumulative and synergistic impacts of forest activities with non-Forest activities need to be examined.

R. A portion of the RPA targets is allocated to each Region and then to the Forests, and finally down to the Ranger Districts. The criteria that are used to allocate a

Region's/Forest's/District's part of the overall RPA target needs to be discussed. While the criteria may be discussed in detail in the Regional Guide, there needs to be a least a brief discussion of the allocation process.

S. Impacts of management activities adjacent to (but outside of) a Wilderness on the Wilderness need to be examined and discussed. Subjects to be discussed should include at least the following: noise impacts on wilderness values, gas and oil drilling under Wilderness, and air quality and visual impacts from prescribed burning.

II. AIR QUALITY

A. The cumulative and synergistic impacts of Forest Service burning and confinement fire policy needs to be examined in conjunction with prescribed burning and wildfire management by the Washington State Department of Natural Resources, large timberland owners *(e.g.* Simpson Timber Company), various Tribes, and others.

B. The Washington State Implementation Plan (Clean Air Act Amendments of 1977) and the cooperative agreement for smoke management mentioned by Kelly Coon at the meeting with the state agencies at the Forest Supervisor's Office (December 12, 1986) are not included in the list of documents which may be affected by this Plan.

C. Appendix B-70., Variable Costs to Others
Air quality deterioration *(i.e.* total suspended particulate) from prescribed burns could and should be viewed and evaluated in much the same way as Forest-generated sediment. Are there other Forest activities that have off-Forest impacts which should be evaluated in the same manner?

D. DEIS, page III-95. The current situation section describes the Olympic National Forest as being designated as a Class II air quality area. It is our understanding that Wilderness areas are to have Class I air quality. Therefore, the Wilderness areas under Forest Service management should be managed for Class I air quality. These areas include the following areas designated in the Washington State Wilderness Act of 1984:

Buckhorn Wilderness
Colonel Bob Wilderness
Mount Skokomish Wilderness
The Brothers Wilderness
Wonder Mountain Wilderness

E. DEIS, page IV-45. One effect predicted from increased recreational use is increased incidence of fire. A greater contributor to air quality degradation is prescribed fires, whose effects are related to the number of acres treated by this method. Generally, and this should be pointed out in the text, higher harvest levels result in higher acreage to treat by prescribed burning. To some extent, then, the number of fire starts from prescribed burns is a function of timber harvest levels. Therefore, lower harvest levels would likely result in a reduced number of fire starts from prescribed burns.

F. DEIS, page IV-47. The discussion of cumulative effects on air describe the current status. It needs to discuss how the process works, who is involved, what problems have arisen, and how they were handled. It needs to present enough information to allow one to understand what is going on. The National Environmental Policy Act (1508.7) requires examining past, present, and reasonably foreseeable future actions in a cumulative effects assessment.

III. WATER RESOURCES, FLOWS AND INSTREAM VALUES

Comments on the Plan

A. I-6. The discussion of anadromous fish should include Dolly Varden and bull trout. (These two species were both called Dolly Varden until 1978 when their differences were recognized) Both species occur in at least Hood Canal streams; although uncommon, there are localized areas of abundance. (Skokomish-Dosewallips Instream Resources Protection Program, Draft document, Department of Ecology, 1985)

B. II-14. It is stated that maintaining fish passage is important because there is a substantial amount of fish habitat upstream of the Forest in Olympic National Park. On the Hood Canal side of the Peninsula, the Dosewallips River is the only river where anadromous fish can enter Olympic National Park. The Forest needs to be particularly sensitive to siting hydropower or other projects which might impinge upon fish passage and other instream values.

C. III-7. The Department of Ecology is interested in *all* instream values, not just recreation and fish. Additional values requiring consideration and protection include: wildlife, scenic and aesthetic aspects, navigation, water quality, and other environmental values that may not be readily apparent on a case-by-case examination.

D. III-9. The Forest Service considers itself to be the logical lead agency for six rivers that have potential to be included in one of the classifications of the National Wild and Scenic River System (page II-22). The Dosewallips, Hamma Hamma, and Soleduck Rivers are not mentioned in this section. By its management direction, such as issuing a special use permit for hydropower projects, the Forest makes the decision to eliminate certain rivers (or at least certain reaches) from qualification from certain of the designations within the System. The Forest needs to clearly and specifically describe what it intends to do with regard to all six of the rivers with potential for designation where it is the logical lead agency.

E. IV-7. The Northwest Power Planning Council (NWPPC) forecasts an energy surplus through at least the mid

1990's. While there may be local demand *(i.e.* speculation) for development of hydropower resources, the Forest Service should take a broader view and protect instream values for the public. The Forest can have an impact on seeing that currently undeveloped rivers are protected against hydropower development that would produce unneeded power.

F. IV-12. Presenting energy potential in BTU's masks where it originates. If any of this estimate originates from hydropower development, the location, size, and a description of the facility needs to be also displayed. Any other sources of energy with potential for significant adverse environmental impacts need to be thoroughly displayed.

G. IV-23. Fish habitat can be influenced by impassable barriers, such as a dam on the Dosewallips River, which would preclude anadromous fish from upper reaches.

H. IV-27. The potential impacts on scenic quality of proposed hydropower projects on various rivers and streams needs to be discussed.

I. IV-30. Conspicuous by their absences are the Hamma Hamma, Dosewallips, and Soleduck Rivers. Exactly how these rivers' corridors will be managed needs to be discussed.

J. IV-40. In part six of the Water, Soil, and Air Program Element, hydropower proposals shall require an environmental assessment and coordination with the Federal Energy Regulatory Commission (FERC). In addition to the FERC, the Forest Service also must coordinate with appropriate state agencies with permits -- such as the Department of Ecology which issues water right certificates, dam safety approval and water quality certifications (pursuant to the Clean Water Act), among other permits.

K. IV-41. In every other part of the Plan and the DEIS, hydropower is included in the sections on energy. In the standards and guidelines, however, it is discussed in the section on Water, Soil, and Air. The documents should be consistent throughout.

L. IV-53. The Dosewallips River corridor is listed in the preferred alternative to be managed under management prescription A2 - providing for pleasing scenic experience (Alternative C map). The map on page B-5 shows the upper part of the Dosewallips that is on the Forest to be managed as A1B. Is the area A1B or A2?

The narrative (page IV-53) does not mention hydropower and both the narrative and the map should show how hydropower development and providing for a pleasing scenic experience are compatible. This should be done for all the rivers and streams where a proponent is actively seeking development on the National Forest, including the Dungeness projects, the Elkhorn project, and the Hamma Hamma drainage projects.

Comments on the Draft Environmental Impact Statement

A. III-78. The section on anadromous trout should include Dolly Varden and bull trout. (Skokomish-Dosewallips Instream Resources Protection Program Draft Document, Department of Ecology, 1985)

B. III-174. The overall tone of the section on energy seems to be that additional sources need to be quickly developed "As the current energy surplus shrinks..." (page III-177). At the medium growth in demand scenario, the Northwest Power Planning Council projects surpluses through the mid 1990's. In any discussion on projected power requirements, it needs to be noted that forecasts of the NWPPC, Bonneville Power, and the Pacific Northwest Utilities Conference Committee are all based on very conservative assumptions of critical water conditions, *i.e.*, the worst consecutive 46 months of streamflow the region has experienced in recorded history. The NWPPC 1986 Plan describes an increase of 112 megawatts of hydropower output that could result from installation of efficiency improvements. Taken in this context, the need for power from environmentally expensive sources on the Olympic National Forest is nonexistent.

C. III-178. The impacts of the development of hydropower on the designation status of certain rivers as wild, scenic or recreational warrants consideration. This discussion should include the Hamma Hamma project (FERC

number 3178), the Elkhorn project (FERC number 6002), as well as the projects in the Jefferson Creek and Dungeness River drainages.

D. IV-56. In the discussion on the Dosewallips River, obvious by its absence is discussion of the Elkhorn project (FERC number 6002). Under which alternative would it be allowed and under which would it not be allowed? The opening paragraph says several alternatives "recommend Congressional designation", but

it does not say which classification.

E. IV-65. Dams and other water diversions are omitted from the discussion on structures. There needs to be discussion on how the various alternatives would be impacted by hydropower (and how hydropower development would impact the alternatives) since there are several "live" hydropower project proposals on National Forest lands.

F. IV-69. The first two sentences in the section on energy have a tone that suggests development is a foregone conclusion. In addition to satisfactorily completing the permitting process, development of energy resources on the Olympic National Forest needs to be examined in a regional context. The NWPPC has pointed out that maintaining a surplus of energy is at least as expensive as having inadequate supplies.

Appendices

A. Appendix F. Consultation with Washington State Parks and Recreation, which administers the Washington State Scenic River System (Chapter 79.72 RCW), should have been done.

B. F-46. A description of the current status of the Elkhorn project is warranted in the section on the Dosewallips River. Jefferson County PUD has dropped out of the project and it has apparently been taken over by Jefferson County PUD's formerly silent partner, Tacoma City Light. Tacoma has retained the same consultant who had worked with Jefferson County PUD, Hosey and Associates Engineering Consultants out of Bellevue, Washington.

C. Jefferson County PUD has in the past considered applying for a water diversion to bring municipal drinking water to Port Townsend and environs. They have discussed doing this through the state water reservation program, "Procedures Relating to the Reservation of Water for Future Public Water Supply" (Chapter 173-590 WAC). The current status of their interest is unknown.

D. A map showing the location of proposed hydropower sites and the power withdrawal site on the Gray Wolf River would be beneficial in evaluating impacts.

General

A. Issues, Concerns, and Objectives (ICO's) were initially identified in 1978. Additional ICO's have occurred since the Forest "locked into" those initial ICO's, at least for this planning tour. Most obvious are hydropower projects submitted since the development of the ICO's.

B. The Geographic Area Maps (Appendix B of the Plan) for the Hamma Hamma River (page B-7) list most of the river's corridor on Forest as being "A21", but in the section on management prescriptions starting on page IV-35 of the Plan, there is no description of this designation.

Also in the Standards and Guidelines section for Wild, Scenic, or Recreational Rivers (A4A), the program element for energy (G) should describe exactly which designation would allow hydropower or other development (and the degree, and which would not.

C. Considering the present and possible future uses of groundwater in and around the Olympic Forest, the description of groundwater resources is lacking. Information concerning sources, problems, anticipated uses, and other, similar, relevant information is needed.

D. Projected water needs for various on-Forest and off-Forest uses need to be thoroughly examined.

E. What data were used to make determinations for which Rivers to recommend or not recommend for inclusion in the Wild, Scenic and Recreational River System? How were the data used to recommend some rivers and not others?

F. The National Forests were established "for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber ..." (Organic Act, 1897). This implies that use of the forest should be focused on water rather than on timber, as currently reflected in budgets and action plans. Has the Forest Service considered a major realignment of priorities more in keeping with the Organic Act under which it was established?

IV. WATER QUALITY

Comments on the Plan

A. II-13. The sediment index is expected to be 196,500 tons per year [over background levels] in the first decade; and after the first decade, the index is expected to be around 170,000 tons per year [average sediment over the first five decades is estimated at 178,000 tons per year]. Table S-14 of the DEIS [page S-40] states the average annual road construction for the first decade will be nine miles, and for the second decade will be 12 miles. Table S-7 [page S-29] states that road construction under the preferred alternative will average nine miles per years over fifty years. It is not apparent why the sediment index will be higher in the first decade than the second when 33% more roads are contemplated for the second decade. Additionally, it is not clear, if the amount of new roading is the same in the first decade and in the third through fifth decades, why the sediment index drops about 15% from 196,500 to 170,000 tons per year. Please explain this and whether the average new roading in the second decade will be nine or 12 miles annually. Our concerns are impacts on water quality.

The discussion in the DEIS on sediment (page IV-18) uses cubic yards rather than tons. The units of measurement through the documents should be the same to facilitate comparisons.

B. As stated on this page, one of the goals of the support programs is to provide and maintain capital investments, such as utility systems. Are old vault toilets routinely checked and evaluated for leakage? What procedures are used in checking?

C. IV-15. Acidity of water bodies, particularly high elevation lakes needs to be included as an inventory need. Baseline data and trend information need to be developed; sources need to be identified [to the extent feasible] and problem areas identified. Coordination with other agencies, particularly the Department of Ecology and the Environmental Protection Agency is important.

D. IV-80. The management prescription for riparian areas does not give assurance these sensitive areas will be

adequately protected. The timber program element needs to describe size, species, spacing and timing requirements. As written, a stand after harvest could consist of four, three inch dbh alders. Diversity needs to be maintained, over time, in size classes, species, and spacing in order to assure protection of riparian areas, and the water bodies proper.

E. In many areas throughout the Plan, residue utilization is mentioned as increasing due to new machinery and techniques. Removal of residue may have long term impacts on soil fertility and water quality. These impacts, although speculative, need to be examined as have other potential impacts of management activities.

Comments on the DEIS

A. III-28 and 29. The discussion about nitrate levels in small streams and also the potential of fire retardant entering streams is inadequate for several reasons. The degree of the problem of nitrate levels in small streams needs discussion and should include how it gets into streams, how long it persists, how it leaves, where it goes, and what can and is being done to minimize its impacts.

B. III-65. "Critical need to maintain a future supply of woody material along stream channels for fish habitat ...." If this is true, why is it acceptable to have leave trees in the riparian management zone that are all one species *(e.g.* leave trees could also be the relatively short-lived alder) or species that may not be as beneficial as a mixture of species?

C. IV-26. The tree species and size composition (and their spatial distribution) in the riparian management zone needs to be discussed. A riparian area could end up in four inch alders after harvest.

D. IV-40. "The cumulative effects of alternatives on fisheries, as described in this section, consider only the predicted aggregate effects of Forest Service management activities...." In the National Environmental Policy Act (NEPA), section 1508.7,

Cumulative impact; cumulative impact is defined as the impact on the environment which results from the incremental impact of actions when added to other past, present, and reasonable foreseeable future actions regardless of what agency (federal or nonfederal) or undertakes such other actions. This means the Forest

Service needs to examine how its management activities and those of other entities, such as intermingled ownerships, combines to cumulatively effect environmental resources.

E. A fairly substantial amount of data and information dealing with water quality and its protection is presented in the DEIS and in the Plan. However, the following issues should also be discussed:

- Existing water quality
- Current water quality trends
- Water quality monitoring plans
- How water quality monitoring plans will be incorporated into management decisions and programs
- An explanation of how water quality standards will be met
- Whether or not special conditions will be implemented where warranted.
- Degradation sources

F. Impacts to lakes and ponds from forest practices and mining activities are not addressed. Impacts to ground water quality are not adequately addressed and could result from the use of fertilizers, pesticides, or herbicides.

G. Bridges must be located so existing water quality is not altered. Any non-emergency alteration of water quality requires a short-term water quality modification from the Department of Ecology.

V. WASTE MANAGEMENT

A. The documents should address the amounts of and the methods for handling and disposal of wastes generated by recreationists (dispersed, campground, special events, and other), at work sites, work centers, and ranger stations. A litter control plan, discussing problems, solutions, and future opportunities is needed.

B. Opportunities for recycling need to be identified, evaluated and considered for integration into routine management. Examples of things that could be easily done include putting "aluminum only" bins near soft drink dispensers, putting recycling boxes in offices for collection of paper to be recycled, and recycling of used oil drained from vehicles and equipment. Recycling reduces litter, conserves resources, and extends the life-span of landfills.

C. We are concerned that former Forest Service dump sites (and also sites of unauthorized dumping) may contain potentially dangerous materials, such as empty herbicide containers. There needs to be an identification and evaluation of these former dump sites to determine if there are any problems, such as leaching, of hazardous or other materials from these sites. There is at least one former dump site south of Bigler Mountain on the Soleduck District along road 29 about two miles from its junction with Highway 101 (SW 1/4 of section 34; T30N, R11W). This pit contained garbage and debris from Klahowya Campground, Snider Work Center, and various forest management activities. This dump and any others should be evaluated as to hazards to public safety.

D. Many Forest Service installations and work sites have storage areas for hazardous materials, such as fuels or herbicides. Spill containment procedures, equipment, and personnel need to be discussed. Some installations may have underground fuel storage tanks that are extremely old and may have high risk for leaks *(e.g.* the fuel storage tank at the Snider Work Center on the Soleduck Ranger District). Identification and evaluation of "high risk" underground storage tanks is needed, especially those with the potential to contaminate soil or groundwater, particularly groundwater used for water supplies. As a corollary to this, over decades of use,

soil at refueling locations can contain significant amounts of harmful and toxic materials, particularly lead. Has the Forest done any sampling and evaluation of such areas in order to protect personnel, the public and natural resources? A discussion of this is warranted in the final EIS.

E. Does the Forest have a monitoring and evaluation program for underground fuel storage?

POSITION STATEMENT ON THE OLYMPIC FOREST PLAN

BY OLYMPIC PENINSULA INDIAN TRIBES

The following text was copied from the original document sent to the Olympic National Forest on November 5, 1981, by Lawrence A. Webster, Suquamish Tribal Chairman.

INTRODUCTION

The purpose of this statement is to introduce to the Forest Service an issue of importance to all tribes around the Olympic Peninsula. Its preparation is in anticipation of the draft Olympic Forest Plan. That Plan will affect the lives and culture of the entire Native American community on the Peninsula for many years.

The issue is the future management of the cultural and religious and treaty reserved resources on the Olympic National Forest. The tribes wish to work with the Forest Service to identify and evaluate these resources in order to protect and preserve them.

In order for these rights to be reflected in the Plan, Forest Service personnel must recognize and understand them. They must recognize that Indian culture did not end with the signing of the treaties in the 1850's. Current day use derives from historical use and is still vital and important to the tribes. We are concerned that you respect historical uses and recognize current cultural needs and values.

RELIGIOUS RESOURCES

Central to the Salish world view are the trees known as Western Red Cedar and the fish called salmon. Our ancestors could not have survived without them. Our ancestors were born onto cedar mats; clothed, housed, and transported with items made from cedar. When they died they were buried in cedar. They always respected this plant/person above all others.

Our ancestors were grateful for the cedar's willingness to share itself to help them and thankful to the creator for providing cedar in such abundance. As their descendants, we have the same respect and gratitude as our ancestors for this gift. We still use cedar in many of the same ways as our ancestors.

Unfortunately, as a result of our non-Indian neighbors' property oriented economy and misunderstanding of our ways and beliefs, cedar, particularly old growth, has become rare. It has become more difficult to obtain access to the remaining old growth cedar which is itself threatened with removal; some provision must be made for its continued existence to sustain our sacred relationship to it.

Native salmon and steelhead occupy a place as important as cedar in our traditional world view. Salmon, more than any other creatures, represent the circular nature of the universe as understood by our ancestors. Salmon not only provided living evidence of the validity of these understandings, but also a dependable and highly valued source of nourishment. However, the economic importance of salmon must not obscure the religious nature of our relationship to them. This relationship is manifested in what is known

as the first salmon ceremony, in which the return of the first salmon in the yearly spawning cycle is celebrated.

Other important resources are medicinal plants, berries, and game animals -- many of which are now very rare.

Today our young people wish to understand traditional lifestyle as a means of insuring spiritual, cultural, and even economic security for their children's children. Many have begun to relearn the ancient skills of our ancestors, such as basketry, carving canoes, traditional medicine, and longhouses. Through this process they are becoming aware of their relationship to this land and the respect and gratitude which this relationship demands. Anthropological data combined with the invaluable memories and encouragement of our elders have enhanced this awareness and also caused us to realize how precarious the survival of this knowledge is.

As our understanding of our tradition increases, so will our need for access to the resources that this tradition is based upon. Without access to the sacred cedar and salmon in their natural state, we cannot carry on the teaching and learning of our ways. When these important gifts disappear, so will our long hoped for and recently attained rights to religious freedom. It is this that we wish the Forest Service to understand. We are citizens of this land, with a constitutional right that is being threatened. This right must be protected, for if it is not, the rights of all citizens of this land -- Indian and non-Indian -- are in jeopardy.

TREATY RESOURCES

Aside from their importance to Indians as religious resources, the fish and game and certain flora were reserved for Indian use by treaty. Beyond their cultural significance, many of these resources are of great economic import to the tribes. Salmon and steelhead are the mainstay of many tribes' and members' cash economies. Game supplements cash income by providing subsistance food. Excessive logging can alter the water quantity and quality of a basin enough to adversely impact fishery resources. Game resources can also be adversely affected. These impacts must be considered in the development of Forest Service policy and site-specific management decisions.

Another important resource which is a reserved property right of the tribes is water. The tribes reserved sufficient water to do two things: 1) support the above mentioned treaty fish and game resources, and 2) meet the water needs of reservation development. Both of these uses of water may be affected by Forest Service activities. Land management activities and water resource projects, particularly impoundments, can affect the quality and quantity of water available for reservation use. The Forest Service must carefully weigh these impacts before permitting such activities and projects.

TRUST RESPONSIBILITY

All of the foregoing resource-specific concerns are based on the United States' general fiduciary duty to safeguard the welfare of Indians and their tribal governments. The legal basis for this doctrine, and its applicability to the Forest Service, is beyond dispute. We state here that we are always ready to help the Forest Service understand our particular concerns so as to ensure compliance with the law.

Following are some specific measures which we believe would bring about a greater degree of recognition and compliance with the Forest Service's obligations to us. We also hope they can help develop a more cooperative relationship in the planning process.

INDIAN RIGHTS IN THE OLYMPIC FOREST PLAN

There are two major areas of concern which need to be addressed in the Olympic Forest Plan.

First is consideration of renewable resources reserved by treaty. The main concern is for anadromous fisheries and game. These are the resources most heavily used by the tribes and most heavily impacted by land management activities.

The Forest Service should use a two-step process regarding fish and game. First, the resources should be considered in a sound multiple use manner by the interdisciplinary team. Second, the impacts of other resource use (logging) on fish and game need to be measured against tribal use and reliance. We cannot overemphasize that our rights are substantive. A measurement of resource "tradeoffs" is not enough; the decision regarding resource allocation must avoid tradeoffs which diminish treaty rights.

The second major area of concern is religious and cultural; we ask the Forest Service to take the following steps to ensure that our religious freedom is not infringed upon through its decisions:

1. The Forest Plan should include a schedule for the conduct and completion of a forest wide Indian cultural resource inventory. We view the purpose and process of the recently published Mt. Baker-Snoqualmie National Forest Inventory as a good starting point. It is not possible for tribes to provide comprehensive information on actual resources in any manner short of such a study. The information is privileged and a great deal of trust is needed, requiring control over much of the process by the tribes.

2. The Forest Plan should provide a method for implementing the findings of the inventory, which will include the identification and evaluation of cultural/religious uses and areas (current and historic), the development of management criteria, and a management plan for these resources and areas.

3. The Forest Plan should provide for an interim cultural/religious resource protection program in ongoing activities. For example, the current processes of cultural resource surveys for lands scheduled for management activities does not consider the current cultural/religious uses of those lands. Requests for proposals (RFP) should explicitly include this aspect of resource use, in addition to archeological evidence.

CONCLUSION

The Olympic Peninsula Tribes have rights to resources under the management control of the Olympic National Forest. The Olympic Forest Plan must be written to ensure the recognition and protection of these rights. The tribes wish to cooperate with the Forest Service in the development of such inventory and conservation measures.

REFERENCES

The importance to the tribes of the resources discussed in this statement is expressed in the following references:

"Inventory of Native American Religious Use, Practices, Localities and Resources". Mt. Baker-Snoqualmie National Forest, April 1981.

Pamela Amoss. "Coast Salish Spirit Dancing: The Survival of an Ancestral Religion". University of Washington Press, 1978.

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Erna Gunther. "Ethnobotany of Western Wahington". University of Washington Press, 1945 (revised 1973).

Wayne Suttles. "Economic Life of the Coast Salish Indians of Haro and Rosario Straits". Ph. D. Dissertation, University of Washington, 1951.

Testimony in "Duwamish et al. v. United States", Court of Claims, No. F-275, taken by deposition in 1927:

Dick Lewis, Skokomish Indian, referring to what he heard at the Treaty of Point No Point - "Governor Stevens said that [fish and all shellfish, deer, elk, bear, ducks, and all game] will all be yours ..... all games of all description and fish will be yours, and also cedar ....".

Frank Allen, Skokomish Indian, referring to the Treaty of Point No Point - "They wanted their clams, they wanted their salmon, they wanted their game of all kinds in the woods; they wanted that cedar timber to make their canoes and buckets and such things as they used to use .... Governor Steves told them, all right, it is yours, and the creeks where the salmon runs."

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