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United States
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Forest Service

Alaska Region

Tongass
National Forest

R10-MB-311a

December 1995



Central Prince of Wales

Supplement to the Final Environmental Impact Statement

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**Supplement to the CPOW FEIS
Key Acronyms**

ASQ	Allowable Sale Quantity
CPOW	Central Prince of Wales project area
DEIS	Draft Environmental Impact Statement
FEIS	Final Environmental Impact Statement
SEIS	Supplemental Environmental Impact Statement
HCA	Habitat Conservation Area
IDT	Interdisciplinary Team
LTF	Log Transfer Facility
LSTA	Logging Systems Transportation Analysis
MELP	Multi-entry Layout Plan
MMBF	Million board feet
NEPA	National Environmental Policy Act of 1969
NFMA	National Forest Management Act of 1976
NOI	Notice of Intent to prepare an Environmental Impact Statement
ROD	Record of Decision
TLMP	Tongass Land Management Plan



United States
Department of
Agriculture

Forest
Service

Alaska Region

Tongass National Forest
Ketchikan Area
Federal Building
Ketchikan, AK 99901

File Code: 1950

Date: NOV 29 1995

Dear Reader:

Enclosed is the Record of Decision (ROD) and the Final Supplement to the Central Prince of Wales (CPOW) Final Environmental Impact Statement (FEIS) for the Ketchikan Pulp Corporation Long-term Timber Sale Contract. The following items should be found in the complete package:


Record of Decision
Final Supplement to the CPOW FEIS
 Preface
 Chapters 1 through 5
 Appendices A through G

Copies of the Final Supplement to the CPOW FEIS are available at Forest Service offices in Ketchikan, Thorne Bay, and Craig. Copies have also been sent to libraries throughout Southeast Alaska.

The ROD documents my final decision to continue the CPOW timber project as planned, and the factors considered in reaching the decision. The effective date of implementation for the decision and the Notice of Rights of Appeal are also specified in the ROD.

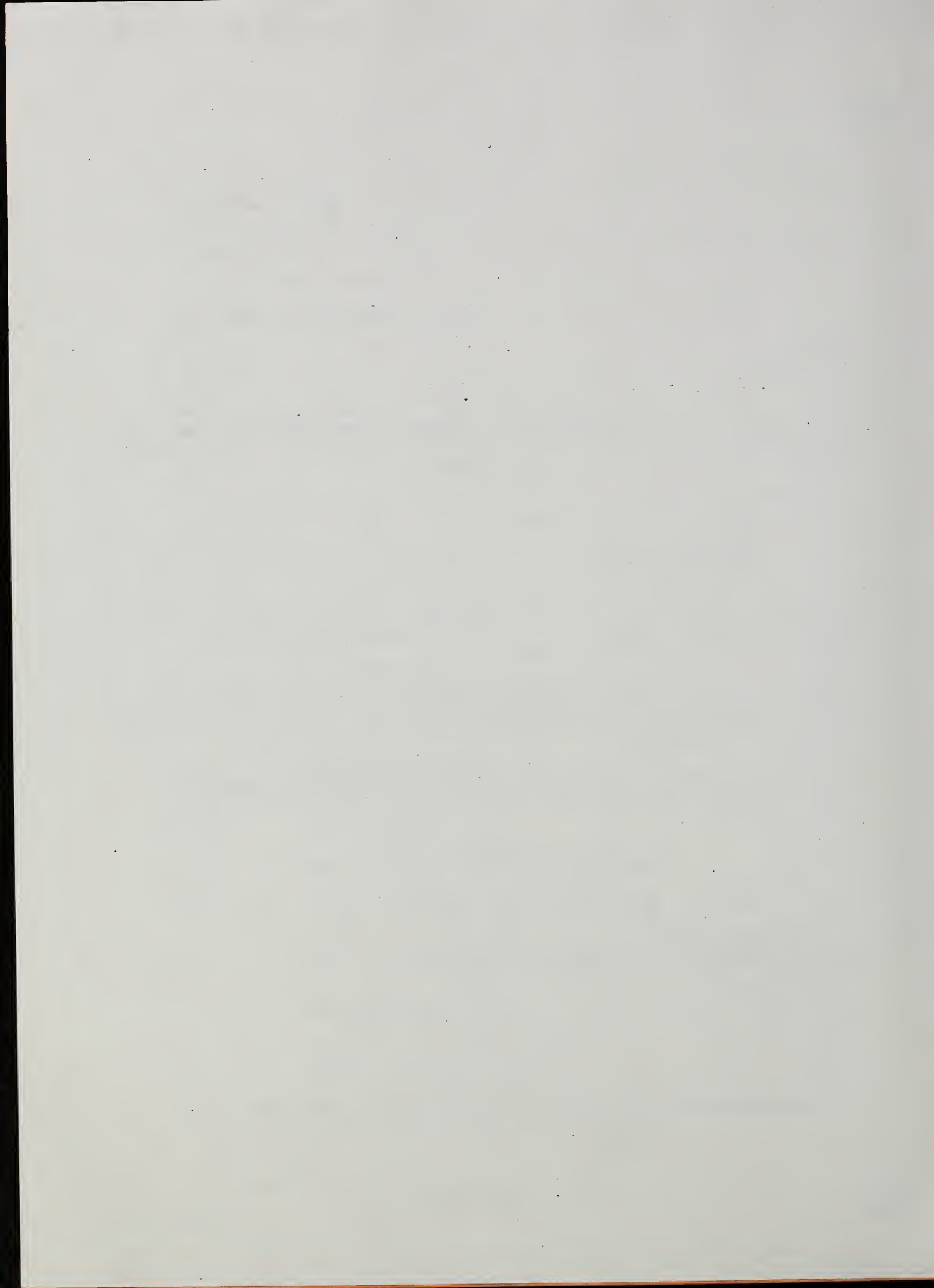
I want to thank those of you who took the time to review and comment on the Draft Supplement. Your interest in the management of the Tongass National Forest is valued.

Sincerely,


BRADLEY E. POWELL
Forest Supervisor

Enclosures





**Final Supplement to the Final Environmental Impact
Statement**

Central Prince of Wales

**United States Department of Agriculture
Forest Service - Alaska Region
Alaska**

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Tongass National Forest
Ketchikan Area**

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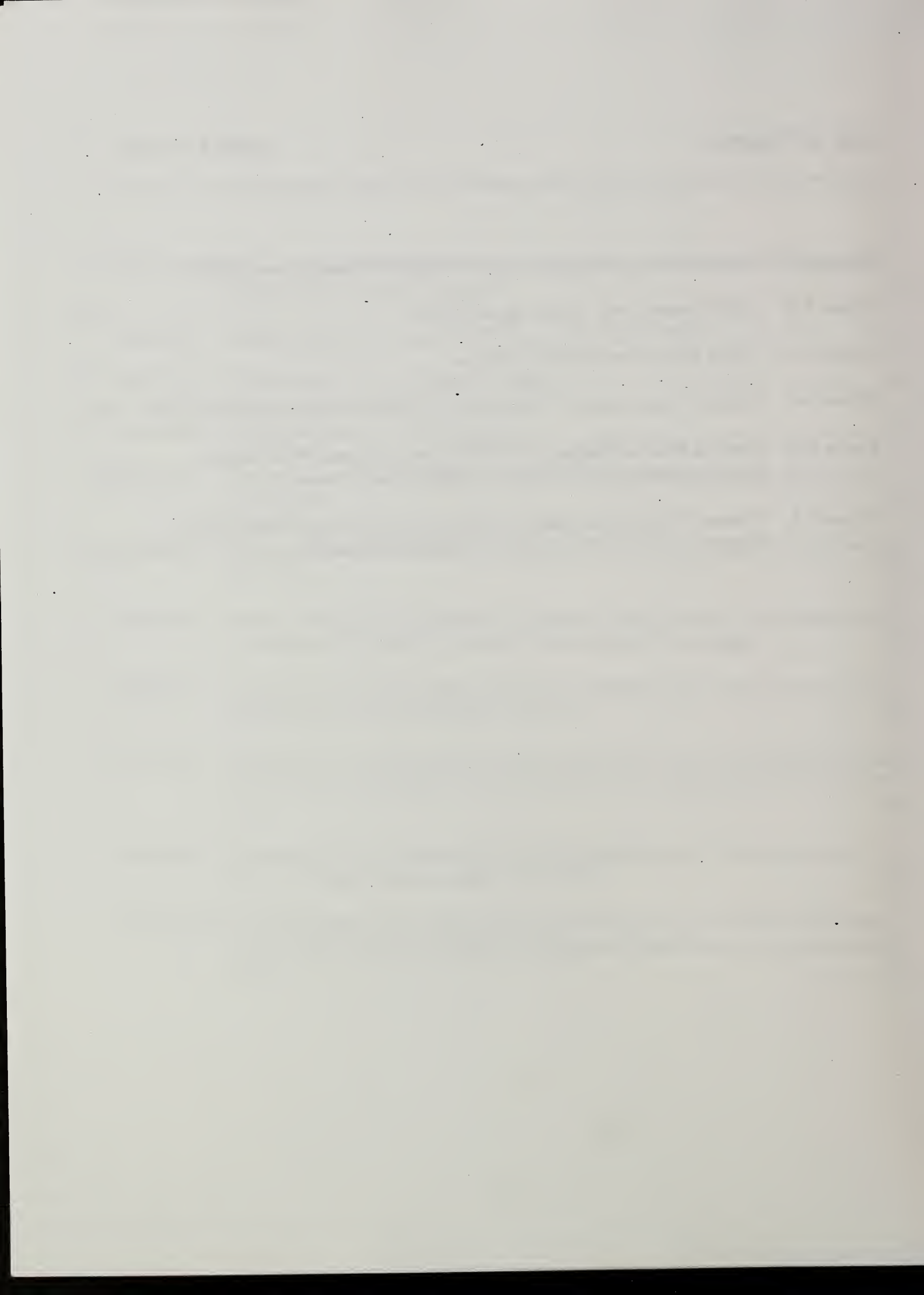
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Preface

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Preface

Purpose and Need

The purpose and need for the Central Prince of Wales (CPOW) timber project has not changed since the Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) were issued in 1993. The purpose and need for action is, in part, to help satisfy the three-year timber supply section of the Long-Term Timber Sale Contract with Ketchikan Pulp Company (KPC) and to implement the Tongass Land Management Plan (TLMP 1979a). There is also a need to help satisfy the obligation under Section 101 of the Tongass Timber Reform Act which reads in part:

“...subject to appropriations, other applicable law..., the Secretary shall, to the extent consistent with providing for the multiple use and sustained yield of all renewable forest resources, seek to provide a supply of timber from the Tongass National Forest which (1) meets the annual market demand for timber from such forest and (2) meets the market demand from such forest for each planning cycle.”

For the CPOW project, that contribution to the timber supply was determined to be approximately 290 million board feet (MMBF). For more information on how and why the CPOW project was scheduled and how 290 MMBF was determined as a project goal, please refer to Appendix A of the CPOW FEIS. The purpose of this project is also to further implement the TLMP (1979a) on the project area. The purpose and need for the project remains valid.

Comments on the Draft Supplement stated that Appendix A of the CPOW FEIS is outdated as it did not reflect the 267 MMBF actually cleared for harvest by the CPOW ROD. Appendix A for the Control Lake DEIS (October 1995) displays how the CPOW project volume of 267 MMBF is needed to meet timber supply needs on the Ketchikan Area.

The Interdisciplinary Team (IDT) charged with preparing this supplement to the CPOW FEIS considered two methods to present additional information on falldown to the Forest Supervisor. Both methods required evaluating falldown projections presented in several studies, determining what types of falldown are applicable at different stages of project planning and implementation, and determining what falldown figures best represent the CPOW project area and Prince of Wales Island.

The first method explored was to apply falldown factors to the alternatives considered in detail in the CPOW FEIS. Falldown would cause reductions in expected harvest volumes for each of the action alternatives. Falldown would also result in lower potential old-growth timber harvest in the future. For the purposes of display and comparison, future harvest was expressed as average annual harvest. This should not be construed as a commitment to harvest exactly the same volume every year through the year 2054.

Table P-1 compares the effects of falldown on timber harvest for the CPOW project by alternative and on potential future harvest on the project area through 2054. The IDT also examined the effects of falldown on wildlife habitat capabilities by alternative. Please refer to Appendix D of this supplement for more information.

Note: Falldown is defined as the difference between timber actually harvested and planned timber harvest levels when actual harvest turns out to be less than that planned. The reverse is also true. Fallup occurs when the amount of timber harvested (acres or volume) in a project area is greater than planned; or areas previously considered as unsuitable for harvest but are now found to be suitable based on field verification. Chapter 1 provides further definition and discussion of falldown.

Supplement Methodology

Preface

This method of comparing the effects of falldown based on the alternatives considered in detail in the CPOW FEIS is based on an assumption that the project has not yet been implemented. It would also lead a reader to assume that the decision maker could select any one of the alternatives to implement, including the no-action alternative.

Table P-1
Effect of 15 Percent Falldown on Five-Year Average Annual Harvest Volume in the CPOW Project Area by Alternative

Alternative	Direct Effects 1994-1998		Cumulative Effects 1999-2054	
	Acres	Vol. MMBF ¹	Acres ²	Vol. MMBF
1 (No Action)	0	0	1,104	29.8
F2 (268 MMBF)	1,595	43.1	981	26.5
F3 (264 MMBF)	1,620	43.7	979	25.4
F4 (261 MMBF)	1,562	42.2	983	26.5
F5 (267 MMBF)	1,674	45.2	975	26.3
F6 (263 MMBF)	1,591	42.9	981	26.5

1/ MMBF is calculated using a conversion factor of 27 mbf/acre.

2/ Total harvestable acres is 71,410 developed in preliminary data from Control Lake Cumulative Effects Analysis adjusted by 14.9 percent hard falldown implementation factor.

The second method considered for presenting falldown information to the Forest Supervisor incorporated a more current picture of the CPOW project as it is being implemented. It recognized that Alternative F5 was selected and has been partially implemented. To date, 96 MMBF has been offered or released to KPC.

The December 20, 1994 memo from the Forest Supervisor suspending the release or offering of timber from several offering areas pending completion of a supplement provides a good decision point in the process. It is upon completion of this supplement that the Forest Supervisor would decide to complete the project as planned or suspend the project indefinitely based on the information and analysis provided in this document.

The data in Table P-1 indicate only small differences of projected harvest volumes between the action alternatives. It should be noted that projected harvest volumes are not the only differences between alternatives as each responded in a different way to the eight issues identified in the CPOW FEIS. For the issues considered in this supplement, however, the range of effects between alternatives is so small as to obviate the need to display all alternatives separately. In addition, the cumulative effects of not harvesting the CPOW project would mean an increase of only 3 MMBF average annual harvest over the potential average annual harvest shown as the result of implementing any of the action alternatives.

This supplement, as a result of the above discussion, uses the second method to present information and analysis. This method simplifies the organization of pertinent data and reduces the clutter of discussions and analysis of alternatives other than halting the implementation of the selected alternative (F5) or continuing the implementation of the selected alternative (F5).

Background

The Draft Supplement to the Central Prince of Wales (CPOW) Environmental Impact Statement (EIS) was published in July 1995 and was available for public review. The comment period ended September 25, 1995. A total of seven comment letters were received.

The Final Supplement to the CPOW EIS presents additional information regarding falldown that was not included in the CPOW FEIS. The Final Supplement includes responses to all public comments on the Draft Supplement. Appendix F includes copies of the comment letters and Forest Service responses.

The Ketchikan Area Forest Supervisor has reviewed the additional information on falldown and its effects. His decision whether to halt the implementation of the CPOW project, to continue the project as planned, or to implement only a portion of the remainder of the project is described in the accompanying Record of Decision (ROD) for the Final Supplement to the CPOW EIS. This decision is subject to appeal for a 45-day period beginning the day after publication of his decision in the Ketchikan Daily News, the official newspaper of record for the Ketchikan Area.

The additional information considered in this supplement consists of several studies that estimated the suitable timber base related to falldown factors occurring at the planning stage, as well as falldown factors that may not be recognized until projects are implemented.

The studies reviewed in this Supplement include the summary of falldown encountered while implementing the CPOW project, the CPOW Multi-Entry Layout Plan (MELP), The Irland Group Report, the Forest Service Evaluation of The Irland Group Report, and preliminary results of the Control Lake Cumulative Effects Analysis for the project area.

Based on the information from these studies, the Supplement Interdisciplinary Team (IDT) identified the falldown factors and suitable timber estimates that best represent the CPOW project area. Using these figures the IDT analyzed the effects of falldown on timber supply and community stability.

The estimate of suitable timber on the CPOW project area identified in preliminary results of the Control Lake Cumulative Effects Analysis is based on the most up-to-date information. This amounted to 75,205 acres of suitable old-growth timber which exceeds TLMP (1979a) scheduled harvest of 71,666 acres. This figure was derived through intensive aerial photo and topographic map interpretation, and used updated soils and streams information.

The CPOW MELP also provided an estimate of suitable timber for the project area. One of the differences between the MELP and the Control Lake Cumulative Effects Analysis estimates was that the MELP used an 8 percent sustained grade limit for roads planned to harvest suitable timber, while the Cumulative Effects Analysis used a 15 percent sustained grade limit which is a Regional standard. Another difference is that the CPOW MELP did not consider potential harvest units on steep slopes and thereby passed over

Preface

potentially suitable timber that the Cumulative Effects Analysis included. The third difference is that the Cumulative Effects Analysis incorporated updated streams and soils information not available to the CPOW IDT. Additional comparisons of the MELP and the Control Lake Cumulative Effects Analysis for the CPOW project area may be found in both Chapter 4 and Appendix B.

The estimate of falldown that would occur during project implementation is best represented by that determined during the layout of 121 CPOW harvest units during 1994 and 1995. Hard falldown (deletion of unsuitable acres from planned harvest units) for 121 units was determined to be 14.8 percent of the planned acreage (rounded to 15 percent). Soft falldown (deferral of suitable acres to protect other resources) for the same 121 units amounted to approximately 5.4 percent (rounded to 5 percent) of the total planned harvest acres.

In addition to falldown that occurs during layout of harvest units, falldown also occurs during the field reconnaissance (recon) phase of the project. This stage of the planning process is an intermediate step between the determination of a potential unit pool on paper and the development of a site-specific proposed action. Data from field recon in the CPOW, Lab Bay, Control Lake, and Polk Inlet projects was analyzed to determine an appropriate recon falldown factor. The data was also analyzed to disaggregate soft falldown and hard falldown. Results of this analysis show that a weighted average of 8 percent hard falldown and 10 percent soft falldown can be anticipated during field recon (see Appendix E - Reconnaissance Falldown).

The other studies that provided design loss estimates included both The Irland Group Report and The Forest Service Evaluation of The Irland Group Report. The estimates provided by the latter two studies were generalized estimates applicable to the Tongass National Forest as a whole. The purpose of these studies was not to determine project level falldown, but to address whether the volume of timber required by the Long-term Contract can be provided from the Tongass National Forest while complying with laws applicable to National Forest management. The studies also analyzed the potential impacts of eliminating the contract areas. The falldown percentages shown in the CPOW Layout Summary more accurately represent the CPOW project and the CPOW project area than either The Irland Group Report or the Forest Service Evaluation of the Irland Group Report. Appendix A of this Supplement provides a more detailed discussion of these studies.

Results

The estimates of the suitable timber base and estimate of falldown that occurs during project implementation were used to predict the volume of harvest for the remainder of the CPOW project and the potential harvest volumes between the end of the CPOW project and the year 2054. This analysis was also done for Prince of Wales Island.

We believe a combination of the CPOW MELP and the updated LSTA provides the best assessment of potentially harvestable timber on the project area. Each study identified harvestable timber in areas not considered by the other study. For example, the updated LSTA excluded from consideration any soils complexes labeled as unsuitable under Draft Revision Alternative P (1991) guidelines. There are soils within those complexes that permit harvest of timber. These are some of the areas identified in the CPOW MELP as suitable and have been harvested in the CPOW project.

The combined MELP and updated LSTA includes encumbered lands and suitable timber at risk of not being harvested. Excluding these from the combined total represents the suitable timber most likely to be harvestable in the future. We have identified this suitable timber scenario as a modified combination of the MELP and the updated LSTA.

Preface

This supplement will analyze the effects of two options. These options are: (1) halt the CPOW project in whole or part, or (2) continue the CPOW project as planned. The total CPOW project harvest would be approximately 96 MMBF if CPOW were halted now. If halted and the remaining CPOW volume were rescheduled between 1999 and 2054, the project area could sustain an average annual harvest of 14 to 36 MMBF, depending upon which suitable timber scenario proves to be most accurate (Table 4-3). The modified combination of the updated LSTA and the CPOW MELP which would permit a potential average annual harvest of 36 MMBF (2005-2054). In contrast, if CPOW were to continue as planned, the sustained average annual harvest in the future could range from 10 to 33 MMBF (Table 4-2) depending upon which suitable timber estimate is the most accurate. The modified combination of the updated LSTA and the CPOW MELP identified suitable timber would allow an average annual harvest of 33 MMBF. All projections are less than the historic average annual harvest of 52 MMBF on the project area. Halting the CPOW project now could increase the potential average annual harvest (2005-2054) by approximately 3 MMBF. The average annual harvest for the project area in the ten-year sale plan is 17 MMBF if the project continues or approximately 10 MMBF if the project is halted.

To assess the effects of timber supply on community stability it was necessary to look beyond the CPOW project area boundaries. Because community establishment and development is related to historic timber harvest on Prince of Wales Island, harvest volumes were tabulated by decade from the 1950s to present.

The harvest figures for Prince of Wales Island as a whole reveal a sharp increase in annual average harvest between the 1950s and the 1960s (176 MMBF) followed by a gradual decline through 1994 to 122 MMBF. There are other timber sales planned for POW as indicated by the ten-year sale schedule (1995-2004). The effects of halting or continuing the CPOW project were compared using the projected timber harvest during the ten-year sale schedule.

If CPOW were to be halted, the ten-year sale schedule for Prince of Wales Island shows an average annual harvest of 61 MMBF through 2004 followed by a potential 51 to 175 MMBF average annual harvest from 2005 through 2054 (Table 4-5). On the other hand, continuing the CPOW project as planned shows an average annual harvest of 69 MMBF through 2004 but a future potential harvest ranging from 50 to 174 MMBF average annual harvest beyond 2005 on Prince of Wales Island (Table 4-6). The most accurate assessment of potentially suitable timber is that represented by projecting the modified combination of the updated LSTA and the CPOW MELP to Prince of Wales Island. Based on this projection, future average annual harvest on Prince of Wales Island could approach 155 MMBF if the CPOW project is halted and 154 MMBF if the CPOW projected continues as planned.

Whether CPOW is halted or continued as planned, the current ten-year sale schedule reflects a reduction from historic harvest levels upon which some communities are very dependent. The period from 2005 through 2054 reflects a range of potential harvest volumes from a low of 50 MMBF to a high of 175 MMBF. Historic harvest through 1994 averaged 122 MMBF annually. Harvest of all TLMP (1979a) scheduled CFL as planned would result in an annual average harvest of 150 MMBF.

Timber harvest in the past was concentrated on northern POW. To maintain historic or near historic timber harvest levels on POW, timber harvest will need to focus more on southern Prince of Wales Island and less on northern POW.

Suitable Timber Base

Assumptions

Estimates of the suitable timber base are compared with TLMP (1979a) scheduled commercial forest land (CFL) rather than TLMP Draft Revision Alternative P estimates as was done in the CPOW FEIS. This is done to provide a link between this analysis and the Forest Plan that was not provided in the CPOW FEIS.

The Control Lake Cumulative Effects Analysis provided updated accessibility and operability analysis to the suitable acres of TLMP Draft Revision Alternative P. The information from the Control Lake Cumulative Effects Analysis will be incorporated in the TLMP Revision effort.

There are differences between TLMP (1979a) scheduled CFL and the TLMP Draft Revision Alternative P projections of suitable timber. TLMP (1979a) schedules harvest of all tentatively suited acres that may be harvested with conventional logging systems (standard), but only a percentage of tentatively suited acres classed as non-standard or low-volume marginal. Alternative P of the Draft Revision, on the other hand, would schedule for harvest nearly all tentatively suited forest land without making a distinction between standard, non-standard, or low-volume marginal classes.

TLMP (1979a) scheduled CFL does not include harvest of CFL on slopes greater than 75 percent. The TLMP (1979a) does not prohibit such harvest when resources can be protected, but harvest on these slopes was not used to calculate the allowable sale quantity (ASQ). Alternative P of the Draft Revision would include these lands in the suitable timber base if the sites have soils that are not a high risk for landslides.

TLMP (1979a) scheduled CFL takes into account the CFL that is to be retained as old-growth habitat for the life of the Forest Plan using the retention factors method. Alternative P of the Draft Revision would not use this method but would make allowances for old-growth habitat by designating an Old-Growth Habitat Land Use Designation (LUD), a Beach Fringe and Estuary LUD, and a Lake and Stream Protection LUD. The total of these acreages for these proposed LUDs would have exceeded retention requirements of TLMP (1979a).

Another difference between TLMP (1979a) and the Draft Revision Alternative P is that Alternative P would reduce the emphasis on clearcutting. While Alternative P would reduce the available timber base by only 5 percent, the ASQ would be reduced by approximately 7 percent from 450 MMBF to 418 MMBF.

Harvest of all TLMP (1979a) scheduled CFL will result in meeting the Forest Plan ASQ of 450 MMBF. Harvest of the suitable timber proposed under Alternative P of the Draft Revision would result in an ASQ of 418 MMBF.

The CPOW FEIS identified 114,260 acres in the CPOW project area as suitable timber based on TLMP Draft Revision Alternative P standards. This figure varies from the TLMP (1979a) scheduled CFL of 71,666 acres for reasons described above. The Control Lake Cumulative Effects analysis used TLMP Draft Revision Alternative P standards and guidelines and land allocation to estimate a suitable timber base of 75,205 acres. This varies from the 114,260 acres as updated streams and soils information provide a more accurate picture of resource concerns.

The suitable timber estimate derived from the CPOW Multi-Entry Layout Plan (MELP) was originally reported in the CPOW Draft EIS. This figure was updated through field reconnaissance and reported in the CPOW Final EIS as 50,288 acres. The TLMP Draft

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Revision Alternative P proposed to harvest 114,016 acres of the 114,260 suitable timber acres (by Alternative P standards) in the CPOW project area. The MELP figure has been compared against the Draft Revision Alternative P figure. The MELP represents a potential harvest that is 56 percent less than timber harvest proposed in Alternative P. This difference has been quoted as “falldown in excess of 50 percent.” The updated LSTA for the project area identified 75,205 suitable acres which is 34 percent less than the Draft Revision Alternative P figure for the project area.

Because falldown is the difference between actual harvest and planned harvest, it is not appropriate to compare suitable timber estimates from the MELP with those from TLMP Draft Revision Alternative P. Projections of suitable timber under Alternative P are not “planned” because Alternative P has not been selected, and are no more or less valid than suitable timber projections in Alternatives A, B, C, or D of the Draft Revision. “Planned” harvest is that identified in TLMP (1979a) as scheduled CFL.

The planned harvest for the CPOW project area is that provided by the TLMP (1979a) which schedules the harvest of 71,666 acres from the project area between now and the year 2054. This figure includes the CPOW project. This represents the baseline against which any estimate of potential timber harvest must be measured on the project area.

In comparing the MELP against the harvest schedule from the TLMP (1979a), the MELP shows a potential falldown of 30 percent on the project area. By contrast, the Control Lake Cumulative Effects Analysis updated Logging Systems Transportation Analysis

(LSTA) delineates 75,205 acres of suitable timber on the CPOW project area. This represents no shortfall to the TLMP (1979a) planned harvest (5% fallup).

The combination of the CPOW MELP and the updated LSTA modified by eliminating high risk soft falldown presents the most accurate assessment of potentially suitable timber available for harvest on the project area. This amounts to 84,345 acres which represents 18 percent more suitable timber than planned for harvest by TLMP (1979a).

Rotation Age

The year 2054 is important as it represents the first 100 years of intensive timber management on the Ketchikan Area. This is often described as the end of the first rotation. The TLMP (1979a) indicated that harvest of 100-year old second-growth becomes the focus of timber production given higher volumes in second-growth than in old-growth, more uniformly sized trees in second-growth, and the existing road system.

Timber Harvest

The term “timber harvest” means the harvest of old-growth timber unless otherwise noted. Timber harvest volumes displayed are the result of the harvest of old-growth. It is expected that the cutting of second-growth stands that originated in the 1950s and 1960s will become economically viable at age 80 or before. While this is a strong possibility, this potential volume is not displayed in average annual harvest calculations.

Soft Falldown

This term is used to describe deferral of timber harvest on suitable forest land. Economic falldown is considered soft but it is at risk if economic indices (market conditions) should stay down for an extended period of time. Throughout the supplement, it is assumed that soft falldown deferred as uneconomical to harvest during the planning of projects or encountered during project implementation will be harvested at some point in the future. This is based on the assumption that real values of timber products will continue to increase. If real values do not continue to increase, some or all of the 5 percent soft

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falldown in the CPOW project would be at risk of not being harvested. The effect of this possibility is discussed in Chapter 4.

Much of the soft falldown encountered during the implementation of the CPOW project was not for economic reasons but for resource protection on lands otherwise suitable for timber harvest. Cave protection measures, goshawk buffers, and muskeg margins deferred to provide habitat for waterfowl are considered soft falldown. There is a risk that these acres may never be harvested, whether or not economic conditions improve. This is the type of soft falldown that tends to occur at the implementation level.

Soft falldown during field reconnaissance, on the other hand, tends to result from the identification of harvest scheduling factors rather than resource protection factors. As an example, finding that an adjacent unit had not yet achieved greenup standards may lead to the deferral of a potential unit and elimination from the project unit pool. When greenup is achieved at some point in the future, the deferred unit would be rescheduled.

Data from field reconnaissance of four Prince of Wales Island projects indicate that of the 10 percent soft falldown encountered, over 8 percent could be rescheduled for the next project and less than 2 percent is for resource protection and at moderate to high risk of not being harvested in the future (in effect, becoming hard falldown).

Falldown Estimate Limitations

It is assumed that the 15 percent hard and 5 percent soft falldown factors based on data collected during layout of the CPOW project are applicable to the remainder of the projects scheduled from the suitable old-growth identified in the Control Lake

Cumulative Effects Analysis as well as the remainder of the CPOW MELP acres. It is also assumed that other projects on Prince of Wales will experience similar falldown during implementation. It is recognized that the falldown found on the CPOW project is the product of a unique project developed in a specific manner. Each project is developed with a slightly different approach from a unit pool that is not homogenous. It is reasonable to use the 15 percent and 5 percent figures for all project implementation falldown.

Field reconnaissance falldown averaged over four projects was found to be 18 percent of the total unit pool undergoing field verification. Of the 18 percent, 8 percent is hard falldown and 10 percent is soft falldown. Of the soft falldown, 8 percent requires rescheduling of harvest to a later entry, while 2 percent is for resource protection measures and is recognized as being at moderate to high risk of not being harvested at any point in the future.

Sustained Yield

Section 13 of the Resource Planning Act of 1974 states that the Secretary of Agriculture

“...shall limit the sale of timber from each National Forest to a quantity equal to or less than a quantity which can be removed from such forest annually in perpetuity on a sustained yield basis...” (emphasis added).

Sustained yield timber harvest is not required by law for any specific project area on the Forest. Sustained yield is calculated for each National Forest.

The Forest Service does not plan to provide a steady timber volume output year after year in each individual project area. The TLMP (1979a) is based on an entry schedule that provides for harvest of 40 percent of the timber on the first entry, 30 percent on the second entry, and the remaining 30 percent on the last entry. This three-entry system allows for the harvest of enough timber on the first entry to offset the initial setup costs

associated with roads, camps, and log transfer facilities. This is especially important when harvesting timber in remote areas of Southeast Alaska where setup costs are substantial.

Displays of average annual harvest in the future show the opportunity to harvest that amount of timber in subsequent decades. These displays are not a commitment to do so.

Changes Between the Draft and Final Supplement to CPOW FEIS

Information that was not available at the time of publication of the Draft was incorporated into the Final Supplement. Following are the summaries of changes between Draft and Final Supplement:

- Developing a reconnaissance (recon) falldown rate based on comments received on the Draft Supplement. Both hard and soft reconnaissance falldown experienced on the CPOW, Lab Bay, Control Lake, and Polk Inlet projects on Prince of Wales Island were identified. Results were summed, and a weighted average for hard and soft recon falldown was calculated. Recon falldown was combined with implementation falldown, and applied to all suitable timber base scenarios.
- The Control Lake Cumulative Effects Analysis was updated to provide a more detailed estimate of the suitable timber base on the CPOW project area.
- The CPOW Layout Summary in Appendix A was supplemented to incorporate two additional timber sale offerings. Updated information was used to further refine hard and soft implementation falldown.
- Additional detail comparing the MELP with the updated LSTA was added to Appendix B.
- The IDT developed additional scenarios of the remaining suitable timber base estimates for the CPOW project area. The additional scenarios resulted from analysis of the CPOW MELP and updated LSTA.
- The IDT determined that the more directly applicable falldown rates were the result of site specific analysis. The Irland Group Report and the Forest Service Evaluation of the Irland Group Report were completed for the Tongass NF as a whole. The combined rates developed for recon falldown and implementation falldown, compared against the suitable timber base scenarios, provide the more directly applicable assessment of remaining suitable timber.
- A broadened approach to identifying soft falldown risk factors was utilized in the Final. The IDT disaggregated soft falldown into two categories: (1) soft falldown as a result of scheduling concerns; and (2) soft falldown as a result of resource protection. It was further determined that some types of soft falldown were at risk of never being harvested.
- An additional appendix discussing reconnaissance falldown was developed for the Final Supplement.
- A distribution list of agencies, organizations and individuals receiving complete copies of the Final Supplement to CPOW EIS is substituted for Appendix C—Forest Products Price Trends.

Chapter 1

Purpose and Need

Chapter 1

Purpose of the Supplement

Introduction

This document presents supplemental information to the analysis documented in the Central Prince of Wales Final Environmental Impact Statement (CPOW FEIS) of July 1993. The reader will need both documents to get a complete picture of the proposed alternatives being considered and effects of those alternatives.

This supplement is organized into chapters that will help the reader understand why the Supplement is being prepared.

Chapter 1 will explain why this Supplement is needed. It also explains how the supplement relates to the Central Prince of Wales (CPOW) Final Environmental Impact Statement (FEIS). Explained in this chapter are the results of the Supplement which will be applied to the decision to be made. It includes a description of falldown and how it may affect sustainable timber harvest. The chapter concludes with a discussion of potential changes to the timber supply.

Chapter 2 provides an overview of the CPOW FEIS for those readers not familiar with that document.

Chapter 3 reviews several reports regarding falldown and the potential timber supply. The purpose of these reports, their strengths and weaknesses, and their conclusions are compared. This chapter also identifies the falldown percentage the Agency believes to be most accurate and analyzes its effects.

Chapter 4 uses the falldown percentage identified in Chapter 3 to analyze effects on timber supply and community stability. Also displayed are the effects of falldown as estimated by other analyses.

Chapter 5 contains the literature cited, list of preparers, glossary, and index.

1 Purpose

Why a Supplement

Information

This supplement to the Central Prince of Wales (CPOW) Final Environmental Impact Statement (FEIS) was prepared to provide additional information to the Forest Supervisor regarding the effects of falldown. Falldown is defined as the difference between planned timber harvest expressed in millions of board feet (MMBF) or acres, and actual timber harvest on a given area.

Decision to be Made

The Forest Supervisor will review the additional information and decide whether to halt the CPOW project, continue the project as planned, or implement only a portion of the remainder of the project. His decision will be documented in a Record of Decision (ROD) for this Supplement.

Relationship to CPOW FEIS

Background

The ROD for the FEIS was published on August 6, 1993. The ROD identified Alternative F5 (as modified) as the selected alternative which would harvest approximately 267 MMBF on approximately 9,836 acres and would meet the purpose and need for the project. Appendix A of the CPOW FEIS documents the reasons for scheduling the CPOW project and how the volume stated in the purpose and need fits the planned timber sale schedule. The purpose and need for the project has not changed and remains valid for this supplement. Appendix A of the Control Lake DEIS (October 1995) contains updated project volumes for all projects and discusses the role of each project in meeting timber supply needs on the Ketchikan Area.

The ROD was followed by a 45-day appeal filing period which ended on September 20, 1993.

Five appeals of the CPOW ROD were received including one from Southeast Alaska Conservation Council (SEACC).

On November 23, 1993, the Regional Forester's appeal decisions on the Central Prince of Wales project affirmed the Ketchikan Area Forest Supervisor's decision. On February 2, 1994, the Reviewing Officer for the Chief of the Forest Service affirmed the Regional Forester's appeal decisions on all CPOW appeals and appeal points.

Five offerings or releases of timber from the CPOW project were made to Ketchikan Pulp Company (KPC) between February and December 1994. These releases totaled approximately 78 MMBF. In 1995 two additional offerings were made to KPC totaling 18 MMBF.

On June 1, 1994, Sierra Club Legal Defense Fund, Inc., filed a complaint for declaratory judgment and injunctive relief on behalf of its clients (SEACC, et al.) in the United States District Court, District of Alaska. This complaint named the Ketchikan Area Forest Supervisor and the Forest Service as defendants and challenged the CPOW timber project. The complaint alleged violations of the National Environmental Policy Act (NEPA), the Administrative Procedures Act (APA), and the Tongass Timber Reform Act (TTRA). The NEPA and APA allegations focused on the volume of timber available in the project area and the sustainability of future timber supply. The TTRA allegation challenged the method used for determining proportionality in the CPOW project under Section 301 (c)(2) of the TTRA.

On December 20, 1994, the Forest Supervisor partially suspended implementation of the CPOW ROD pending completion of a Supplement to the CPOW FEIS. The Forest Supervisor did not suspend implementation on approximately 98 MMBF previously offered, released, or being contemplated for release to KPC prior to April 1996. The total volume suspended pending completion of the Supplement was approximately 140 MMBF.

The Forest Supervisor directed the preparation of a Supplement to review additional information regarding falldown that had not been disclosed in the CPOW FEIS and ROD. A Notice of Intent (NOI) to prepare a Supplement to the CPOW FEIS was published in the Federal Register on April 5, 1995. A letter explaining the supplement process and describing the focus of the analysis was mailed to over 700 individuals and organizations on April 10, 1995.

The Draft Supplement to the CPOW FEIS was published in late July 1995 and mailed to all interested parties in the first week of August. A Notice of Availability was published in the Federal Register on August 11 with a comment period ending September 25, 1995. Seven comment letters were received.

Factors Analyzed in the Supplement

In June 1994, Sierra Club Legal Defense Fund, Inc. (SCLDF) filed a lawsuit arguing that the CPOW FEIS inadequately discussed the issue of community stability based on a sustainable timber harvest. Their concern is that the amount of timber harvest planned for the CPOW project would leave too little timber available for harvest in future decades to sustain the communities on Prince of Wales Island.

Ketchikan Pulp Company (KPC) has expressed concern regarding community stability because they believe that present timber availability is a problem for all camps and communities on the northern part of Prince of Wales Island. This problem particularly affects the logging camps of Lab Bay and Naukati. KPC has claimed that not enough harvest acres are available to meet their total demand and capacity, and that there are not enough units available at lower elevations when weather conditions halt operations on high elevation units (Control Lake Subsistence Resource Report, page 60). Upon completion of timber harvest planned in the area, KPC closed the Lab Bay logging camp (March 1994). It is expected that logging camps would move upon completing harvest within their operating areas. While Lab Bay and Naukati are both logging camps, Naukati is also a small community. The community is not incorporated, but it does have a homeowners association.

The issue of proportional harvest by volume class was one of the points raised in the complaint filed by SCLDF on June 1, 1994. This issue is currently before the federal district court in another case. Proportionality will not be discussed in this Supplement.

Factor 1: Falldown

Definition

Falldown is a term used to describe a situation when the amount of timber harvested (expressed in acres or volume) in a project area is less than the planned or projected timber harvest. Acres are the most common unit of measure used in the planning and layout phases of a project. Falldown occurs for various reasons at different

1 Purpose

points of applying the Forest Plan standards and guidelines to a project area. The following categories identify the types of falldown that may occur.

Hard Falldown

Hard falldown is defined as acres that may not be harvested by law or where irreparable resource damage may occur as a result of harvest. Areas that fit this description are identified as not suitable for timber production based on the National Forest Management Act (NFMA) regulations (36CFR 219.14(a)(1) through (4).)

Examples of hard falldown include local areas of poor soil stability, rock outcrops, v-notches, non-commercial forest land, and sites that cannot be reforested in five years. Hard falldown also includes lands required for buffers along previously unmapped fish streams and lands selected by the State or Native corporations that have been conveyed to their ownership. These areas reduce the timber base from which Forest Plan allowable sale quantity (ASQ) is calculated.

Soft Falldown

Soft falldown is defined as the deferral or delay of timber harvest on suitable forest land. These lands are not necessarily removed from the suitable timber base and could be harvested at some time in the future.

Examples of soft falldown include deferral of potential harvest units adjacent to previously harvested units that have not reached sufficient new tree growth to meet NFMA created opening requirements; deferral of potential harvest units in areas/watersheds that have exceeded Forest Plan cumulative effects thresholds; deferral of potential harvest units to meet TTRA proportional harvest requirements; and deferral of portions of potential harvest units that require different logging systems than planned (e.g. small portions that would require helicopter yarding).

The soft falldown category also includes potential harvest units (or portions of) that are deferred to meet newly defined resource objectives not addressed in the Forest Plan. Areas deferred to protect potentially significant karst features is one example. These deferrals allow the forest planning process to more adequately deal with them. It is possible that these buffers may not be harvested, regardless of rising or falling economic indices. Chapter 4 discusses the potential effect of soft falldown further.

Key indicators for evaluating falldown in this analysis are that falldown will be measured in acres and percentages of project areas. The effects of falldown will be displayed in thousands of board feet (MBF) or millions of board feet (MMBF) of timber.

Fallup

Discussions of falldown should be accompanied by a discussion of fallup factors. Fallup is defined as a situation when the amount of timber harvested (acres or volume) in a project area is greater than the planned or projected harvest.

An example of fallup during planning, is a stand of forest land believed to have regeneration difficulties if harvested. The stand is considered unsuitable for timber production. On-site investigations reveal, however, that regeneration would occur successfully, thereby causing the stand in question to be re-classified as suitable for timber production and considered for future harvest.

Other unit increases are not considered as fallup but rather as unit additions. Unit boundaries as laid out sometimes differ from locations of planned unit boundaries.

While these differences usually result in acreage reductions, they occasionally result in acreage increases.

One example of a unit addition is when a planned unit borders a second-growth stand. If the location of the second-growth stand is not accurately portrayed in the GIS data base, the result may be that the planned unit boundary falls short of the second-growth stand. During implementation, the harvest unit boundary is laid out to abut the second-growth stand if it is clear there was no intent to leave an unharvested strip between the two stands.

Another example of a unit addition is harvesting all timber from a planned setting rather than leaving fringes that would become isolated and uneconomical to harvest in the future. The extent of harvest boundaries from each setting will vary from that planned based on minor topographic variations and locations of adequate tailhold trees. It should be noted that these same features sometimes contribute to soft falldown, not harvesting otherwise suitable timber because of blind leads and lack of adequate tailholds.

Factor 2: Sustainability

Effects of Falldown

Sustainability is related to issue seven of the CPOW FEIS, long-term social and economic stability of local communities. Our discussion will focus on how falldown affects harvest from the CPOW project area and the projected cumulative effects for the project area and Prince of Wales Island.

Sustainability is used interchangeably with the term "sustained yield" defined in the Multiple-Use Sustained-Yield Act of 1960 as "the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the national forests without impairment of the productivity of the land."

The Resource Planning Act of 1974 provides that the Secretary of Agriculture shall limit the sale of timber from each national forest to a quantity equal to or less than a quantity which can be removed from such forest annually in perpetuity on a sustained-yield basis.

"Local sustainability" may be termed as a level of harvest opportunity expected in a project area over the decades. Although no legal requirement exists to provide sustainability at the local level, local sustainability could be of some assistance in gauging the role which timber employment will play in any particular community over time. Because those employed in the timber harvest industry often commute outside a particular project area, sustained harvest in any particular project area may be considered an unreliable indicator of timber employment in any given community. The Agency does not plan to harvest the same amount of timber every year in any particular project area.

Key indicators for evaluating community stability and the sustainability of the local timber supply include average annual harvest estimates from the CPOW project area, as well as from Prince of Wales Island as a whole. Communities in and adjacent to the CPOW project area affected by the proposed action include Whale Pass, Coffman Cove,

1 Purpose

Naukati, and Thorne Bay as identified in the CPOW FEIS. These key indicators are discussed in detail in Chapter 4.

Potential Changes

Timber Supply

Potential changes to timber supply may result from reallocation of lands for purposes other than timber management. These kinds of changes may come about through the forest plan amendment process, the forest plan revision process, or through laws enacted by Congress. The actions that affect the suitable timber base from which ASQ is calculated will affect the ASQ. This type of change based on changes in the suitable timber base is not considered falldown as it is a change to the planned allowable harvest level. The definition of falldown in Chapter 1 is the difference between the planned harvest and the actual harvest.

Habitat Conservation Areas (HCAs), goshawk protection zones, cave/karst allocations, and the Alaska Fish Habitat Assessment (AFHA) strategy are examples of potential allocations of lands to purposes other than timber management. Until such time as decisions are made through the appropriate land allocations process, any deferrals result in soft falldown. This will result in fewer acres and less volume being harvested in a given project than planned. When land allocation decisions are made, these soft falldown acres may become hard falldown for the project and the ASQ adjusted accordingly.

The Control Lake Timber Sale EIS, currently in progress, will include updating of various resource data bases for much of the Ketchikan Area, including Prince of Wales Island. Karst vulnerability rating will also be done to quantify the potential effects of managing these resources on the timber supply. The Control Lake updating is designed to help address the areas of potential changes to timber supply discussed above and is expected to provide better data in measuring potential change.

There are cases when field reconnaissance results in discovery of unanticipated conditions requiring deletion of an area from the suitable timber base. This is considered hard falldown and would reduce the projected harvest from a project area as well as reduce the suitable timber base. This may happen occasionally, for example, when a previously unidentified anadromous stream is located within a unit scheduled for harvest. Implementing a minimum 100-foot buffer on the stream results in falldown regarding the anticipated harvest volume for the unit. Identifying the stream and adding it to the database results in additional acres being removed from the suitable timber base with subsequent effects (minor for one stream, but cumulatively may approach significance) on the ASQ.

The streams database has been updated as part of the Control Lake Cumulative Effects Analysis to better represent conditions being found during ground verification and project implementation. Additional analysis of slopes, landslides and V-notches in conjunction with soils will help identify areas that often are inoperable for logging. Logging and transportation analysis for future projects have been done to quantify how much of the suitable timber base is in more expensive economic categories for harvesting. These updates will be used in cumulative effects and timber supply analyses in future environmental impact statements. Preliminary results of the Control Lake effort were used in the Final Supplement. The updated resource databases were forwarded to the Tongass Land Management Planning Team for use in the TLMP Revision process.

Fallup is another factor that has a bearing on the potential timber supply. Timber suitability data from the Ketchikan Area's Geographic Information System (GIS) database indicates that 16 percent of 3,531 acres prepared for release in the CPOW project were shown to be not tentatively suited for timber harvest. Field review during harvest unit layout clearly indicates these acres are suitable. While this indicates a potential fallup factor, it is based on a small sample size that may not be applicable over larger geographic areas.

There is potential for second-growth timber becoming available for harvest before the end of the first rotation (2054). If the earliest stands harvested under the Long-term Sale contract (1954-1959) were put under an 80 year rotation, they could be available for harvest in 2034-2039. Ketchikan Area records show approximately 9,000 acres harvested on Prince of Wales Island in the 1950s. If harvested under a thinning prescription, these acres could yield a conservative total harvest of approximately 90 MMBF. Scheduled over the remaining 20 years of the rotation they could yield a possible average annual harvest of 4.5 MMBF. This volume would be in addition to mature timber harvest volumes. If harvested under a clearcut prescription, these same acres could yield a conservative total harvest of approximately 166 MMBF. Scheduled over the remaining 20 years of the rotation they could yield a possible average annual harvest of 8.3 MMBF. This volume would also be in addition to mature timber harvest volumes.

Availability of Documents

The planning record for this supplement is incorporated by reference and available for review during regular business hours at the Forest Supervisor's Office, Ketchikan, Alaska. Copies of the Supplement and the CPOW FEIS and ROD may be viewed at the Supervisor's Office or at public libraries in the area, and are available upon request. The certified administrative record for the CPOW project is incorporated by reference and is also available for public review at the Supervisor's Office.

Chapter 2

Summary of CPOW FEIS

Chapter 2

Summary of CPOW FEIS

Introduction

This part of the Supplement to the Central Prince of Wales Final Environmental Impact Statement (CPOW FEIS) presents a brief summary of the key points found in the FEIS. The reader should consult the FEIS to obtain complete information and the analysis regarding each affected resource and the effects upon those resources from the proposed action and alternatives.

CPOW FEIS

Chapter 1: Purpose and Need

The planning process for the CPOW project officially began on August 30, 1991, with publication of a Notice of Intent to prepare an Environmental Impact Statement in the Federal Register. Scoping, or "an early and open process for determining the scope of the issues to be addressed" in an environmental impact statement (40 CFR 1501.7) also began at this point in the process.

The CPOW Interdisciplinary Team (IDT) used many activities to involve the public in the CPOW project, such as:

- **Public mailing.** On August 15, 1991, a letter seeking public comment was mailed to approximately 2,100 groups and individuals who had previously shown interest in Forest Service projects in Southeast Alaska.
- **Notice of Intent (NOI).** A Notice of Intent was published in the Federal Register on August 30, 1991.
- **Local News Media.** A scoping document with project map was placed in the September 7, 1991, weekend edition of the Ketchikan Daily News and in the Island News. A press conference was held October 17, 1991, to discuss Area planning projects, including CPOW.

2 Summary

- **Second Public Mailing.** On March 23, 1992, a second mailing was sent to 376 names summarizing the significant issues derived from the initial public comments, outlining the tentative alternatives, and inviting public attendance at scoping feedback meetings.
- **Scoping Feedback Meetings.** Five meetings were held in April 1992 to disclose the tentative alternatives and to answer questions from the public.
- **Third Public Mailing.** A letter was sent to approximately 2,100 groups and individuals on June 5, 1992, providing an opportunity for people to indicate how they would like to continue participation in the CPOW planning process.
- **Briefings.** Additional briefings were held in July and August of 1992 with various concerned organizations.
- **Availability of Draft EIS for Public Comment.** Availability of the DEIS was announced in the Federal Register on October 23, 1992, with deadline for public comment listed as December 7, 1992. The comment period was later extended to December 14, 1992.
- **Subsistence Hearings.** Subsistence hearings were held in eight different communities along with open houses to describe the analysis process and answer questions.
- **Public Comments on DEIS.** Approximately 375 individuals, agencies, and organizations submitted written comments on the CPOW DEIS. Written comments and subsistence comments were analyzed and incorporated into the Final EIS.
- **Record of Decision.** On August 6, 1993 the Record of Decision was published followed by a 45-day appeal period during which five appeals were received.

Chapter 1 of the Supplement contains information on events after the appeal period leading up to this Supplement.

Proposed Action

In the CPOW FEIS, the Forest Service proposed to harvest approximately 290 MMBF of timber from an estimated 10,000 acres on Prince of Wales Island. Timber volume would be offered to Ketchikan Pulp Company (KPC) in separate offerings ranging in size from 10 to 50 MMBF. Approximately 100 miles of new road would be built to facilitate timber removal. Five existing log transfer facilities (LTFs) would be used to implement the proposed action; no new LTFs were proposed.

Purpose and Need

The purpose and need for the CPOW project is to help satisfy the three-year timber supply section of the Long-Term Timber Sale Contract with Ketchikan Pulp Company and to implement the Tongass Land Management Plan, as amended (TLMP 1979a). There is also a need to help satisfy the obligation set by Congress under directing the Forest Service to comply with Section 101 of the Tongass Timber Reform Act (TTRA) of 1990:

“(A) Subject to appropriations, other applicable law, and the requirements of the National Forest Management Act of 1976 (Public Law 94-588), except as provided in subsection (d) of this section, the Secretary shall, to the extent consistent with providing for the multiple use and sustained yield of all renewable forest resources, seek to provide a supply of timber from the Tongass National Forest which (1) meets the annual market demand for timber from such forest and (2) meets the market demand from such forest for each planning cycle.”

Appendix A of the CPOW FEIS displays the role of the CPOW project in meeting current timber supply needs and projected harvest through the year 2004 (CPOW FEIS Appendix A, Table 1, p. 6-7).

Decision to be Made

In making his decision on the CPOW FEIS, the Ketchikan Area Forest Supervisor could decide to: 1) select one of the alternatives from the FEIS; 2) modify an alternative, as long as the environmental consequences of the modified action were analyzed in the FEIS; or 3) reject all alternatives. The decision to select and modify Alternative F5 was documented in a Record of Decision.

Issues

Eight issues were identified as significant and within the scope of the project in the CPOW FEIS. They were:

1. Cost effectiveness of timber harvest operations.
2. Impact of timber harvest on subsistence use.
3. Impact of timber harvest operations on wildlife habitat.
4. Impact of timber harvest operations within Honker Divide.
5. Impact of timber harvest operations on fish habitat and water quality.
6. Impact of timber harvest operations on visual quality.
7. Long-term social and economic stability of local communities.
8. Impact of timber harvest operations on karst ecosystem and cave resources.

2 Summary

Chapter 2: Alternatives

The alternatives considered in detail in the CPOW FEIS are listed below; the five action alternatives were developed to respond to the issues described above.

Alternative 1 (No Action):
No harvest of CPOW project.

Alternative 1a (No Action/No Harvest):
No harvest of CPOW project and suspension of harvest operations on previously approved units.

Alternative F2:
Harvest 268 MMBF. The emphasis of this alternative was to reduce harvest of high value wildlife habitat and to maintain the integrity of the Habitat Conservation Areas (HCAs) proposed by the viable population committee.

Alternative F3:
Harvest 264 MMBF. The emphasis of this alternative was to focus on providing economic viability for this timber entry, proposing no helicopter logging and minimizing logging and road costs.

Alternative F4:
Harvest 261 MMBF. The emphasis of this alternative was to provide for economically viable timber harvest and to maintain the integrity of the HCA block within Honker Divide.

Alternative F5 (Preferred and Selected):
Harvest 267 MMBF. This alternative was designed to emphasize ecosystem principles, including reduced use of clearcutting, establishment of an area emphasizing uneven-aged management, incorporation of ecosystem management principles, and reduction of forest fragmentation by minimizing harvest in the Honker Divide HCA.

Alternative F6:
Harvest 263 MMBF. The emphasis of this alternative was to reduce harvest in areas important to subsistence users, sport hunters, and recreation users, while seeking to minimize forest fragmentation and harvest of areas containing karst features.

Chapter 3: Environment and Effects

Chapter 3 of the FEIS presented detailed information and effects analysis on those aspects of the environment that could be affected by the activities in the proposed action and its alternatives.

As Chapter 3 contains 356 pages, its contents will not be summarized here; the resource areas and page references to their FEIS location are listed below.

- Air Quality, page 3-7.
- Old Growth and Biodiversity, page 3-9.
- Threatened and Endangered Species, page 3-33.
- Forest Pests and Diseases, page 3-39.
- Geology and Minerals, page 3-42.

- Geology and Minerals, page 3-42.
- Soils, page 3-47.
- Water Resources, page 3-65.
- Fisheries, page 3-77.
- Timber and Vegetation, page 3-99.
- Wildlife, page 3-149.
- Karst and Caves Resources, page 3-179.
- Visual Resources, page 3-201.
- Recreation, page 3-233.
- Cultural Resources, page 3-257.
- Subsistence, page 3-269.
- Socio-Economic Environment, page 3-317.
- Transportation and Facilities, page 3-343.
- Land Status, page 3-357.
- Other Environmental Considerations, page 3-361.

Appendices

The FEIS also contained material in these appendices:

- A. Reasons for Scheduling the Environmental Analysis of the CPOW Project Area.
- B. Biological Assessment.
- C. Unit Design Criteria.
- D. Response to Public Comments.
- E. Changes to Units Between DEIS and FEIS.
- F. Subsistence and Biodiversity Maps
- G. Unit Cards.

Chapter 3

Analysis of Falldown Studies

Chapter 3

Analysis of Falldown Studies

Introduction

This chapter analyzes the suitable timber base considered for future harvest in the CPOW project area and compares it with the Tongass Land Management Plan (TLMP 1979a) scheduled commercial forest land (CFL) on the project area. The suitable timber base is best represented by the combined results of the Control Lake Cumulative Effects Analysis updated LSTA and the CPOW MELP. The combined results were adjusted for high risk factors such as encumbered lands selected but not yet conveyed, slopes in excess of 70 percent, high vulnerability karst, excessive numbers of streams, and areas dominated by steep V-notches. When compared with the TLMP (1979a) scheduled CFL, this estimate of 84,345 acres of potentially harvestable timber represents no shortfall from planned harvest of 71,666 acres by TLMP.

This chapter documents our selection of an implementation falldown factor of 14.8 percent, rounded to 15 percent. This is the hard falldown factor experienced in the implementation of the CPOW project and documented in the CPOW Layout Summary (Appendix A). This summary also documents a 5.4 percent soft falldown factor (rounded to 5 percent). While soft falldown can affect harvest volume on a specific project, it is not removed from the suitable timber base and may be rescheduled for harvest. Chapter 4 discloses the effects of these falldown factors on timber supply.

In addition to an implementation hard falldown factor of 15 percent, a reconnaissance (recon) falldown factor has been identified. This falldown occurs between the establishment of a potential unit pool to be considered for a timber harvest project and actual project implementation. Both hard and soft falldown have been documented in this phase. Based on data from four Prince of Wales Island timber projects, we believe that an average of 8 percent hard falldown occurs during field recon. Ten percent soft falldown is also noted but this does not affect the suitable timber base. See Appendix E, Reconnaissance Falldown, for additional information.

The Draft Supplement identified a planning falldown percentage of 0.4 percent because the best available estimate of suitable timber was less than that represented by TLMP (1979a) scheduled CFL. In the Final Supplement, the concept of a planning falldown percentage has been dropped, replaced by our application of combined recon and implementation falldown applied to each estimate of timber remaining in the project area.

3 Analysis of Falldown Studies

The five estimates range from 44 to 132 percent of TLMP (1979a) scheduled CFL of 71,666 acres for the project area.

Chapter 4 also displays the potential effects of falldown on timber supply as predicted by the CPOW Multi-Entry Layout Plan (MELP), The Irland Group Report, the Forest Service Evaluation of The Irland Group Report, and the updated LSTA from the Control Lake Cumulative Effects Analysis.

Falldown Studies

Analysis

Several studies and reports that provided estimates of falldown were analyzed. These were:

- CPOW Layout Summary
- CPOW MELP
- The Irland Group Report (TIG)
- Forest Service Evaluation of The Irland Group Report
- Control Lake Cumulative Effects Analysis

Following is a summary of each study, why it was conducted, how it was applied, and strengths and weaknesses of each. Strengths and weaknesses were identified by the Supplement IDT. Appendix A and B contain in-depth discussions of falldown estimates found in each study.

CPOW Layout Summary

Thorne Bay Ranger District prepared 121 units from the CPOW timber project for eventual release to Ketchikan Pulp Company (KPC) during 1994 and 1995. Five of the prepared units were deferred or deleted from release. Prior to release, the units were analyzed to determine whether differences between planned units and laid out units represented enough change to require a revision or supplement to the FEIS. This is in accordance with 40 CFR 1502.9 (c)(1)(ii) of Council on Environmental Quality regulations implementing the National Environmental Policy Act (NEPA).

The Strengths of the CPOW Layout:

- The CPOW layout falldown findings offer the best representation of actual project level falldown occurring on the CPOW project.
- The CPOW layout falldown projections have been thoroughly analyzed by resource crews, Forest and District Staffs, and Line Officers. The acres deferred or deleted are based on 100 percent site specific field verification.
- All units laid out were done so by interdisciplinary resource crews. This check and balance ensures optimum protection and consideration of all resources.
- The CPOW layout offers full disclosure and documentation for changes to units. These are documented in change analysis memos per 40 CFR 1502.9 (c)(1)(ii).

The Weaknesses of the CPOW Layout:

- The CPOW project was developed from the Multi-Entry Layout Plan (MELP). The MELP identified relatively low risk units. Future projects from within the CPOW project area may experience higher falldown rates as the remaining comparatively high risk units are harvested.

- The CPOW layout falldown estimates are specific to the CPOW project and may not accurately reflect falldown rates on other projects.
- The CPOW layout does not provide an estimate of falldown that may occur earlier in the planning process when proposed units thought to be suitable are found to be not suitable and dropped from further harvest consideration. Some level of planning falldown should be accounted for in addition to the CPOW layout falldown to better represent total falldown.

Conclusion

The unit layout resulted in a total net falldown of 20.2 percent (4.5 percent additions, 9.9 percent soft falldown, 14.8 percent hard falldown). For the purpose of analyzing effects of falldown on the potential timber supply, we used the 14.8 percent hard implementation falldown factor, rounded to 15 percent.

CPOW MELP

An Interdisciplinary Team (IDT) initiated a large scale Multi-Entry Layout Plan (MELP) in 1990 to locate and quantify areas which would be available for subsequent NEPA analysis. The purpose of the plan was to identify a pool of low risk units. The plan focused on North Prince of Wales Island, then was further refined to include only the CPOW project area. The plan was updated as office and field reviews occurred.

The Strengths of the MELP:

- A process consistent with the National Forest Management Act (NFMA) to determine suitable acres for harvesting within the CPOW project area was developed and used to determine a unit pool unconstrained by established methodologies. As a result, the MELP identified several suitable settings or acres that would have been identified as unsuitable by TLMP Revision Alternative P and current soils information. This is, in effect, a fallup factor rather than falldown.
- The MELP was one of the first intensive attempts to field verify potential Long-term Sale units on the Ketchikan Area. Approximately 52 percent of the units from the total unit pool were field verified. Falldown may have been higher at the implementation stage had field verification at the planning stage not taken place.
- The MELP identified a unit pool that was designed to provide relatively non-difficult operability units. Falldown levels occurring at implementation might have been higher if more difficult operability units had been included in the unit pool.
- The MELP identified a hard falldown factor that occurs during field recon.

The Weaknesses of the MELP:

- While the MELP identified units that met NFMA requirements in determining timber suitability, the process used was unique to the CPOW project and did not tie directly to TLMP (1979a). As a result, the MELP did not identify all potentially suitable harvest units.

3 Analysis of Falldown Studies

- The MELP overlooked pockets of suitable timber that may be found within larger unsuitable areas of very high Mass Movement Index (MMI) soils. The MMI predicts the risk of landslides. Aerial photos and topographic maps often do not provide this level of information.
- The 8 percent sustained grade limit may have restricted the amount of road that could have been planned (CPOW DEIS, Appendix C, page 2). The limit placed on helicopter flight distances for yarding timber was 5,000 feet (CPOW DEIS, Appendix C, page 3). Potential areas for timber harvest were not considered if a road could not be built within the 8 percent sustained grade limit to either access the timber by road or approach the area within 5,000 feet to allow helicopter logging. Regional standards use a 15 percent sustained road grade limit, which if applied, could have accessed additional timber.
- Not all units from the CPOW unit pool were field verified prior to completion of the Record of Decision (ROD). Approximately 200 units of the 384 in the unit pool (52 percent) were field verified.
- Because the MELP identified a pool of relatively non-difficult units, future projects will rely on a larger portion of their harvest volume coming from isolated and difficult operability acres.
- The MELP did not identify an implementation falldown factor.
- Results of a MELP cannot be used to determine suitability which is a function of a Forest Plan. A MELP determines the operability of potential units on suitable acres identified in the Forest Plan.

Conclusion

The CPOW MELP estimated a total of 50,288 acres of suitable old-growth timber. TLMP (1979a) scheduled 71,666 acres of old growth harvest. The MELP represents a 30 percent potential falldown in planned harvest now through 2054 as compared to TLMP.

Note: The 50 percent falldown figure used or estimated in the CPOW DEIS is a result of comparing the 50,288 acres of timber identified in the MELP with suitable acres identified by Alternative P of the proposed revised Forest Plan (114,260 acres). The current TLMP (1979a) scheduled acres (71,666) were chosen for the project area as providing the base against which to compare other estimates of harvestable timber because it represents planned harvest for the project area. Alternative P of the proposed revised Forest Plan is only one of five proposed alternatives in the proposed revised Forest Plan.

The Irland Group

In the summer of 1991 The Irland Group (TIG) was awarded a contract by the Alaska Region of the USDA Forest Service designed to address the study provisions of Section 301(e) of the Tongass Timber Reform Act (TTRA). The results of The Irland Group Report concluded that volumes required by the modified Long-term Sale (LTS) contracts could be provided while complying with applicable laws. The results of the report are stated in terms applicable to the Tongass National Forest as a whole and may not be applicable to smaller project areas.

The Strengths of The Irland Group Report:

- The Irland Group accounted for the lands yet to be conveyed to the State of Alaska and Native corporations. This amounted to a 7 percent reduction to the Tongass National Forest allowable sale quantity (ASQ). This is considered as hard falldown.
- The FORPLAN model is not capable of determining where potential conflicts between land uses occur in juxtaposition. The Irland Group determined this spatial limitation resulted in a 2 percent reduction to the ASQ. While this may affect planning for individual projects, it is a soft falldown factor.
- The Irland Group determined that isolated timber stands and stands of low volume class might not be harvested. They determined that these two factors would amount to a 10 percent reduction to the ASQ. This is a soft falldown based on economic conditions.
- The Irland Group determined that project implementation design losses would occur which would reduce the ASQ by 25 percent. Not enough information was presented in the report to determine whether this 25 percent should be considered as hard or soft falldown, for analysis purposes, we assume it is hard falldown.

The Weaknesses of The Irland Group Report:

- The 7 percent reduction The Irland Group developed for land yet to be conveyed to third parties changed after completion of their report. The Forest Service Evaluation of The Irland Group report determined the reduction to be 3 percent. Either figure may not be directly applicable to individual projects, and is not applicable to the CPOW project.
- The FORPLAN spatial limitation reduction of 2 percent is for the Tongass National Forest. This value may not be directly applicable to individual projects. While this limitation may affect the amount of timber that may be harvested in a ten-year period, it does not affect long-term timber supply.
- The project implementation design loss reduction factor of 25 percent developed by The Irland Group is for the Tongass National Forest and may not be directly applicable to individual projects. Individual projects may experience higher or lower falldown levels. It is not apparent if the 25 percent level is hard falldown, soft falldown, or a combination of both. For analysis purposes, we assume it is hard falldown.
- The Irland Group Report determined that better data on lands where regeneration is difficult or lands with low volume would result in an improvement of 11 percent to the ASQ. This improvement is not anticipated to occur on the Tongass National Forest or individual projects because there is no indication that research will occur in the foreseeable future to provide improved information.
- The Irland Group Report determined that a 10 percent improvement would occur to the ASQ as a result of higher volumes being harvested than were planned. The Irland Group based this improvement on initial entry projects where harvesting higher than anticipated volumes were experienced. Initial entries often require higher than average volumes to offset the cost of road construction and log transfer facilities (Alaska Regional Guide, p. 2-48). The volumes are expected to average out during second and third entries. As a result, the 10 percent improvement anticipated by the Irland Group Report is not expected to occur.

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- The Irland Group Report did not differentiate between hard and soft falldown. It is difficult to determine how much of the total falldown might be soft falldown, which could indicate how much volume may become available for future harvesting.

Conclusion

The Irland Group analyzed the attainable volumes for Long-term Sale (LTS) contracts and the Tongass National Forest. The analysis determined that the net falldown rate for the Tongass was 23 percent (44 percent gross falldown and 21 percent gross fallup). The projected fallup factors of 10 percent higher volume on initial entry and 11 percent based on better data for stands difficult to regenerate are not thought to be reasonable on the Tongass and not applicable to the CPOW project area. The Irland Group Report factors were applicable to the Tongass National Forest as a whole. The falldown factors The Irland Group developed which could apply to individual projects are design losses, isolated stands, and not harvesting volume class 4/5. These factors amount to 35 percent hard falldown and soft falldown. For the purpose of comparison, we use only the project implementation design loss hard falldown factor of 25 percent. The supplement uses this factor because it represents The Irland Group Report's best estimate of hard falldown that might occur while implementing individual projects. It is important to note that this estimate is not specific to the CPOW project. Appendix A displays all the adequacy of supply (AOS) falldown factors The Irland Group analyzed.

Forest Service Evaluation of The Irland Group Report

The Irland Group's final report was accepted by the Alaska Region in early 1992. The Forest Service Evaluation Report agreed with The Irland Group's conclusion that volumes required by the modified LTS contracts could be provided while complying with applicable laws. The evaluation further agreed that the amount of timber likely to be sold and harvested on the Tongass NF would be less than the maximums permitted by the allowable sale quantities (ASQ) stated by TLMP Revision (418 MMBF/year for Alternative P) and TLMP (1979a) (450 MMBF/year). The evaluation attributed factors related to economics as the primary source of volume shortfalls. This evaluation was intended to apply to the Tongass National Forest as a whole.

The Strengths of the FS Evaluation of The Irland Group Report:

- The Forest Service Evaluation Report accounted for the inherent limitations of FORPLAN and projected the occurrence of a 2 percent reduction in the ASQ. This is soft falldown as it may affect project planning but not the suitable timber base.
- The evaluation report differentiated project implementation design loss falldown into economic falldown (soft) and other falldown (hard). It attributed a 13.6 percent reduction for soft falldown and a 4.6 percent reduction for hard falldown.
- The evaluation report used current information on lands yet to be conveyed. It attributed a 3 percent reduction to occur to the ASQ. This is a hard falldown factor.
- The evaluation report determined that not harvesting isolated stands would lower the ASQ by 2 percent. The report determined that this was soft falldown. These stands are available for future harvesting if economic conditions improve.

- The evaluation report determined that not harvesting low volume stands (volume class 4 and 5) would lower the ASQ by 5.5 percent. Again, the report determined this was soft falldown. These stands might become available for future harvesting if economic conditions improve.
- The evaluation report did not agree with The Irland Group Report's 11 percent and 10 percent improvements to the ASQ. The evaluation report noted that the response data improvement was not scientifically defensible. In this case "response" refers to adding timber lands to the suitable timber base that are currently not considered because of expected regeneration problems. TIG assumed that half those acres could be added to the suitable timber base if research was conducted on them. The evaluation report also noted that the higher harvest volume predictions were based partly on interviews with IDT leaders rather than solid data from field implementation files.

The Weaknesses of the FS Evaluation of The Irland Group Report:

- The 3 percent reduction developed for lands yet to be conveyed is for the Tongass National Forest as a whole. This reduction may not be directly applicable to individual projects, and is not applicable to the CPOW project.
- The 2 percent reduction developed for spatial limitations of FORPLAN is for the Tongass National Forest as a whole. This reduction may not be directly applicable to individual projects.
- The project implementation design loss factors of 4.6 percent hard falldown and 13.6 percent soft falldown were averages developed for the Tongass National Forest as a whole. These design loss factors may not accurately reflect falldown occurring on specific individual projects.

Conclusion

The Forest Service Evaluation Report analyzed attainable volume for the Tongass and determined a potential net falldown of 30.7 percent. The land selection and spatial limitation falldown factors (total of 5 percent) do not apply to specific projects. We considered the factors of design loss, isolated stands, and not harvesting volume class 4/5 isolated stands as those that best apply to individual projects. These factors total 25.7 percent, of which 21.1 percent is soft falldown based on economics and 4.6 percent is hard falldown. For the analysis of potential effects on timber supply, we used only the 4.6 percent hard falldown design loss factor (rounded to 5 percent). Appendix A displays all falldown factors the Forest Service Evaluation of The Irland Group Report analyzed.

**Control Lake
Cumulative
Effects
Analysis**

The Control Lake Cumulative Effects Analysis is the result of an intensive effort to update various resource data bases on the Ketchikan Area. The purpose is to better identify factors that have been causing falldown or adjustments to the suitable timber base. In addition, areas identified as suitable for timber harvest will have a logging system transportation analysis (LSTA) completed which will identify operability and related economic factors.

The Strengths of the Control Lake Cumulative Effects Analysis:

- One of the updated LSTAs is specific to the CPOW project area.

3 Analysis of Falldown Studies

- The analysis is based on the most recent inventory of resources available on the Ketchikan Area.
- The analysis recognized standards of fifteen percent (15 percent) for sustained road grades.
- The analysis examined all suitable acres for potential harvest.
- The analysis will include a comprehensive mapping of steep slopes.
- Streams are being mapped and classified with appropriate minimum no-harvest buffers applied. These no-harvest buffers are excluded from the LSTA.

The Weaknesses of the Control Lake Cumulative Effects Analysis:

- The updated LSTA used TLMP Draft Revision Alternative P standards to determine suitability rather than TLMP (1979a) standards. This will result in no LSTA completed for beach fringe and estuary zones and will include slopes greater than 75 percent. The LSTA also excluded areas the TLMP Draft Revision Alternative P would exclude from harvest such as Old Toms Creek Research Natural Area, Rio Roberts proposed Research Natural Area, Special Interest Areas, and Semi-primitive Recreation Areas among others.
- Field verification of the suitable acres will include only potential harvest units in recent ongoing projects such as Polk Inlet, Lab Bay, and Control Lake.
- Areas identified as unsuitable in the GIS database for reasons of slope or soils were not field checked for potentially suitable harvest units in the CPOW project area.

Conclusion

As of this writing the Control Lake Cumulative Effects Analysis final report is not available. The CPOW MELP was updated and preliminary figures for potential harvest units were determined. The updated LSTA identified 75,205 acres as suitable for harvest in the CPOW project area which represents a 5.4 percent fallup from planned harvest. TLMP (1979a) scheduled 71,666 acres for harvest in the project area.

Falldown Factors Used in This Supplement

Factors Considered

To simplify the discussion of falldown and potential effects on the suitable timber supply, it is necessary to identify the most likely falldown factors and percentages to apply in project planning, field reconnaissance, and implementation. A realistic picture of falldown must provide an estimate of old-growth remaining in the suitable timber base.

The current Forest Plan (TLMP 1979a) provides the scheduled acreage planned for harvest in the CPOW project area. Harvest of this acreage along with harvest from other project areas provides the basis for the allowable sale quantity (ASQ) of 450 MMBF. TLMP (1979a) scheduled harvest of 71,666 acres of old-growth on the CPOW project area between now and the end of the first rotation in the year 2054.

This 71,666 acre "pool" provides the basis for comparison of all falldown analyses and predicts potential harvest acreage. If we were to harvest all the acres scheduled by TLMP (1979a), this would amount to the equivalent of seven CPOW timber projects (9,800 acres each) over the next 60 years.

Analysis of Falldown Studies **3**

This Supplement discusses several estimates of suitable timber that range from 44 percent to 132 percent of the TLMP (1979a) scheduled CFL for the CPOW project area.

Reconnaissance (recon) falldown occurs during the field verification of potential units identified during the planning phase of a timber harvest project. Units may be deferred from consideration in a project for a variety of reasons. Such deferrals may be made because adjacent units have not yet reached greenup standards, in order to meet proportionality requirements, or because cumulative harvest thresholds for a given watershed may have been reached during this planning period. These units may be rescheduled for harvest during the next project. Other deferrals may be made because preliminary indications may reveal a unit to be located on high vulnerability karst features. While this timber would not be removed from the suitable timber base, it is at risk of not being rescheduled if timber harvest cannot be accomplished without damaging significant cave resources.

Some units may be deleted from the suitable timber base. These deletions may be the result of a unit being located on very high MMI slopes and soils, for non-commercial timber volumes (less than 8,000 board feet per acre), and for lands conveyed to other ownership since a project was initiated. Hard falldown occurring during recon has ranged from 5 percent to 11 percent. Soft falldown on these same projects during recon has ranged from 5 percent to 26 percent. Total hard and soft falldown has ranged from 14 percent to 31 percent. The weighted average of recon falldown for all projects is 8 percent hard falldown and 10 percent soft falldown. See Appendix E for more information.

Any analysis of falldown must include an implementation factor to be applied to the units identified in the NEPA decision document because planning activities cannot account for all potential falldown encountered on the ground. Falldown occurring during this phase of the project should be disaggregated into hard and soft falldown. While both hard and soft falldown have an effect on the acres and volume to be harvested during the project, hard falldown has the effect of diminishing the suitable timber base. Estimates of hard falldown occurring during implementation of a project range from approximately 5 to 25 percent.

Percentages Believed Most Accurate

For the purposes of this Supplement to the CPOW FEIS, a hard falldown factor of 8 percent resulting from field recon is combined with a hard falldown of 15 percent encountered during implementation for a total hard falldown of 23 percent to be applied to the five estimates of suitable timber for the CPOW project area.

Soft falldown of 10 percent resulting from field recon is primarily a result of factors deferring harvest of suitable acres until the next project. Soft falldown of 5 percent encountered during project implementation is a combination of factors, some economic, some the result of resource protection measures implemented for caves or goshawk nest protection. There is some risk that some soft falldown may not be rescheduled for harvest and that possibility is addressed later in Chapter 4.

A hard falldown of 15 percent based on CPOW project implementation to date is the best estimate for project level falldown available. A soft falldown of 5 percent is also the best available information for project level soft falldown.

It should be noted that both The Irland Group Report and the Forest Service Evaluation of The Irland Group Report provided estimates of project level hard falldown, 25 percent and 5 percent respectively. While these estimates are not based on site specific projects and were intended as Forest-wide averages, we have applied these possibilities to estimates of suitable timber for the CPOW project area as well.

Chapter 4

Effects of Falldown on Timber Supply and Community Stability

Chapter 4

Effects of Falldown on Timber Supply and Community Stability

Introduction

In previous chapters we evaluated several falldown estimates and identified the falldown factors most applicable to the Central Prince of Wales (CPOW) project. In Chapter 4 we compare the direct and cumulative effects of implementing two options and the effects they would have on timber supply and community stability. The two options whose effects are displayed:

- Option 1: Halt the project in whole or in part
- Option 2: Continue the project as planned

Changes Between the Draft and Final Supplement to CPOW FEIS

The Final Supplement documents analysis of suitable timber base estimates provided by the CPOW MELP and the updated Control Lake Cumulative Effects Analysis LSTA. The Supplement displays five possible suitable timber base estimates based on these two studies, under the following scenarios:

- CPOW MELP timber base (50,288 acres)
- Updated LSTA timber base (75,205 acres)
- Overlap between the MELP and LSTA (31,250 acres)
- Combination of the MELP and LSTA (94,243 acres)
- Modified-combined MELP and LSTA (84,345 acres)

4 Effects of Falldown

The Supplement also analyzes in depth the effects of possible falldown estimates documented in The Irland Group Report and the Forest Service Evaluation of The Irland Group Report even though they were completed for the Tongass NF as a whole. Information on falldown expected to occur to projects completed on Prince of Wales Island is based on projections gained through site specific information provided by the MELP and updated LSTA.

The Final Supplement identifies a reconnaissance falldown factor and combines it with an implementation factor. This combination of falldown factors is then applied to each of the five potential suitable timber base scenarios to display five possible outcomes.

Direct, Indirect, and Cumulative Effects

Direct Effects

Direct effects are those that occur at the same time and place as the project (CPOW FEIS, Chapter 4, page 6). An example of a direct effect is the employment of people in the felling, yarding, and hauling of timber in harvest units. Direct effects are calculated for the life of the CPOW project.

Indirect Effects

Indirect effects are the result of an action occurring at a location other than where the action takes place and/or later in time, but in the reasonably foreseeable future (CPOW FEIS Glossary, Chapter 4, page 7). An example of an indirect effect is a business supplying harvest equipment to a timber operator.

Cumulative Effects

Cumulative effects are the effects of similar projects when added to past, present, and future projects. An example of a cumulative effect is the employment of people in the timber industry based on anticipated future timber harvest in the project area as well as on Prince of Wales Island. Cumulative effects are estimated through the year 2054, when most of the scheduled CFL would have been converted from old-growth timber to second-growth timber.

The direct, indirect, and cumulative effects of the alternatives will be measured in this Supplement by the volume of timber harvested on the CPOW project area now and in the future (through the year 2054). The effects of the alternatives will also be related to community stability. Prince of Wales Island communities covered in this supplement were established and have developed largely as a result of historic timber harvest levels on the island as a whole. The relationship of historic, current, and future timber harvest projections and timber-related employment in island communities is compared.

Total timber-related employment (direct, indirect, and induced jobs) can be assessed by using a conversion factor of 8.67 total jobs per MMBF of harvest (CPOW FEIS, Chapter 3, page 331). To estimate employment based on total timber harvest, the reader has only to apply this factor to predicted harvest for any given harvest period.

This chapter concludes with a discussion of potential risk of not harvesting due to economic soft falldown.

Timber Supply

CPOW Project Area

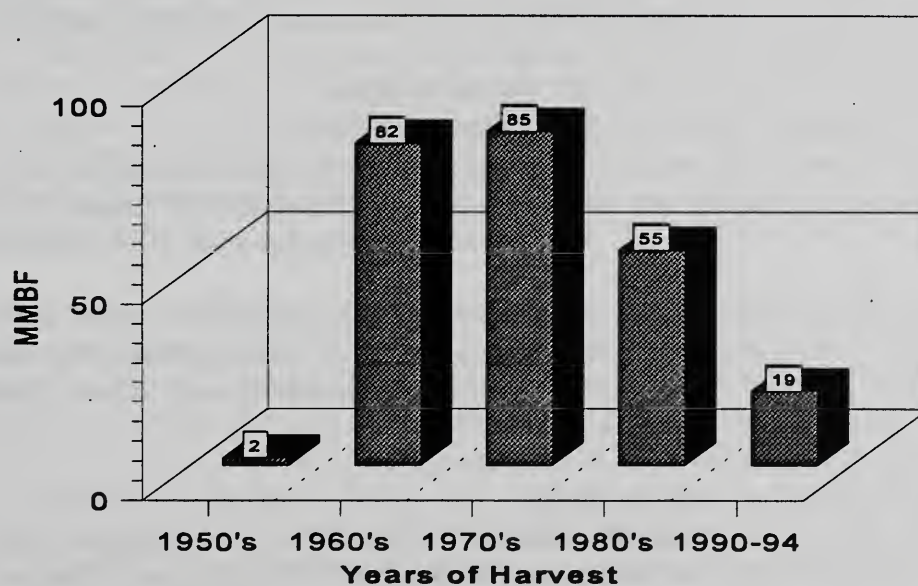
Historic Harvest Levels

Historic harvest from the CPOW project area from 1950 through 1994 averaged an annual harvest of 52 MMBF, varying from a high of 85 MMBF in the 1970's to a low of 1.7 MMBF in the late 1950's (Figure 4-1). The decline in volumes in the 1990's reflects three years of little timber harvest activity between the completion of the 1989-94 Operating Period EIS harvest units in the area and the beginning of the CPOW project in 1994. Table 4-1 and Figure 4-1 display this information.

Table 4-1
Average Annual Harvest in CPOW Project Area Since 1950

	Reporting Period				
	1950-59	1960-69	1970-79	1980-89	1990-94
Annual average harvest (MMBF)	1.7	82.2	85.1	54.6	19.4

Figure 4-1
Historic Annual Average Harvest from the CPOW Project Area in MMBF



4 Effects of Falldown

Suitable Acres TLMP (1979a) Scheduled Harvest

The Central Prince of Wales (CPOW) project area encompasses 205,201 acres of commercial forest land (CPOW FEIS). According to TLMP (1979a), 150,192 acres of commercial forest land (CFL) are scheduled for harvest in the CPOW project area between 1954 and 2054. The 150,192 acres comprise the tentatively suitable timber base. Lands are tentatively suitable if they have not been withdrawn from timber production and timber harvest can be accomplished without irreversible resource damage.

Of the tentatively suitable timber acreage, 78,526 acres were harvested by KPC under the Long-term Contract by the time the CPOW Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) were issued in 1993. This leaves 71,666 acres of tentatively suitable timber scheduled for harvest from the CPOW project area through the year 2054. This amounts to more than seven CPOW-sized projects, or an average annual harvest of 32 MMBF from 1994 through 2054.

Estimates of Suitable Timber Available

There are two recent estimates of suitable timber remaining in the CPOW project area: the CPOW MELP completed in preparation for the on-going CPOW timber project, and the updated LSTA being completed as part of the Control Lake Cumulative Effects Analysis to update resource information on project areas identified in the Ketchikan Area ten-year sale schedule. We believe the CPOW MELP, combined with the LSTA as modified, provide the most accurate suitable timber scenario as explained below. These two studies identified acres unique to each, as well as acres common to both. We recognize it is controversial, so we are displaying all possible scenarios. The five possible estimates of suitable timber on the project area are:

- 1) the CPOW MELP
- 2) the updated LSTA
- 3) the overlap between the MELP and the LSTA
- 4) the combined acres of the MELP and the LSTA
- 5) a modified combination of the MELP and the LSTA

These are five scenarios that are based on site-specific information, rather than Forest-wide estimates as represented by The Irland Group, the Forest Service Evaluation of The Irland Group, or those based on older resource data as represented by Draft Revision Alternative P (1991).

CPOW MELP

The CPOW Multi-entry Layout Plan (MELP) falldown study indicated 50,288 acres available for harvest from the CPOW project area. This amounts to only 70 percent of the remaining TLMP (1979a) scheduled CFL for the project area. This would indicate a 30 percent falldown from planned harvest. Under this assessment of harvestable timber remaining in the project area, four more CPOW-sized projects could be planned through the year 2054 upon completion of the current CPOW timber project.

Updated LSTA

The Control Lake Cumulative Effects Analysis LSTA identified 75,205 acres of suitable timber remaining in the project area. This amounts to 105 percent of the remaining TLMP (1979a) scheduled CFL for the project area. Under this assessment of harvestable

timber in the project area, nearly eight more potential CPOW-sized timber projects could be planned through the year 2054.

MELP and LSTA Overlap

Because the MELP and the LSTA were done independently, they identified suitable timber in different locations. They also identified areas common to both, in this case, 31,250 acres. This intersection of the two studies would indicate relatively low risk harvest potential from biological and physical standpoints. This intersection represents 44 percent of the remaining TLMP (1979a) scheduled CFL for the project area. Under this scenario of suitable timber remaining on the project area, three more CPOW-sized projects could be planned through the year 2054.

MELP and LSTA Combination

The sum of the acres identified by both studies, taking into account the overlap acres, would result in a potential 94,243 acres of suitable timber. This union of the two studies represents 132 percent of the remaining TLMP (1979a) scheduled CFL for the CPOW project area. Upon completion of the CPOW project, this would allow planning for nearly nine more CPOW-sized projects through the year 2054 in the project area.

MELP and LSTA Modified Combination

The sum of the acres identified by both studies, taking into account the overlap acres, would result in 94,243 acres of suitable timber. The updated LSTA identified acres of suitable timber that may be considered at risk from future harvest. The risk factors include encumbered lands (4,539 acres), slopes in excess of 70 percent (436 acres), areas dominated by steep V-notches (1,971 acres), areas with excessive numbers of streams (328 acres), and high vulnerability karst (2,624 acres). The total of these risk factors is 9,898 acres. Subtracting this risk total from the combined acreage of the MELP and the LSTA would result in a modified potential suitable timber figure of 84,345 acres. This represents 118 percent of the remaining TLMP (1979a) scheduled CFL for the project area. This modified combination includes the 9,836 acres scheduled for harvest in the current CPOW project. Upon completion of the CPOW project, the remaining suitable timber would provide nearly eight more CPOW-sized projects through the year 2054 in the project area.

We believe this combination, as modified, represents the most accurate representation of the harvestable timber in the CPOW project area. Each effort (the MELP and the LSTA) identified potentially harvestable timber in areas not considered by the other. As an example, the updated LSTA excluded from consideration soils complexes labeled as unsuitable. There are soils within those complexes where timber harvest will not cause irreversible damage to soils productivity. These are some of the areas identified in the CPOW MELP as suitable and have been harvested in the CPOW project. On the other hand, the MELP excluded the Honker Divide from consideration for future timber harvest, while the updated LSTA identified suitable timber within that area.

Potential Effects of Falldown On Future Timber Supply

This section displays the potential effects of hard falldown experienced during reconnaissance and implementation of a project. We use hard falldown factors of

4 Effects of Falldown

8 percent for reconnaissance and 15 percent for implementation and apply these to the five estimates of suitable timber for the CPOW project area. We apply these falldown factors to estimates of available timber on Prince of Wales Island as a whole. The effects of continuing or halting the CPOW project on future timber harvest in the project area are displayed in Tables 4-2 and 4-3. The effects of continuing or halting the CPOW project on overall harvest on Prince of Wales Island as a whole are displayed in Tables 4-4 and 4-5. It should be noted that if timber is harvested at a higher rate than future averages portrayed in Tables 4-2 and 4-3, it would mean a reduced average harvest beyond that point.

Continuing the CPOW Project

If this option were selected, the CPOW project would be completed with planned harvest of 9,836 acres. Table 4-2 displays the results of continuing the CPOW project as planned on future potential harvest in the project area given the five suitable timber scenarios presented earlier in this chapter. The most conservative estimate of future harvest potential would be 10 MMBF average annual harvest based on harvesting only those acres identified by both the MELP and the LSTA. The least conservative estimate of future harvest potential given the five scenarios, would be 33 MMBF average annual harvest. We believe the most likely scenario is that provided by the modified combined MELP and LSTA. This could result in an average annual harvest of 29 MMBF. Continuing the project will result in average annual harvest of 17 MMBF from 1995 through 2004.

Table 4-2
CPOW Project Area: Continue the Project

	MELP	LSTA	Overlap	Combined	Modified Combined
Suitable Acres	50,288	75,205	31,250	94,243	84,345
CPOW project	9,836	-	-	9,836	9,836
Suitable Acres Remaining	40,452	75,205	31,250	84,407	74,509
8% Reconnaissance Falldown	3,236	6,016	2,500	6,753	5,961
Suitable Acres Remaining	37,216	69,189	28,750	77,654	68,548
10-Yr. Sale Plan (less 15%)	6,290	6,290	6,290	6,290	6,290
(10-Yr. Plan Volume MMBF)	(170)	(170)	(170)	(170)	(170)
Remaining Suitable Acres	30,926	62,899	22,460	71,364	62,258
15% Implementation Falldown	4,639	9,435	3,369	10,705	9,339
Suitable Acres Remaining	26,287	53,464	19,091	60,659	52,919
2005-2054 Average Annual					
Harvest Acres	526	1,069	382	1,213	1,058
Harvest Volume (MMBF)	14	29	10	33	29

**Halting the
CPOW Project**

If this option were selected, the CPOW project would terminate after the harvest of approximately 5,181 acres. Table 4-3 displays the results of halting the CPOW project on future potential harvest in the project area given the five suitable timber scenarios presented earlier in this chapter. Harvest of 4,761 acres is rescheduled over the remainder of the rotation. These acres are assumed to be suitable though subject to implementation falldown. Reconnaissance falldown has been accounted for during the planning of the CPOW project. The updated LSTA considered all CPOW project acres as second growth. Not harvesting the remainder now would make these acres available with other suitable acres later in the rotation. The unharvested remainder of the CPOW project acres are also added to the MELP/LSTA overlap. The most conservative estimate of future harvest potential would be 14 MMBF average annual harvest based on harvesting only those acres identified by both the MELP and the LSTA. The least conservative estimate of future harvest potential given the five scenarios, would be 36 MMBF average annual harvest. The most likely estimate of harvestable timber is that represented by the modified combination of the MELP and the LSTA, which could result in an average annual harvest of 32 MMBF. Halting the CPOW project will result in an average annual harvest of approximately 10 MMBF from 1995 through 2004.

Table 4-3
CPOW Project Area: Halt the Project

	MELP	LSTA	Overlap	Combined	Modified Combined
Suitable Acres	50,288	75,205	31,250	94,243	84,345
CPOW project	5,181	-	-	5,181	5,181
Suitable Acres Remaining	45,107	75,205	31,250	89,062	79,164
8% Reconnaissance Falldown	3,609	6,016	2,500	7,125	6,333
Suitable Acres Remaining	41,498	69,189	28,750	81,937	72,831
Unharvested CPOW Acres	-	4,655	4,655	-	-
Suitable Acres Remaining	41,498	73,844	33,405	81,937	72,831
10-Yr. Sale Plan (less 15%)	3,525	3,525	3,525	3,525	3,525
(10-Yr. Plan Volume MMBF)	(95)	(95)	(95)	(95)	(95)
Suitable Acres Remaining	37,973	70,319	29,880	78,412	69,306
15% Implementation Falldown	5,696	10,548	4,482	11,762	10,396
Suitable Acres Remaining	32,277	59,771	25,398	66,650	58,910
2005-2054 Average Annual					
Harvest Acres	646	1,195	508	1,333	1,178
Harvest Volume (MMBF)	17	32	14	36	32

The following Figures 4-2 and 4-3 display the historical harvest level in the CPOW project area, and the potential effects of continuing or halting the project in the CPOW project area.

4 Effects of Falldown

Figure 4-2
CPOW Project Area: Continuing the Project

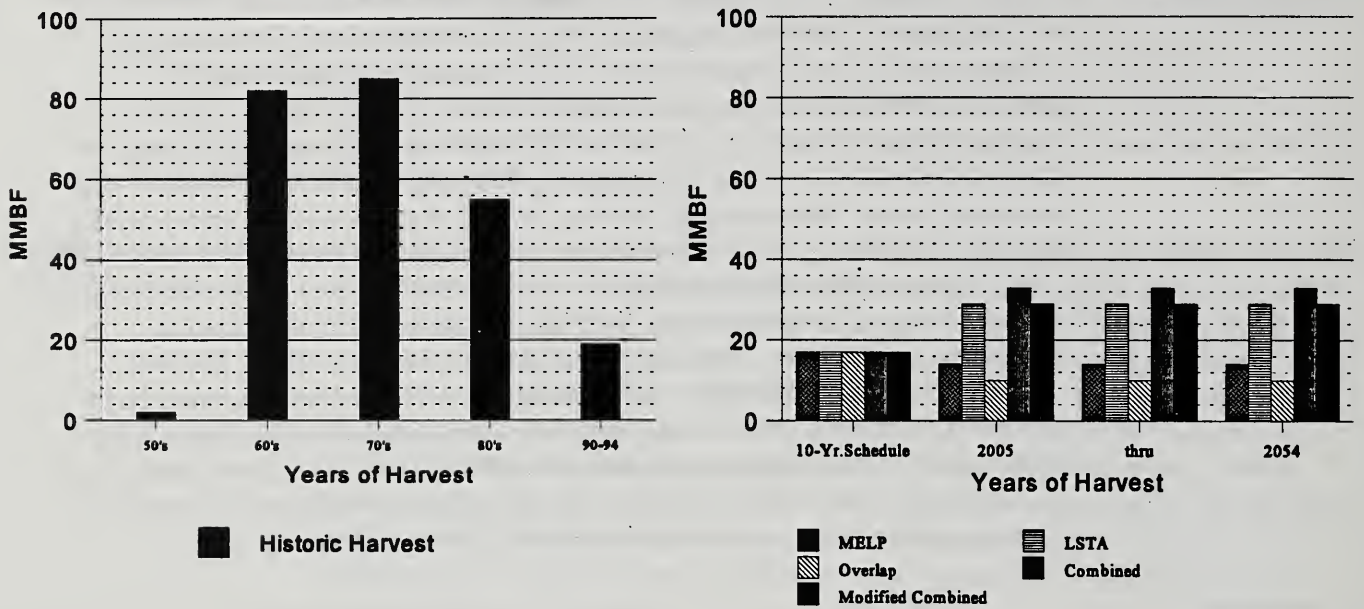
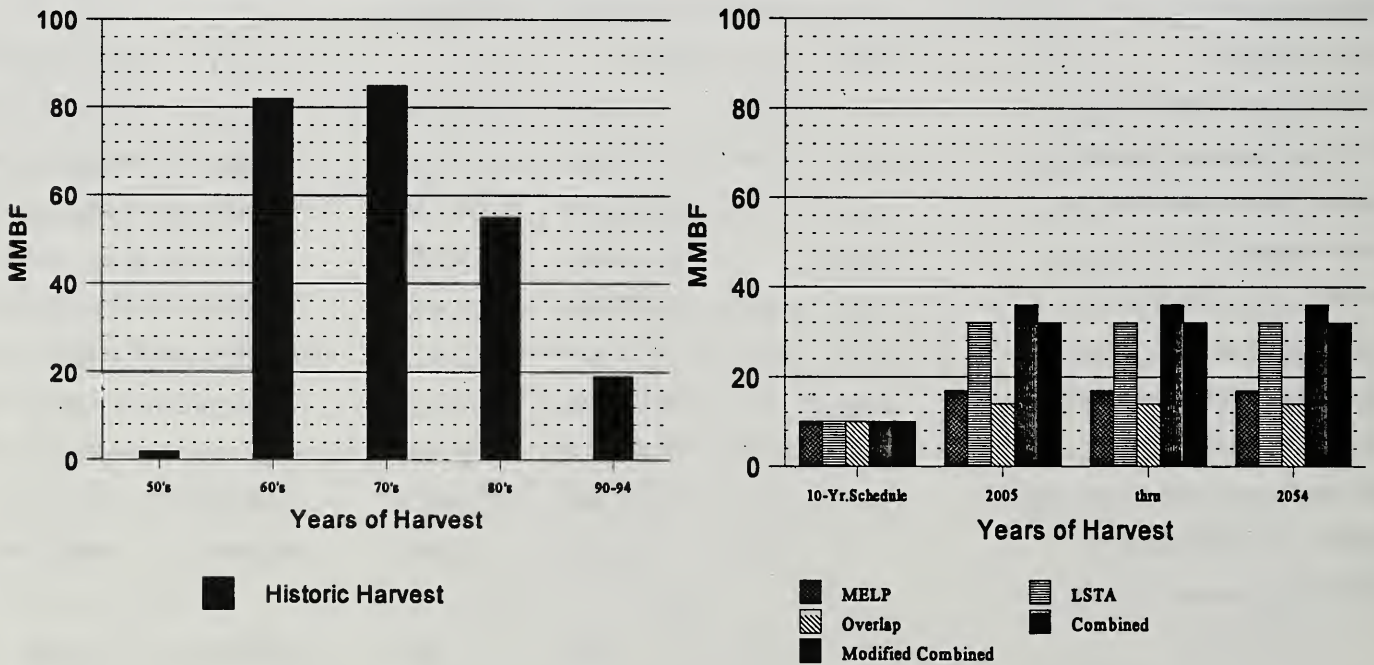


Figure 4-3
CPOW Project Area: Halting the Project



Average annual harvest from the 1950s through 1994 on the CPOW project area was approximately 52 MMBF. The Forest Plan (TLMP 1979a) schedules 71,666 acres for harvest from now through the end of the rotation, including the CPOW project. Deducting the 9,836 acres of the project from scheduled CFL would leave 61,830 acres for harvest in the remaining 55 years. This is the equivalent of 1,124 acres per year and would yield approximately 30 MMBF per year. This is the result of implementing TLMP (1979a) on the project area. This would not provide an even flow of timber equivalent to historic harvest levels of 52 MMBF per year.

Clearly, two of the scenarios would not meet Forest Plan expectations on the project area, given expected reconnaissance and implementation falldown of 23 percent. Three scenarios, if accurate, would meet Forest Plan expectations even considering this anticipated level of falldown. The three scenarios that would meet or exceed Forest Plan harvest expectations do not approach the historic harvest of 52 MMBF annually, whether the CPOW project is halted or continued as planned.

Application of Falldown Estimates from Other Studies

“The Irland Group Report” (TIG) and the “Forest Service Evaluation of the Irland Group Report” (FS Evaluation) provide additional projections of falldown applicable to an identified suitable timber base. TIG estimated a 25 percent project level hard falldown and the FS Evaluation indicated a potential 5 percent hard falldown at the project level. These projections were intended to be a reflection of what may occur across the Tongass National Forest as a whole and may not be accurate for specific projects. Both studies identified soft falldown factors that may affect the potential unit pool for any given project for reasons of economics but these do not affect the size of the suitable timber base.

Analysis was performed using the 5 percent and 25 percent hard falldown factors in a similar manner as the 23 percent hard falldown analysis performed previously. Results of The Irland Group Report’s 25 percent falldown level indicate a range of 10 MMBF to 32 MMBF average annual harvest from within the CPOW project area from 2005 through 2054. Results of the FS Evaluation 5 percent falldown would indicate a range of 12 MMBF to 40 MMBF average annual harvest for the same period.

Under the FS Evaluation, potential average annual harvest would be higher than those predicted using the 23 percent reconnaissance and implementation falldown factors. Under TIG, only minor differences would be reflected in potential average annual harvest.

Communities

Prince of Wales

Historic

Some of the communities on Prince of Wales Island have been established and developed largely as a result of the timber industry. The fishing and mining industries have also influenced the history of communities on Prince of Wales.

Timber harvest began on the island in the early 1900's mostly by independent logging organizations. Expansion of timber harvest took place in the early 1950's with the

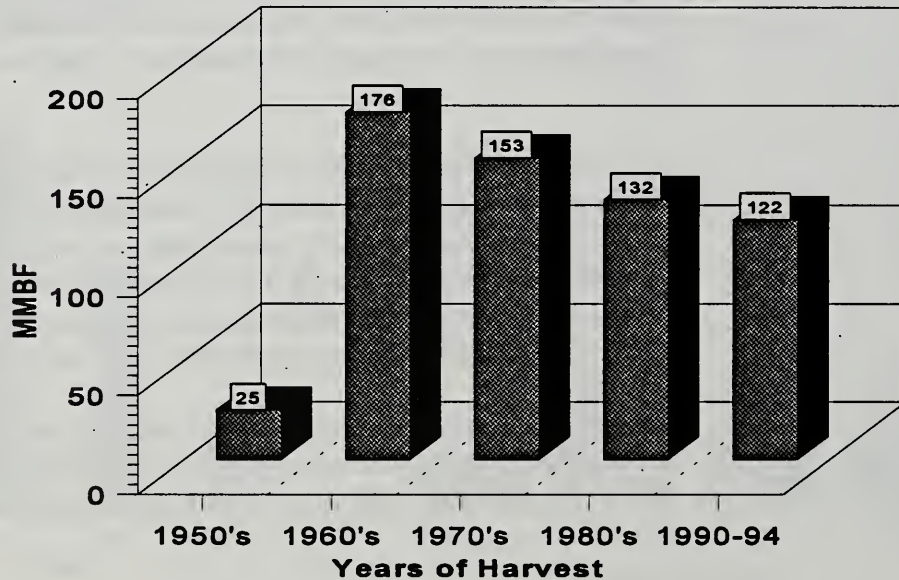
4 Effects of Falldown

implementation of a 50-year timber sale contract between Ketchikan Pulp Company and the USDA Forest Service.

The Long-term Sale Contract provided employment for people who were willing to live in or commute to sites, sometimes remote, on the island and other islands. Communities developed around the centers of logging activity and through organization of community governments, were able to offer people more amenities with the passage of time. Transportation systems were developed on the island as a result of logging activity. Road links between communities enabled people to commute to various sites of logging activity while maintaining a constant residence. The ferry system began regular routes to Prince of Wales in 1974 which provided residents with a more economical means of travel and importation of support items. Shipping companies brought in goods and supplies to maintain communities and their needs. Commercial enterprise invested in communities by providing fuel, food, banking, schools, medical and other support businesses.

Figure 4-4 displays historic timber harvest on Prince of Wales beginning with the 1950s. The figure displays the 1960s as the height of timber harvest activity largely as a result of the long-term contract implementation.

Figure 4-4
Historic Average Annual Timber Harvest (MMBF) on Prince Of Wales Island



Importance of Timber

Following is a discussion of the importance of timber supply for each community within the CPOW project area as well as discussions on Craig, Hollis, Hydaburg and Klawock.

Community stability for small timber producing communities on Prince of Wales Island is linked to levels of timber harvest on the island. The communities discussed have developed to their present condition based in large part on the historic timber harvest on the island as a whole, and to a lesser degree on historic timber harvest on the CPOW project area.

Coffman Cove

Coffman Cove was incorporated as a second class city in 1989. Of the 195 people employed, 146 people (75 percent) are directly employed in a timber related field. Fifty-five people are employed by KPC. The community has the capability to handle an annual capacity of 40 MMBF with the size of the current labor force. In 1993 the workforce processed 33 MMBF and 43 MMBF in 1989. The data on Coffman Cove's historic population is limited. The census information goes back to only 1980. In 1980 the population was 193 residents. The 1990 census lists a population of 191 residents. The latest information on Coffman Cove's population lists 270 people (source: Castleman and Pitcher 1992).

Naukati

Naukati is a logging camp and unincorporated community with the 1990 census showing 93 people claiming residence. Of 60 people employed, approximately 92 percent are employed as manufacturers. This information was obtained from a sample of the Naukati population census survey. The survey does not reflect school employees due to their not receiving the census survey or reporting their residences elsewhere. It is assumed from the census survey that 55 employees are employed by KPC or its subcontractors in timber related fields. The few jobs that do exist outside KPC or its subcontractors are still largely dependent upon the timber industry. Naukati now houses all the Lab Bay camp employees.

Thorne Bay

Thorne Bay was incorporated as a second class city in 1982. Of the 241 people employed, approximately 134 (55 percent) are directly related to timber, with many of the rest indirectly employed because of the timber industry. Before 1982 approximately 90 percent of those employed were in a timber related field. Historically all timber harvested on Prince of Wales Island for the KPC Long-term Sale (LTS) has been brought to Thorne Bay. Here it was scaled and sorted, then towed to Ward Cove for further processing. As future offerings are released under tree measurement specifications, some offerings might be scaled on site, then towed to Ward Cove. Employment in Thorne Bay is significantly affected by a steady flow of timber through the sort-yard. This active flow of timber through the sort-yard affects direct and indirect employment benefits in the community. The Census Bureau listed 443 residents in Thorne Bay in 1970, 322 residents in 1980, and 569 residents in 1990. The latest information on Thorne Bay's population lists 625 residents (Source: Thorne Bay City Administrator, 1992).

The following information was published by the Ketchikan Daily News on April 17, 1995 and is an example of current land base activity taking place in the community of Thorne Bay. On April 5, 1995, 15 of 17 lots in the Goose Creek subdivision were sold by auction. The state land was made available for industrial and business uses. According to Thorne Bay City Administrator Ginny Tierney, "For Thorne Bay, the sale obviously demonstrated the demand and the need (for business and industrial property)." The subdivision was auctioned in response to several area timber-related businesses that wanted to lease or own land, rather than renewing yearly special use permits with the

4 Effects of Falldown

USDA Forest Service. Ms. Tierney further stated, "Those businesses can now be relocated, adding a stronger permanency to the community. The relocation should assist in growth of and investment in business. As those businesses grow, so does the employment base."

Although the Long-term Sale may not be directly related to the potential for growth in the new subdivision, it does affect the potential indirectly. Opportunities for cedar salvage, bridge stringer salvage, and free-use increase within and near harvested Long-term Sale units. Independent sawmills operating in the new subdivision will have the opportunity to manufacture products from these and other wood sources.

Whale Pass

Whale Pass is an unincorporated community. The 1990 census determined that 75 people claimed residence there. Of the 18 people employed, nine jobs are directly related to timber. The remainder of the work force is employed in educational services, entertainment, and recreation (Whale Pass Resort). The majority of local residents expressed the importance of the timber industry for wage earning residents in Whale Pass.

Craig

Craig is a first class city that was incorporated in 1922. Available employment data for Craig is fairly weak from a statistical sense. The Alaska Department of Labor collects information for the Craig/Klawock community as one area. This is done because of the difficulty in separating the economies of the two communities because of their close proximity. Approximately 25 percent of the people living in Craig are employed in the fields of agriculture, forestry, and manufacturing (source: Control Lake Subsistence Report, page 73). The Census Bureau listed residents of Craig as 374 in 1950, 273 in 1960, 272 in 1970, 587 in 1980 and 1,260 in 1990. The latest information on Craig's population lists 1,637 residents (source: City of Craig and Alaska Revenue Sharing Program).

Klawock

Klawock is also a first class city that was incorporated in 1929. The community represents an unbroken continuity with the Tlingit villages that have existed at the mouth of the Klawock River since well before first contact with Euroamericans. Of the 267 people employed, 103 (38 percent) are employed in timber or timber related fields. The Census Bureau listed residents of Klawock as 404 in 1950, 251 in 1960, 213 in 1970, 318 in 1980 and 722 in 1990 according to the most recent information.

Hollis

Hollis is an unincorporated community with the 1990 census listing 111 residents. Of the 44 people employed, 13 (30 percent) are directly employed in a timber related field. The remaining people are largely employed in a transportation related field.

Hydaburg

Hydaburg was incorporated as a first class city in 1972. The community has a strong Native identity, similar to Klawock. It differs from Klawock in that contemporary Hydaburg was originally a Haida village. Of the 378 people employed (full-time and part-time combined), 77 (20 percent) are directly employed in a timber related field. The

Census Bureau listed residents of Hydaburg as 353 in 1950, 251 in 1960, 214 in 1970, 298 in 1980, and 384 in 1990 according to the latest information

Population Trends

Living conditions on the island have shifted from very difficult in early years to relatively comfortable for many who currently reside on the island. The island's population trend reflects this. The population of these eight communities grew from approximately 1,643 residents in the 1950s to approximately 3,917 today (238 percent increase).

Cumulative Effects of Falldown

Prince of Wales Island

The stability of Prince of Wales Island communities is not solely dependent on harvest occurring within the CPOW project area boundary. Harvest occurring on the remainder of the island and the outer islands combined with harvest occurring within the CPOW project area boundary generally provide a better base for determining community stability.

The CPOW project is the only scheduled timber harvest for the Long-term Sale on the north half of Prince of Wales Island between March 1994 and the Polk Inlet (113 MMBF), Lab Bay (85 MMBF) and Control Lake (187 MMBF) projects expected to occur beginning in late summer 1995 and spring 1996.

Long-range community stability for these communities will be influenced by average annual timber harvest for Prince of Wales Island as a whole, including the CPOW project area. The stability of these communities is tied to harvest occurring on both National Forest System (NFS) lands and private land. The Supplement will focus only on NFS lands.

The long-range direction for timber harvest on the island is guided by the TLMP (1979a). Additional site-specific information on tentatively suited lands within smaller project areas is being compiled in the Control Lake Cumulative Effects Study. Tentatively suited lands are those that may be considered for timber harvest projects.

Suitable Acres

TLMP (1979a) schedules the amount of harvest required to meet the Forest Plan allowable sale quantity (ASQ) between now and the year 2054. For Prince of Wales Island (and outer islands) this figure is 525,636 acres amounting to 14,192 MMBF. Of this half-million scheduled acres, 192,477 acres had been harvested through 1994. This leaves 333,159 acres of timber remaining for harvest from 199 through 2054 and would amount to 150 MMBF average annual harvest on Prince of Wales Island.

Halt CPOW Project

If the CPOW project were halted, the remaining planned acres would not be harvested at this time. These acres would be available for harvest in future projects. The ten-year sale schedule (1995-2004) for Prince of Wales Island would result in an annual average harvest of approximately 61 MMBF. At the end of the current ten-year schedule (2005) through the first rotation (2054), various suitable timber scenarios yield average annual harvest for Prince of Wales Island ranging from a low of 51 MMBF to a high of 175 MMBF. The potential harvest projections based on the modified combined MELP and LSTA are thought to be the best assessment of timber harvest potential which would equal 155 MMBF average annual harvest between 2005 and 2054. All but one of the possible

4 Effects of Falldown

timber harvest scenarios would yield higher future harvest levels than is planned over the next ten year, including the projection based on the CPOW MELP. Table 4-4 displays potential annual average harvest based on the five suitable timber scenarios extrapolated to Prince of Wales Island. For the purpose of comparison, the average annual harvest from National Forest System lands on Prince of Wales Island from the 1950s through 1994 was approximately 122 MMBF.

Table 4-4
Effects of Halting the CPOW Project on Prince of Wales Island, Year 2005 through 2054 (acres)

	Suitable Timber Scenario				Modified Combined
	MELP	LSTA	Overlap	Combined	
TLMP (1979a) Scheduled CFL	525,636	525,636	525,636	525,636	525,636
Second-Growth Through 1994	192,477	192,477	192,477	192,477	192,477
Remaining Scheduled CFL	333,159	333,159	333,159	333,159	333,159
Suitable Timber Factor 1	70%	105%	44%	132%	118%
Suitable Timber Projection	233,211	349,817	146,590	439,770	393,128
8% Recon Falldown	214,554	321,832	134,863	404,588	361,178
10-Yr. Plan With 15% Falldown	22,771	22,771	22,771	22,771	22,771
(10-Yr. Plan Volume MMBF)	(615)	(615)	(615)	(615)	(615)
Suitable Timber Remaining	191,783	299,061	112,092	381,817	338,407
Avg Annual Harvest 2005-2054	3,836	5,981	2,242	7,636	6,768
Avg Annual Harvest With 15% Implementation Falldown					
Acres	3,261	5,084	1,906	6,491	5,753
MMBF	88	137	51	175	155

1. Suitable timber factor was derived by comparing TLMP (a) scheduled CFL with each scenario's timber base estimate on the CPOW project area.

Continue CPOW Project

If the CPOW project were to continue, the remaining acres would be harvested at this time. These acres would be available for harvest in future projects. The ten-year sale schedule (1995-2004) for Prince of Wales Island would result in an annual average harvest of approximately 69 MMBF. At the end of the current ten-year schedule (2005) through the first rotation (2054), various suitable timber scenarios yield average annual harvest for Prince of Wales Island ranging from a low of 50 MMBF to a high of 174 MMBF. All but one scenario would provide higher potential harvest than is planned over the next ten years, including the projection based on the CPOW MELP. Table 4-5 displays potential annual average harvest based on the five suitable timber scenarios extrapolated to Prince of Wales Island. For comparison, the average annual harvest from National Forest System lands on Prince of Wales Island from the 1950s through 1994 was approximately 122 MMBF.

Table 4-5
Effects of Continuing the CPOW Project on Prince of Wales Island, Year 2005 through 2054 (acres)

	Suitable Timber Scenario				Modified Combined
	MELP	LSTA	Overlap	Combined	
TLMP (1979a) Scheduled CFL	525,636	525,636	525,636	525,636	525,636
Second-Growth Through 1994	192,477	192,477	192,477	192,477	192,477
Remaining Scheduled CFL	333,159	333,159	333,159	333,159	333,159
Suitable Timber Factor ¹	70%	105%	44%	132%	118%
Suitable Timber Projection	233,211	349,817	146,590	439,770	393,128
8% Recon Falldown	214,554	321,832	134,863	404,588	361,178
10-Yr. Plan With 15% Falldown	25,531	25,531	25,531	25,531	25,531
(10-Yr. Plan Volume MMBF)	(690)	(690)	(690)	(690)	(690)
Suitable Timber Remaining	189,023	296,301	109,332	379,057	355,647
Avg Annual Harvest 2005-2054	3,780	5,926	2,187	7,581	6,713
Avg Annual Harvest With 15% Implementation Falldown					
Acres	3,213	5,037	1,859	6,444	5,706
MMBF	87	136	50	174	154

1. Suitable timber factor was derived by comparing TLMP (a) scheduled CFL with each scenario's timber base estimate on the CPOW project area.

Community Stability Conclusion

The communities profiled in this supplement exhibit varying degrees of dependence on continued timber harvest on Prince of Wales Island. Some of the smaller communities were established as a result of timber harvest operations while others were established before the Long-term Contract was enacted. Older communities such as Craig and Klawock have a more diversified economic base which now include timber harvest and support industries along with tourism and fishing.

Declines in timber harvest as shown in the ten-year sale schedule will have different effects on each community. The degree of effect will be proportionate to each community's dependence on timber harvest related employment. The projected decline in timber harvest would have a relatively greater effect on a community like Naukati, with 55 of its 60 jobs provided by Ketchikan Pulp Company (KPC) or KPC's contractors, than on the community of Klawock with 103 of its 267 jobs in the timber or timber related field:

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The average annual harvest on Prince of Wales Island from the 1950s through 1994 was approximately 122 MMBF. Projections of future potential harvest should be compared with TLMP (1979a) scheduled CFL for Prince of Wales Island. Approximately 330,000 acres of scheduled CFL remain for harvest on the island as a whole, from 1995 through 2054. This is equal to planned harvest of about 5,500 acres per year, or 150 MMBF.

The average annual harvest on Prince of Wales Island over the next ten years would be 69 MMBF if the CPOW project were to continue as planned. If halted, that annual average would be reduced to 61 MMBF. Both represent roughly half of the historic average annual harvest of 122 MMBF.

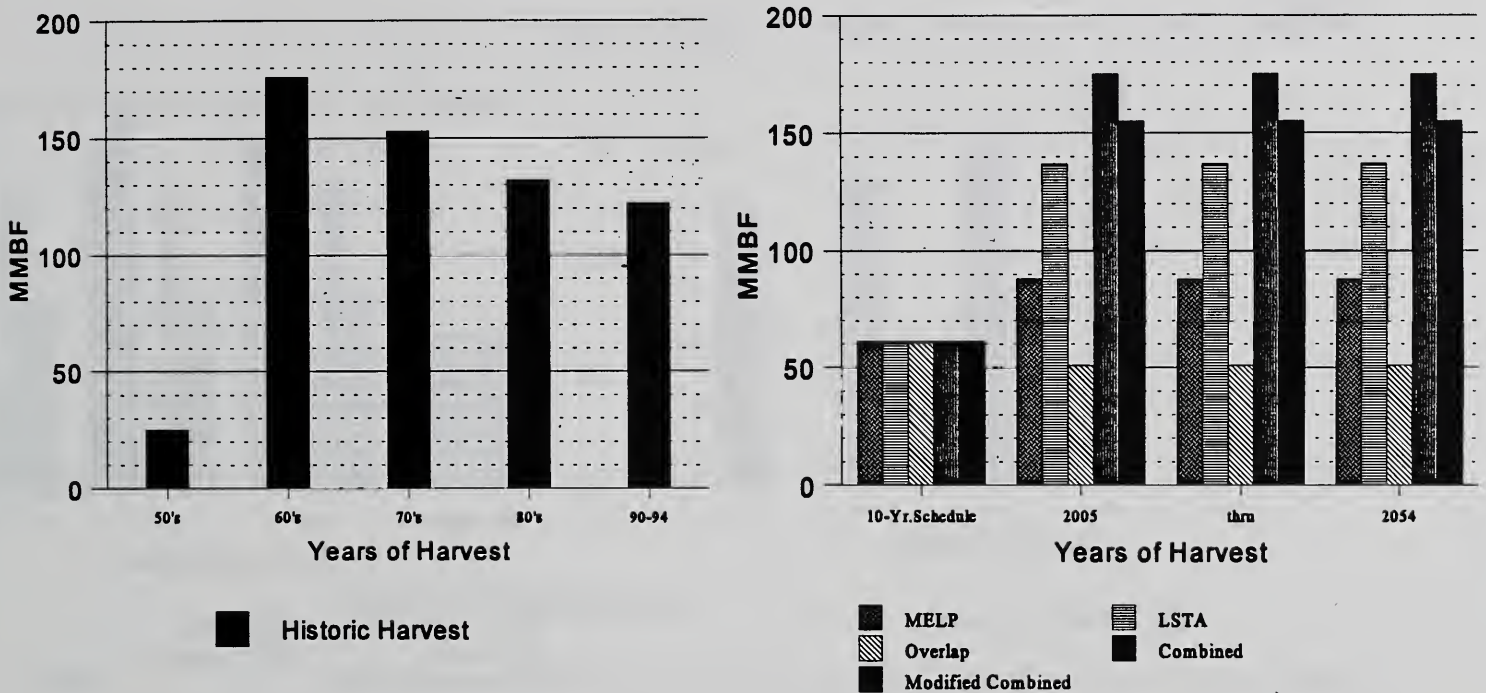
The best assessment of timber available for harvest on Prince of Wales Island is that projected by the modified combination of the CPOW MELP and updated LSTA. Based on this projection, potential future timber harvest from 2005 through 2054 could yield an average annual harvest of 154 MMBF if the CPOW project continues as planned. If halted, potential timber harvest from 2005 through 2054 could yield an average annual harvest of 155 MMBF. Of the five suitable timber projections for Prince of Wales Island, only the most conservative estimate of suitable timber would result in an annual average harvest (50 MMBF) less than that of the ten-year sale plan. Projections of suitable timber on Prince of Wales Island based on the CPOW MELP (87 MMBF), the second lowest forecast of suitable timber of the five discussed, also exceeds the planned harvest of 1995 through 2004.

The average annual harvest on Prince of Wales over the next ten years is only half that of the 1980s, whether or not the CPOW project continues, even with falldown. The effects on community stability would be greatest if the project were to be halted at this point during a ten-year period characterized by low timber harvest.

Halt CPOW Project

Halting the CPOW project would result in an annual average harvest of 61 MMBF over the next ten years on Prince of Wales Island. This would be equal to half the average annual harvest of 122 MMBF on Prince of Wales between 1954 and 1994. Figure 4-5 displays the effects of halting the CPOW project on annual average harvest on Prince of Wales over the next ten years and through 2054. The figure also displays the average annual harvest from past decades and potential average harvest in the future based on five suitable timber scenarios discussed earlier in this chapter. The most likely scenario is that represented by the modified combination of the CPOW MELP and the updated LSTA.

Figure 4-5
Potential Effects of Halting the CPOW Project Compared With Historic Harvest on Prince of Wales Island (Average Annual Harvest)



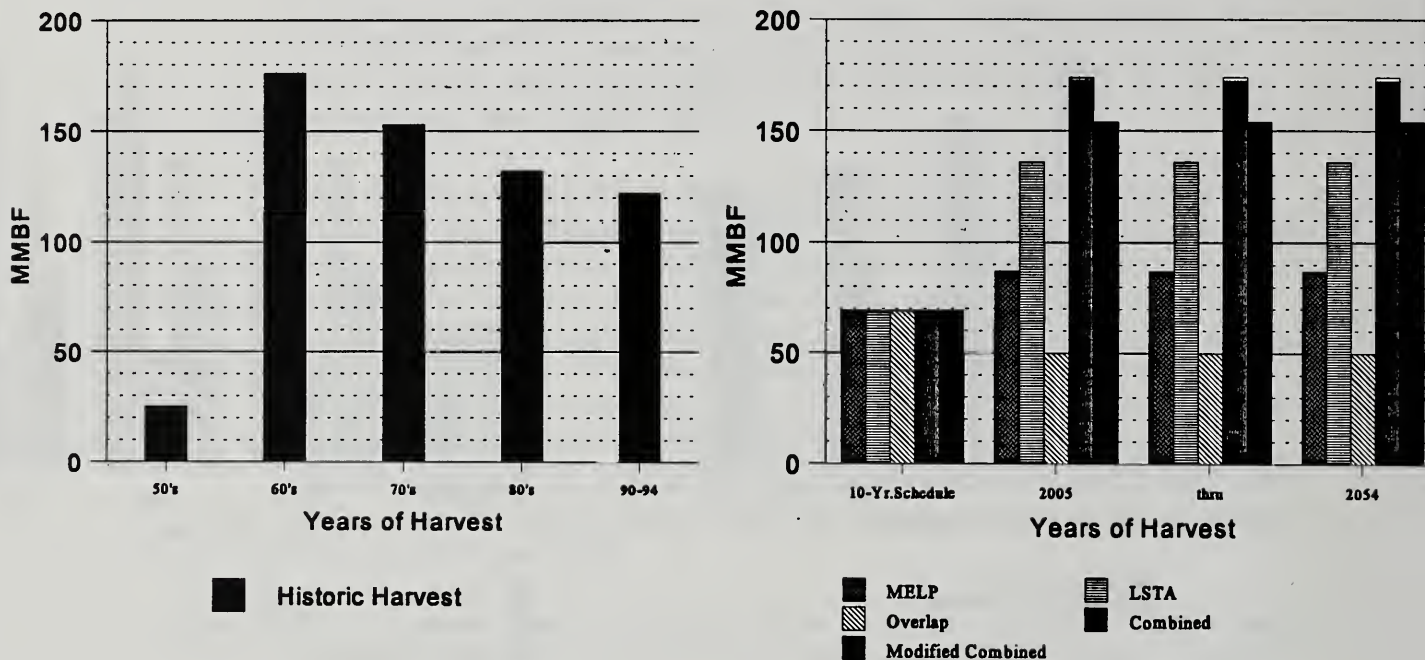
There is another effect of halting the CPOW project with the thought of rescheduling harvest at a later date. Though difficult to quantify, spatial limitations on the adjacency of clearcuts would begin to make it difficult to implement the rescheduled CPOW project along with other scheduled projects in the same area. This means that the rest of the CPOW project would have to be rescheduled at a much later date and could not be harvested entirely by the year 2004, and the end of the Long-term Contract.

Continue CPOW Project

Continuing the CPOW project would result in an annual average harvest of 69 MMBF over the next ten years on Prince of Wales. This would be equal to 57 percent of the average annual harvest of 122 MMBF on Prince of Wales between 1954 and 1994. Figure 4-6 displays the effects of continuing the CPOW project on average annual harvest over the next ten years and through 2054. The figure also displays average annual harvest in past decades and potential average annual harvest in the future based on the five suitable timber projections discussed earlier in this chapter.

4 Effects of Falldown

Figure 4-6
Potential Effects of Continuing the CPOW Project Compared With Historic Harvest on Prince of Wales Island (Average Annual Harvest)



Application of Falldown Estimates From Other Studies

TIG and FS Evaluation of TIG

The Irland Group Report (TIG) and the Forest Service Evaluation of The Irland Group Report (FS Evaluation) provide additional projections of falldown applicable to an identified suitable timber base. TIG estimated a 25 percent project level hard falldown and the FS Evaluation indicated a potential 5 percent hard falldown at the project level. These projections were intended to be a reflection of what may occur across the Tongass National Forest as a whole and may not be accurate for specific projects. Both studies identified soft falldown factors that may affect the potential unit pool for any given project for reasons of economics but these do not affect the size of the suitable timber base.

The results of using the hard falldown factors identified in these two studies rather than the 23 percent recon and implementation factors used in the preceding analysis, are displayed in Table 4-6. Under the FS Evaluation, potential average annual harvest would be substantially higher than those predicted using the 23 percent recon and implementation factors. Under the TIG falldown of 25 percent, only minor differences would be reflected in potential average annual harvest previously reported.

Table 4-6
Prince of Wales: Potential Harvest Comparison Using The Irland Group Report and FS Evaluation of The Irland Group Report Hard Falldown Percentages. Both projections assume that the CPOW project is completed as planned.

	MELP	LSTA	Overlap	Combined	Modified Combined
The Irland Group 1999-2054 Ave. Annual					
Harvest Acres	3,149	4,936	1,822	6,315	5,592
Harvest Volume	85	133	49	171	151
FS Evaluation of TIG 1999-2054 Ave. Annual					
Harvest Acres	3,791	5,944	2,194	7,604	6,733
Harvest Volume	102	160	59	205	182

Soft Falldown

Risk

There is the potential that soft falldown occurring at the field recon and implementation stages of a project may never be harvested. Of the 10 percent soft falldown encountered during field recon, less than 2 percent is at moderate or high risk of not being rescheduled for harvest. The other 8 percent of soft falldown is purely for deferment purposes until adjacent units achieve greenup, until proportional harvest is attained, or when regeneration allows additional harvest within watersheds whose cumulative harvest thresholds have been reached at the time of the project. See Appendix E Reconnaissance Falldown for additional details.

Soft falldown at project implementation, estimated to be 5 percent, is at risk of never being harvested. While whole units are sometimes deferred during field recon, implementation usually results in portions of units being deferred from harvest.

If the 7 percent total of moderate to high risk falldown from field recon and implementation is added to the falldown equation, total falldown for a given project could approach 30 percent of any given suitable timber estimate.

The potential average annual harvest acres and harvest volumes displayed in Tables 4-2 and 4-3 could be further reduced by 7 percent, if this high and moderate risk falldown were not to be harvested in the future. Table 4-7 summarizes this possibility using the five estimates of suitable timber on the CPOW project area and the two possible outcomes for the CPOW project: if the project is continued as planned, and if the project is halted.

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Table 4-7

Potential Effects of Moderate and High Risk Soft Falldown to Timber Harvest on the CPOW Project Area (an additional 7 percent)

	MELP	LSTA	Overlap	Combined	Modified Combined
Continue the Project 1999-2054 Avg. Annual					
Harvest Acres	489	994	355	1,128	985
Harvest Volume	13	27	10	30	27
Halt the Project 1999-2054 Avg. Annual					
Harvest Acres	600	1,112	472	1,240	1,096
Harvest Volume	16	30	13	33	30

A 7 percent reduction in potential harvest acres and volumes from the CPOW project area, in addition to 23 percent hard falldown already accounted for, would result in a range of average annual volumes from 10 MMBF to 30 MMBF if the project is continued as planned. If the project is halted, possible outcomes for future harvest volumes would range from 13 MMBF to 33 MMBF.

TIG and the FS Evaluation also estimated soft falldown. TIG estimated a 10 percent falldown due to factors considered as deferral of suitable acres. The FS Evaluation discussed soft falldown of approximately 21 percent. Both studies were broadly applicable to the Tongass National Forest as a whole, rather than to specific project planning and implementation.

If, however, the estimates of soft falldown for either TIG or the FS Evaluation proved to be accurate, and harvest never proceeded on those acres, the average annual harvest acres and volumes displayed in Tables 4-2 and 4-3 would be reduced by 21 percent and 10 percent respectively. Under the FS Evaluation possibility, potential average harvest could range from 12 to 31 MMBF. The TIG soft falldown factor of 10 percent would result in potential harvest ranging from 10 MMBF to 28 MMBF for the CPOW project area. These possibilities are displayed in Table 4-8. Both cases would assume that the CPOW project is harvested as planned.

**Table 4-8
Potential Harvest Comparison Using The Irland Group Report (10%) and FS Evaluation of The Irland Group Report (21%) Soft Falldown Percentages on the CPOW Project Area**

	MELP	LSTA	Overlap	Combined	Modified Combined
The Irland Group (10%) 1999-2054 Avg. Annual					
Harvest Acres	497	923	383	1,036	914
Harvest Volume	13	25	10	28	25
FS Eval. of TIG (21%) 1999-2054 Avg. Annual					
Harvest Acres	552	1,026	427	1,152	1,017
Harvest Volume	15	28	12	31	27

Risk to Harvest on Prince of Wales

A 7 percent reduction in potential harvest acres and volumes from Prince of Wales, in addition to 23 percent hard falldown already accounted for, would result in a range of average annual harvest from 47 MMBF to 162 MMBF if the project is continued as planned. If the project is halted, the possible outcomes for future harvest volumes would range from 48 MMBF to 163 MMBF. Table 4-9 displays the effects of an additional 7 percent soft falldown never being harvested on five suitable timber scenarios for Prince of Wales.

4 Effects of Falldown

**Table 4-9
Potential Effects of Moderate and High Risk Soft Falldown to Timber Harvest on Prince of Wales Island
(an additional 7 Percent)**

	MELP	LSTA	Overlap	Combined	Modified Combined
Continue the project 1999-2054 Avg. Annual					
Harvest Acres	2,988	4,684	1,729	5,993	5,304
Harvest Volume	81	126	47	162	143
Halt the Project 1999-2054 Avg. Annual					
Harvest Acres	3,033	4,728	1,773	6,037	5,350
Harvest Volume	82	128	48	163	144

TIG and the FS Evaluation were intended as a Tongass-wide evaluation of potential falldown as related to the proposed Forest Plan Revision. Most, if not all, the soft falldown factors identified in these studies were related to the economics of timber harvest. Economic falldown to this point has been considered a low risk soft falldown factor.

This differs from soft falldown that is intended to protect other resource values such as caves or goshawk nests. If, however, the soft falldown predicted in these studies could not be scheduled for harvest, it would have an effect on potential timber harvest in the future. Table 4-10 displays the results of applying an additional 10 percent falldown to TIG estimates of future timber harvest and an additional 21 percent to FS Evaluation estimates of future timber harvest on Prince of Wales. Both cases would assume that the CPOW project is harvested as planned.

**Table 4-10
Potential Effects of The Irland Group Report (10%) and FS Evaluation of The Irland Group Report (21%)
Soft Falldown Percentages on Future Harvest on Prince of Wales Island**

	MELP	LSTA	Overlap	Combined	Modified Combined
The Irland Group 1999-2054 Avg. Annual					
Harvest Acres	2,834	4,442	1,640	5,684	5,033
Harvest Volume	77	120	44	153	136
FS Evaluation of TIG 1999-2054 Avg. Annual					
Harvest Acres	2,995	4,696	1,733	6,007	5,319
Harvest Volume	81	127	47	162	144

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CHAPTER 5

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1850-1900

1900-1950

1950-2000

2000-Present

Conclusion

Literature Cited

The following are supplemental citations and references to the literature cited in Chapter 4 of the Central Prince of Wales Final Environmental Impact Statement:

Brooks, David J. and Haynes, Richard W. 1995. Alaska Stumpage Prices: Revised Projections.

Castleman, Deke and Don Pitcher. 1992. Alaska-Yukon Handbook. Moon Publications Inc., Chico, CA.

Council on Environmental Quality (CEQ). 1986. Draft, final and supplemental statements Sec. 1502.9.

Enserch Environmental Corporation. 1994. Control Lake Environmental Impact Statement Subsistence Resources Inventory Report.

The Irland Group. 1991. Assessment of Adequacy of Timber Supply and Analysis of Potential Effects of Eliminating the Long-Term Timber Sale Contract Areas - Tongass National Forest.

USDA Forest Service. 1983. Alaska Regional Guide. Alaska Region Report No. 126a.

_____. 1992. Evaluation of The Irland Group Report Pertaining to Sec. 301(e) Tongass Timber Reform Act of 1990.

_____. 1995. ANILCA 706(a) Report to Congress. Timber Supply and Demand 1994. Report number 14.

_____. 1995. Control Lake Timber Sale Draft Environmental Impact Statement.

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Glossary

Adjacency Requirements

A Forest Plan standard that restricts the placement of new harvest units immediately next to a previously harvested unit until the previously harvested unit has achieved the desired height growth necessary to meet resource objectives of the area.

Allowable Sale Quantity (ASQ)

The maximum quantity of timber that may be sold each decade from a National Forest. This quantity, expressed in board feet, is calculated for the Tongass National Forest using timber utilization standards specified in the Alaska Regional Guide, the number and type of acres available for timber management, and the intensity of timber management. The ASQ was calculated at 4.5 billion board feet per decade for the Tongass National Forest

Alternative

One of several policies, plans, or projects proposed for decision making.

Board Foot (BF)

A unit of wood 12" X 12" X 1". One acre of commercial timber in Southeast Alaska on the average yields 28,000-34,000 board feet per acre (ranging from 8,000-90,000 board feet per acre). One million board feet (MMBF) would be the volume of wood covering one acre two feet thick. One million board feet yields approximately enough timber to build 120 houses or 75,555 pounds of dissolving pulp.

Buffer

The Tongass Timber Reform Act (TTRA) requires that timber harvest be prohibited in an area no less than 100 feet on each side of all Class I streams and Class II streams which flow directly into Class I streams. This 100-foot area is known as a buffer.

Clearcut

The harvesting in one cut of all trees on an area. The area harvested may be a patch, strip, or stand large enough to be mapped or recorded as a separate class in planning for sustained yield. Clearcut size on the Tongass National Forest is limited to 100 acres, except for specific conditions noted in the Alaska Regional Guide.

Commercial Forest Land (CFL)

Productive forest land that is producing or capable of producing continuous crops of industrial wood and is not withdrawn from timber utilization by statute or administrative regulation. This includes areas suitable for management and generally capable of producing in excess of 20 cubic feet per acre of annual growth or in excess of 8,000 board feet net volume per acre. It includes accessible and inaccessible areas.

Convey

To pass or transmit the title to property from one to another.

Conveyance

An instrument by which some estate or interest in lands is transferred from one person to another.

Cumulative Effects

The impacts on the environment resulting from the addition of the incremental impacts of past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions occurring over time.

Draft Environmental Impact Statement (DEIS, or Draft EIS)

A statement of environmental effects for a major Federal action which is released to the public and other agencies for comment and review prior to a final EIS and management decision. Required by Section 102 of the National Environmental Policy Act (NEPA).

Encumbrance

A claim, lien, charge, or liability attached to and binding real property.

Falldown

Falldown is a term used to describe a situation when the amount of timber harvested (acres or volume) in a project area is less than the planned or projected timber harvest.
Hard Falldown. A term used to describe areas that may not be harvested by law or where irreparable resource damage may occur as a result of harvest.
Soft Falldown. A term used to describe deferral of timber harvest on suitable forest land. Economic falldown is considered soft but it is at risk if economic indices (market conditions) should stay down for an extended period of time.

Fallup

Fallup is a term that may be defined as: Situations when the amount of timber harvested (acres or volume) in a project area is greater than planned; or areas previously considered as unsuitable for harvest but are now found to be suitable based on field verification.

Final Environmental Impact Statement (FEIS, or Final EIS)

The final version of the statement of environmental effects required for major federal actions under Section 102 of the National Environmental Policy Act. It is a revision of the Draft EIS to include public and agency responses to the draft. The decision maker chooses which alternative to select from the Final EIS, and subsequently issues a Record of Decision (ROD).

Forest or Forest Land

National Forest lands currently supporting or capable of supporting forests at a density of 10 percent crown closure or better. Includes all areas with forest cover, including old-growth and second-growth, and both commercial and non-commercial forest land.

FORPLAN

The forest planning model. A linear programming software package used to analyze planning decisions regarding land use patterns, capital investment, and timber harvest scheduling.

Hard Falldown

A term used to describe areas that may not be harvested by law or where irreparable resource damage may occur as a result of harvest.

Geographic Information System (GIS)

An information processing technology to input, store, manipulate, analyze, and display spatial and attribute data to support the decision-making process. It is a system of computer maps with corresponding site specific information that can be electronically combined to provide reports and maps.

Habitat Conservation Areas (HCA)

Contiguous blocks of habitat to be managed and conserved for breeding pairs, connectivity, and distribution of species of concern.

Inoperable Timber

Timber that cannot be harvested by any proven method because of potential resource damage, extremely adverse economic considerations, or physical limitations.

Interdisciplinary Team (IDT)

A group of people with different backgrounds assembled to research, analyze, and write a project Environmental Impact Statement in an interdisciplinary fashion. The team is assembled out of recognition that no one scientific discipline is sufficiently broad enough to adequately analyze a proposed action and its alternatives.

Issue

A point, matter, or section of public discussion or interest to be addressed or decided.

Karst

A type of topography that develops in areas underlain by soluble rocks, primarily limestones. Areas on which karst has developed is said to display "karst topography" or is referred to as a "karst landscape." Caves are commonly found in karst areas.

Land Use Designation (LUD)

The method of classifying land uses presented in the 1979 Tongass Land Management Plan (TLMP). Land uses and activities are grouped to define, along with a set of coordinating policies, a compatible combination of management activities. The following is a description of the four LUD classifications: LUD I: Wilderness areas. Undeveloped areas managed for solitude and primitive types of recreation, and containing unaltered habitats for plant and animal species. LUD II: Lands to be managed in a roadless state in order to retain their wildland character; permits wildlife and fish habitat improvement as well as primitive recreation facilities and road development under special authorization. LUD III: Lands to be managed for a variety of uses. The emphasis is on managing for uses and activities in a compatible and complimentary

manner to provide the greatest combination of benefits. LUD IV: Lands that provide opportunities for intensive resource use and development, where the emphasis is primarily on commodity or market resources.

Layout

On the ground location of harvest units and road systems needed for total harvest of a given area.

Logging Systems

Highlead. A cable yarding system, using a two-drum yarder, in which lead blocks are hung on a spar or tower to provide lift to the front end of the logs.

Aerial Logging Systems. Systems where the cut logs are moved from the stump to the loading area or log deck without touching the ground.

Live skyline/gravity carriage return. A two-drum, live skyline yarding system in which the carriage moves down the skyline by gravity; the skyline is lowered to attach logs then raised and pulled to the landing by the mainline; thus, is restricted to uphill yarding.

Live skyline/haulback required (slackline system). A three-drum, live skyline yarding system composed of skyline, mainline, and haulback; the carriage is pulled to the woods by the haulback; the skyline is lowered to permit the chokers to be attached to the carriage, and the turn is brought to the landing by the mainline.

Running skyline. A yarding system with three suspended moving lines, generally referred to as the main, haulback, and slack-pulling, which when properly tensioned will provide lift, travel and control to the carriage; normally indicates a gantry type tower and a three-drum yarder.

Standing skyline. Used wherever yarding distances or span distances exceed the capability of live skyline equipment.

Multispan skyline. European equipment is commonly associated with this.

Tractor. Used to describe the full range of surface skidding equipment, designed to operate on level to downhill settings.

Shovel. A system of short-distance logging in which logs are moved from the stump to the landing by repeated swinging with a swing-boom log loader; the loader is walked off the haul road and out into the harvest unit; logs are moved and decked progressively closer to the haul road with each pass of the loader; when logs are finally decked at roadside, the same loader, or a different loader, loads out trucks. On gentle ground, logs are either heeled and swung or dragged by the boom as it rotates; larger log length and tree length logs are usually dragged to maintain machine stability. Soils should be moderate to well drained and side slopes must be less than 20 percent; passes or strips should be kept to a maximum of four.

Helicopter. Flight path cannot exceed 40 percent downhill or 30 percent uphill; landings must be selected so there is adequate room for the operation and so that the helicopter can make an upwind approach to the drop zone.

A-Frame. Beach fringe timber which is logged with a float mounted yarder typically rigged in a highlead configuration for direct A-frame yarding.

Cold-deck and swing. Planned to access areas not suitable for skyline operations.

LSTA

Logging System Transportation Analysis. Project level analysis to determine feasible harvest systems and access to Forest Plan designated suitable acres. Determines operability of Forest Plan designated suitable timber.

Logical Setting

Total acreage that goes to a particular landing. A unit is a grouping of logical settings.

Long-Term Contract

In this document, refers to the Ketchikan Pulp Company Long-Term Timber Sale Contract between the Forest Service and Ketchikan Pulp Company.

MBF

A thousand board feet.

MMBF

A million board feet.

Management Area

An area one or more VCU's in size for which management direction was written in the Tongass Land Management Plan.

Model

A representation of reality used to describe, analyze, or understand a particular concept. A model may be a relatively simple qualitative description of a system or organization, or a highly abstract set of mathematical equations. A model has limits to its effectiveness, and is used as one of several tools to analyze a problem.

Multi-Entry Layout Plan (MELP)

A six-step process (Alaska Regional Guide, 1983, p. 3-21) to develop scheduled harvest plans. A MELP will:

- Identify and delineate non-forest and non-commercial forest.
- Identify and delineate natural unregulated areas, such as v-notches, muskegs, and sensitive soils.
- Identify and delineate unregulated areas based on management considerations, such as municipal watersheds, administrative sites, recreation areas, off-shore islands less than 50 acres, and other considerations.
- Identify and delineate areas required to meet sensitive wildlife and fisheries habitat needs, such as bald eagle nest trees and perching and roosting areas; key winter habitats for black-tailed deer, moose, and mountain goats; key resting, cover, and feeding areas; and stream protection zones.
- Identify and delineate areas of extended rotation to meet wildlife, visual, or other management objectives.
- Harvest scheduling will not include lands that will be retained to meet the needs of other resources, unless the condition to be retained is time-specific.

Muskeg

In Southeast Alaska, a type of bog or fen that has developed over thousands of years in depressions or flat areas on gentle to steep slopes. Also called peatlands.

National Environmental Policy Act (NEPA) of 1969

An Act to declare a national policy which will encourage productive and enjoyable harmony between humankind and the environment, to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and

welfare of humanity, to enrich the understanding of the ecological systems and natural resources important to the nation, and to establish a Council on Environmental Quality.

National Forest Management Act (NFMA)

A law passed in 1976 as an amendment to the Forest and Rangeland Renewable Resources Planning Act requiring the preparation of Regional Guides and Forest Plans and the preparation of regulations to guide that development.

Native Selection

Application by Native corporations and individuals to a portion of the USDI Bureau of Land Management for conveyance of lands withdrawn in fulfillment of Native entitlement established under ANCSA.

Non-commercial Forest Land

Land with more than 10 percent cover of commercial tree species but not qualifying as Commercial Forest Land.

Notice of Intent (NOI)

A notice printed in the Federal Register announcing that an Environmental Impact Statement will be prepared. The NOI must describe the proposed action and possible alternatives, describe the agency's proposed scoping process, and provide a contact person for further information.

Offering

A Forest Service specification of timber harvest units, subdivisions, roads, and other facilities and operations to meet the requirements of a contract.

Offering Area

A geographic area identified by the Forest Service within which the offering specifications are outlined. One or more offering areas may be identified within all or a portion of a project area.

Old-growth Forest

A forest stand characterized by trees usually well past the age of maturity, with declining growth rates, dead and dying trees, snags, and downed woody material. The stand usually includes large diameter trees, multi-layered canopies, a range of tree diameter sizes, and the notable presence of understory vegetation. Old-growth forests provide important habitat for Sitka black-tailed deer, martens, black bears, cavity nesting birds, raptors, and other wildlife species.

Operability

Operability refers to timber harvest operability, defined as the method(s) of timber harvest necessary to get the trees from stump to landing. There are three different classes of operability: normal (tractor and highlead cable), difficult (long span skyline), and isolated (helicopter).

Planning Record

A detailed, formal account of the planning process for an EIS. The record contains data, maps, reports, planning process information, and results of public participation in the

planning process. The planning record documents the decisions and activities that resulted in the Final EIS. Planning records are available for public review upon request under the Freedom of Information Act.

Proportionality

Section 301(c)(3) of the Tongass Timber Reform Act requires that harvest of high volume old-growth (volume classes 6 and 7) will not be at an accelerated rate. The Act requires that the proportion of harvest in volume classes 6 and 7 will not exceed the proportion of volume of these classes currently represented in a contiguous management area.

Record of Decision (ROD)

A document separate from but associated with an Environmental Impact Statement which states the decision, identifies all alternatives, specifying which were environmentally preferable, and states whether all practicable means to avoid environmental harm from the alternative have been adopted, and if not, why not.

Regeneration

The process of establishing a new crop of trees on previously harvested land.

Reserved

Lands that have been withdrawn from the timber base by an Act of Congress, the Secretary of Agriculture, or the Chief of the Forest Service.

Rotation

The planned number of years (approximately 100 years in Alaska) between the time that a Forest stand is regenerated and its next cutting at a specified stage of maturity.

Sawlog

That portion of a tree that is suitable in size and quality for the production of dimension lumber, collectively known as sawtimber.

Scheduled Timber Harvests

Timber harvests done as part of meeting the allowable sale quantity.

Second-growth

Forest growth that has become established following some disturbance such as cutting, serious fire, or insect attack; even-aged stands that will grow back on a site after removal of the previous timber stand.

Setting

Geographic area whose boundaries are most usually defined by topographic features and/or timber features and/or riparian features. The attribute of the area is that all the timber within its boundaries goes to a common location, typically called a landing. The boundary of a given setting is dependent on the proposed harvest system.

Soft Falldown

A term used to describe deferral of timber harvest on suitable forest land.

State Selection

Application by Alaska Dept. of Natural Resources to the USDI Bureau of Land Management for conveyance of a portion of the 400,000-acre State entitlement from vacant and unappropriated National Forest System lands in Alaska, under the Alaska Statehood Act.

Subsistence Use

The customary and traditional uses by rural Alaskan residents of wild renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of non-edible byproducts of fish and wildlife resources taken for personal or family consumption; and for customary trade.

Suitable

Commercial Forest land identified in the Forest Plan as having both the biological capability and availability to produce industrial wood products (unsuitable is defined on the following page).

Sustained Yield

The amount of renewable resources that can be produced continuously at a given intensity of management.

Tentatively Suitable Forest Land

Forest land that is producing or is capable of producing crops of industrial wood and: (a) has not been withdrawn by Congress, the Secretary of Agriculture or the Chief of the Forest Service; (b) existing technology and knowledge is available to ensure timber production without irreversible damage to soils productivity, or watershed conditions; (c) existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that it is possible to restock adequately within 5 years after final harvest; and (d) adequate information is available to project responses to timber management activities.

Tiering

Eliminating repetitive discussions of the same issue by incorporating by reference the analyses in an environmental impact statement of broader scope; e.g., this document is tiered to the environmental analyses of the EIS for the Tongass Land Management Plan, as amended.

Tongass Land Management Plan (TLMP 1979a)

The 10-year land allocation plan for the Tongass National Forest that directs and coordinates planning, the daily uses, and the activities carried out within the Forest. Currently under revision.

Unsuitable

Forest land for which technology is not available that will ensure timber production without irreversible resource damage to soils, productivity, or watershed conditions; for which there is no reasonable assurance that such lands can be adequately restocked; or for which there is management direction indicating that timber production is not an appropriate use of that area.

Value Comparison Unit (VCU)

Areas which generally encompass a drainage basin containing one or more large stream systems; boundaries usually follow easily recognizable watershed divides. Provides a common set of areas for resource inventories and interpretations.

V-notch

A deeply cut valley along some waterways, generally in steep, mountainous terrain, that would look like a "V" from a frontal view.

Volume Class

Used to describe the average volume of timber per acre in thousands of board feet (MBF). The seven volume classes include:

Classes 1 to 3: Less than 8 MBF/acre (cleared land, seedlings, or pole timber stands).

Class 4: 8 to 20 MBF/acre.

Class 5: 20 to 30 MBF/acre.

Class 6: 30 to 50 MBF/acre

Class 7: 50+ MBF/acre

Watershed

The area that contributes water to a drainage or stream; portion of a forest in which all surface water drains to a common point. Can range from tens of acres that drain a single small intermittent stream to many thousands of acres for a stream that drains hundreds of connected intermittent and perennial streams.

Withdrawal

The withholding of an area of Federal land from settlement, sale, location, or entry under some or all of the general land laws for the purpose of limiting activities under those laws in order to maintain other public values in the area.

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Appendix A

Falldown Analyses

CPOW MELP

TIG

FS Evaluation of TIG

CPOW Layout Analysis of Falldown

Falldown Analyses

Falldown - CPOW MELP

In November 1990 an Interdisciplinary Team (IDT) initiated a large scale Multi-Entry Layout Plan (MELP) to locate and quantify timber harvest units which would be available for subsequent NEPA analysis.

To assist the IDT in the unit design phase, they developed a process to: (1) guide which areas to consider for further planning; and (2) provide standards and guidelines for design of harvest units (Letter: Life of Sale (LOS) Unit Design Assumptions). Several "can't log" areas were eliminated from further planning considerations. These areas were:

- private land
- encumbered land
- fresh water lakes
- previous clearcuts
- proposed KPC units (cleared under previous NEPA documents)
- proposed independent units (cleared under previous NEPA documents)
- non-timbered lands
- timbered lands which are non-CFL
- LUD I, II (including TTRA designations)
- Honker Divide
- old-growth retention, per 1989-94 LTS
- extended rotation, per 1989-94 LTS
- 100 ft. buffers around all lakes greater than 10 acres
- 100 ft. buffers adjacent to Class I and II streams
- 500 ft. shoreline buffer adjacent to all salt water shorelines
- SMU 81 (rock outcrop)
- SMU 15 (landslide prone)
- SMU 22 (talus slopes)
- potentially loggable areas which are less than 10 acres (slivers)

The IDT focused their planning efforts on the reverse image of the "can't log" areas, which they called "maybe log" areas.

The IDT Leader (logging engineer) took the first step at designing all feasible units and roads necessary for access to the maybe log areas. To assist with determining feasible units, topographic maps and 1991 aerial photos were used. The feasible units were assigned a number and logging system(s). Logging systems assigned to a unit had maximum external distances applied to them (CPOW FEIS, Appendix C, page 3). The following limits were used:

	Maximum Uphill	Maximum Downhill
Highlead	1200 ft.	600 ft.
Small Skyline	1500 ft.	800 ft.
Large Skyline	2000 ft.	1000 ft.
Helicopter	6000 ft.	6000 ft.

The logging systems engineer also took the first step at identifying many of the rejected areas. These areas were rejected if they fell into one of the following categories:

- inoperable - economics
- inoperable - can't road
- inoperable - not loggable
- inoperable - can't regenerate
- inoperable - low volume
- too many streams
- soils concerns
- over steepened slopes
- recreation concerns
- visual concerns
- fisheries concerns
- wildlife concerns

After all units and rejected areas were identified and coded, the logging systems engineer turned the information over to the IDT for review. The IDT evaluated each unit for individual viability. The team did not try to analyze cumulative effects or scheduling of units for release.

When the IDT completed their review the entire team arrived at a consensus on all units and roads. This information was submitted to a peer level oversight group to analyze logging system and road location feasibility.

During the field season of 1992, approximately 200 of the 384 proposed units in the alternative pool were verified by field crews. These crews determined the feasibility of unit logging and roading, located previously unidentified fish streams, karst/caves, very high MMI or riparian soils, cultural sites and other resource concerns.

Following incorporation of the field review data, the MELP was updated and predicted that harvesting could occur on 52,727 acres of the 111,077 acres TLMP Revision identified as suitable commercial forest land within the CPOW project area (CPOW DEIS, Figure 3-13). This figure represents 52.5 percent projected falldown for the project area. The MELP (developed for the Final EIS) predicted that harvesting could occur on 50,288 acres from within the 114,260 acres of suitable commercial forest land TLMP Revision identified for the project area (CPOW FEIS, Figure 3-12). The MELP considered 60,175 acres as "other" hard falldown in addition to the 3,707 acres of "inoperable" that were field reviewed and recommended for deletion or deferral from the suitable timber base.

TLMP (1979a) identified 71,666 acres of suitable old-growth for harvesting within the CPOW Project Area as displayed in Table A-1. When the MELP acreage is compared against the TLMP (1979a) acreage there is a 30 percent falldown level. This falldown level (30 percent) is considered in this Supplement for analysis purposes.

Table A-1

CPOW Project Area Scheduled CFL Acres Based on TLMP (1979a) (adjusted schedule column)

MA	VCU	CPOW TOT AC	TLMP AMD TOT AC	TLMP AMD TOT CFL	TLMP AMD Norm. SUIT	TLMP AMD Dif. SUIT	ADJ. CFL	ADJ. SCHED.
K03	549	6,955	11,875	6,207	4,098	27	3,635	2,416
K03	550	10,703	10,484	7,339	5,648	178	7,492	5,948
K03	551	5,151	12,336	6,042	881	4	2,523	370
K03 TOT		22,809	34,695	19,588	10,627	209	13,651	8,733
K07	554	8,765	9,318	7,765	6,518	0	7,304	6,131
K07	557	3,113	8,210	7,733	6,645	0	2,932	2,520
K07	571	16,485	16,234	11,657	10,077	21	11,837	10,254
K07	587	7,804	12,056	10,425	8,471	190	6,748	5,606
K07	588	26,607	26,014	20,072	14,645	339	20,530	15,326
K07	589	20,051	20,239	12,541	7,419	288	12,425	7,635
K07	590	13,780	13,891	9,656	6,386	154	9,579	6,488
K07 TOT		96,605	105,962	79,849	60,161	992	71,355	53,960
K08	552	8,199	8,422	6,259	3,323	27	6,093	3,261
K08	553	7,561	7,369	3,554	3,273	0	3,647	3,358
K08	573	25,980	26,322	18,125	10,632	108	17,890	10,600
K08	574	13,625	27,840	18,613	15,163	107	9,109	7,473
K08	577	13,544	28,910	17,730	16,023	157	8,306	7,580
K08 TOT		68,909	98,863	64,281	48,414	399	45,045	32,273
K09	572	5,862	7,668	5,322	4,556	27	4,069	3,504
K09	579	10,770	10,583	6,428	4,625	314	6,542	5,026
K09	580	15,399	15,475	9,634	5,022	252	9,587	5,248
K09	581	20,047	20,085	13,248	8,705	458	13,223	9,146
K09	582	3,924	4,104	2,345	1,044	40	2,242	1,036
K09	583	12,303	12,692	8,036	4,664	178	7,790	4,694
K09	584	13,421	14,252	10,324	5,430	233	9,722	5,333
K09	585	10,497	10,807	7,236	6,366	29	7,028	6,212
K09 TOT		92,223	95,666	62,573	40,412	1,531	60,202	40,198
K10	586	9,795	9,896	8,458	4,585	0	8,372	4,538
K10	598	12,573	12,772	8,658	7,248	52	8,523	7,186
K10	599	3,658	2,923	1,649	976	84	2,064	1,327
K10	600	3,158	3,262	2,404	1,420	0	2,327	1,375
K10	601	640	338	338	318	0	640	602
K10 TOT		29,824	29,191	21,507	14,547	136	21,926	15,028
Grand Total		310,370	364,377	247,798	174,161	3,267	212,178	150,192
Past Harvest Suitable Acres								78,526
								71,666

Data from TLMP (1979a) compiled by Bill Wilson (Regional Office-TM) on March 30, 1995. Minor acreage correction made by Michael Hutchins, CPOW Supplement IDT, April 6, 1995. Correction made to account for private lands in the project area by M.Hutchins, June 16, 1995.

Falldown - The Irland Group Report

In June 1991, the Alaska Region of the USDA Forest Service awarded The Irland Group (TIG) a contract designed to address the study provisions of Section 301(e) of the TTRA. The Irland Group completed their report in December 1991 and concluded that volumes required by the modified long-term sale (LTS) contracts could be provided while complying with applicable laws.

The Irland Group analyzed volumes attainable for the Tongass National Forest for the long-term contracts using a model of their own design called Adequacy of Supply (AOS). The AOS model used allowable sale quantity (ASQ) volumes from TLMP Draft Revision. This model analyzed several factors and ultimately identified reductions and improvements to the ASQ (see Table A-2).

Reductions to the ASQ

Land Selections

The Irland Report predicted several reductions to occur in the ASQ. The first was a reduction to the land base due to anticipated land selection for Natives and the State of Alaska. The report stated that this reduction was not part of the assumptions in the selection of the 418 MMBF ASQ for Alternative P of TLMP Draft Revision. According to the report, the effect to the ASQ on tentatively suitable forest lands expected to be conveyed amounted to 29.3 MMBF lost or a 7 percent reduction.

Spatial Limitations of FORPLAN

The ASQ was also reduced because the forest planning (FORPLAN) model used in the Forest Plan cannot precisely portray spatial distribution of land allocations. All FORPLAN "sees" are acres in the timber base which meet specific criteria. It cannot determine where any potential conflicting land uses occur in juxtaposition. An example would be visually sensitive areas adjacent to intensive development areas. To measure the effect of spatial constraints, TIG compared the harvest history by Management Area against planned future harvest. The results of their calculations determined a 2 percent reduction is needed to meet dispersion requirements.

Design Losses

The Irland report predicted a 25 percent reduction in acres to occur due to difficulties in achieving forecast yields through field implementation. The 25 percent loss was attributed to discrepancies between acres, due to large scale paper plans being compared to actual layout and reductions in acres which account for fish streams, practical limitations on roads and logging feasibility, and other resource concerns. This reduction was also based on project plans and interviews with IDT leaders.

Isolated Stands

A 2 percent reduction in future acres was anticipated as a result of isolated timber stands behind harvested units. The term TIG uses to describe this is "the Monk's fringe".

Leaving Volume Class 4 and 5 Timber

Lastly, The Irland Group data shows that harvesting isolated operability timber stands in volume class 4 and 5 is not economically feasible. The report predicts an 8 percent reduction in volume to occur as a result of leaving these stands. The isolated operability component is not the same as isolated stands mentioned above.

Improvements to the ASQ

Forest Inventory

The Irland Group report identified several improvements to the ASQ. The first was a small net positive change based on the Forest Inventory, which shows modest net growth (<0.03 percent) compared to the FORPLAN assumption of zero net growth.

Better Response Data

Another improvement to the ASQ predicted to occur is completion of research on lands where regeneration is difficult or response information was lacking. Their analysis projected that the ASQ would rise by 11 percent within the time frame of the long-term sale contracts.

Higher Harvest Volume

Finally, the report anticipates higher volumes per acre actually harvested than planned. The report cites two timber sale EISs on the Tongass NF (Kelp Bay FEIS Alternative 3 and the KPC 89-94 EIS) to substantiate this prediction. Their analysis expects harvested volume per acre to be 10 percent higher than FORPLAN volume figures.

Table A-2 is from page 30 of The Irland Group's report summarizing their analysis for Alternative P (preferred) of TLMP Draft Revision.

Table A-2

Forest Wide Supply: Irland Group Assumptions ALT P of TLMP Draft Revision (The Irland Group Report, page 30)

	Sawlog Volumes Only	Tongass National Forest	
		M Acres	ASQ MMBF Percent Values
1. Maximum Timber Benchmark			
	Decade 1	2,467.0	704.0
	Decade 5	2,467.0	635.0
2. Current Plan Benchmark			
	Decade 1	1,773.0	440.0
	Decade 5	1,773.0	414.0
Alternative P (preferred)			
3. Suitable Acres and ASQ		1,601.0	418.2
4. Land Selections		-261.3	- 7% - 29.3
5. Reduction due to spatial Limitations in FORPLAN Adjusted FORPLAN			- 2% - 8.4 380.6
Outside of FORPLAN			
Reductions			
6. Design Losses		- 25%	- 25% -104.6
7. Isolating Stands		- 2%	- 2% - 8.4
8. No Harvesting VC 4/5 Isolated		- 8%	- 8% - 33.8
Improvements			
9. Forest Inventory			< 1% 0.1
10. Better Response Date Through Research		+ 11%	+ 11% 46.0
11. Higher Harvest Volume			+ 10% 41.8
TOTAL			- 23% 321.7

Note: Percentages are additive; MMBF are sawlog only and do not include utility.

APPENDIX A

The Irland Group identified several reductions (falldown) to occur to the Forest ASQ: 7 percent for land selection; 2 percent for FORPLAN spatial limitations; 2 percent for isolated stands; 8 percent for not harvesting volume class 4/5 isolated stands; and 25 percent for design losses. The Irland Group also identified improvements (fallup) expected to occur to the ASQ of 11 percent for better response data and 10 percent for higher harvest volume. Cumulatively, this resulted in a 23 percent net reduction to occur to the Forest ASQ. For the purposes of this supplement, the 25 percent reduction was used for design losses in the analysis. This value is used because it represents the best estimate of project level falldown The Irland Group identified. The other falldown and fallup factors are for the Tongass National Forest as a whole and they may not directly relate to project level falldown rates.

The 25 percent hard falldown level may not be 100 percent applicable to project implementation. The actual level of hard falldown may be lower than this, but TIG did not break out what they expected to actually be hard falldown for the design loss AOS factor. The SEIS uses the full 25 percent level for lack of more detailed analysis.

Falldown - FS Evaluation of TIG

The Irland Group (TIG) report was accepted by the Alaska Region in January 1992. The USDA Forest Service completed an evaluation of TIG's report in April 1992. The evaluation agreed with TIG that the volumes required by the modified long-term sale contracts can be provided while complying with applicable laws.

The evaluation report also agreed that the amount of timber likely to be sold and harvested on the Tongass NF is less than the maximums permitted by the ASQ stated by TLMP Draft Revision (418 MMBF/year for Alternative P) and TLMP (1979a) (450 MMBF/year); however, the evaluation report determined that factors related to timber sale economics were the primary source of the shortfall in volume. The report addressed each of the AOS factors TIG stated for the improvements and reductions to the ASQ. The results are shown in Table A-3.

Table A-3

Evaluation of The Irland Group's AOS Factors (FS Evaluation of TIG, Table 3)

Falldown Factors	TIG%	Total	Forest Service %	
			Soft Falldown	Other Hard Falldown
1. Land Selection	-7.0%	-3.0%		-3.0%
2. Spatial Limitations (FORPLAN)	-2.0%	-2.0%		-2.0%
3. Design Losses	-25.0%	-18.2%	-13.6%	-4.6%
4. Isolated Stands	-2.0%	-2.0%	-2.0%	
5. No Harvest VC 4/5 Isolated	-8.0%	-5.5%	-5.5%	
6. Forest Inventory	<1.0%	0.0%		0.0%
7. Better Response Data	+11.0%	0.0%		0.0%
8. Higher Harvest Volume	+10.0%	0.0%		0.0%
Total Falldown Estimates	-23.0%	-30.7%	-21.1%	-9.6%

As was done for The Irland Group's analysis, the supplement narrowed the falldown factors to the one that best represents expected project level falldown. The 4.6 percent design loss hard falldown The Forest Service Evaluation of The Irland Group developed is the best estimate of project level falldown. The other factors are either soft falldown factors or for the Tongass National Forest as a whole.

Reductions to the ASQ

Land Selection

The Forest Service evaluation report agreed that the 7% reduction used by The Irland Group for land selections was appropriate and consistent with the calculations from the TLMP Draft Revision. Since the TLMP Draft Revision was published current information on the encumbered lands yet to be conveyed indicates a 3% reduction. TIG's report predicted that 110,180 acres (29.3 MMBF) remained to be conveyed, while the Forest Service evaluation report predicted there were 46,025 acres (12.2 MMBF) yet to be conveyed (FS Evaluation of TIG, page 8).

Spatial Limitations of FORPLAN

The Forest Service evaluation report agreed with TIG's reduction in the ASQ by 2% due to FORPLAN's inability to accurately portray the effects of spatial limitations. To better portray visual limitations in FORPLAN, the TLMP Draft Revision team considered new modeling constraints, particularly in relation to managing for scenic quality. The Forest Service report predicted the new constraints to reduce ASQ by the same amount TIG estimated.

Design Losses

The Forest Service evaluation report analyzed design loss in greatest detail since it was TIG's largest AOS determinant. Design loss was first analyzed through case studies on the three administrative areas. After the analysis identified economic factors as key determinants of the outcome, two additional analyses were completed that focused on the economic aspects. To better understand these analyses, the evaluation report clarified the concept of falldown and distinguished between two separate types of falldown, **project falldown** and **forest plan falldown**.

Project falldown (FS Evaluation of The Irland Group Report)

Project falldown relates to a specific timber sale or long-term FEIS. The falldown occurs between volume planned for harvest in a project area and the actual volume sold or released. If within a study area the difference between planned volume and actual volume is due to portions of the suitable land base deferral for future entry, there would be no affect on the ASQ. The evaluation report called this **deferred volume** (soft falldown). If irreparable resource damage would result from harvesting portions of the suitable land base, those acres would be deleted from this base. Those deletions would affect the ASQ. The evaluation report termed this **excluded volume** (hard falldown).

Forest plan falldown (FS Evaluation of The Irland Group Report)

The evaluation report stated that when project planning and implementation identify conditions requiring reductions in the suitable land base, ASQ is affected. These situations occur when extensive inventories used in the Forest Plan are field checked with site specific local inventories. Examples of this include additional buffers required to protect fish streams or excluding harvest activities on suitable timber land due to the presence of very high MMI soils. These suitable timber lands require reclassification to unsuitable timber lands. If these conditions are not compensated for, the available land base and ASQ calculation would be reduced.

Another component of Forest Plan falldown relates to the implementation of the standards and guidelines that governed the development of a FORPLAN-based ASQ. The FORPLAN model is best used for optimal scheduling. FORPLAN has limited spatial detail and as such, field implementation will not perfectly match the optimal solution the model predicts. A possible occurrence of this is through local interpretation of management standards and guidelines during project planning which differ from those used to constrain the yield calculation in the Forest Plan. Consistent interpretation and application of standards and guidelines at the project level is not always attainable.

APPENDIX A

The evaluation report predicts an 18.2 percent reduction in ASQ to occur due to design loss. Of this 18.2 percent reduction, 13.6 percent is attributed to economic factors (soft falldown) and 4.6 percent is attributed to other factors (hard falldown).

Isolated Stands

The evaluation report agreed with TIG's findings that isolated stands account for a 2 percent reduction in ASQ. However, the evaluation report does not agree that these isolated stands are necessarily unsuitable and reduce the ASQ. Harvesting the "Monk's fringe" left from previous harvesting, or isolated stands due to land allocation might require helicopter logging or uniquely designed road networks. Future harvesting of these stands will depend on improved market conditions or additional monetary investments for access.

Leaving Volume Class 4 and 5 Timber (FS Evaluation of The Irland Group report)

The evaluation report agreed with TIG that there was limited opportunity to harvest timber in the isolated operability component of the Forest. These stands of timber met the tentatively suitable criteria (biological capacity to produce industrial wood products), but were either isolated stringers or patches of timber inaccessible for harvest. According to the evaluation report, analysis showed that one half of one percent (0.005 percent) of the acres harvested on the Tongass were from this component of the land base.

The evaluation report used Table B-21, found in the TLMP Draft Revision, Appendix Volume I, page B-340, to determine what effect to ASQ not harvesting isolated operability timber would have. Table A-4 summarizes this information. The constraints are interrelated and not meant to be subtracted in sequence from the original ASQ of 442.7 to reach 353.8. Of the 98,310 acres defined as isolated operability, 93,682 acres (95 percent) are volume class 4 and 5 (RSDEIS TLMP).

Table A-4

TLMP Draft Revision, Alternative P Additional Constraints (TLMP Draft Revision, Appendix Volume I, Table B-21, page B-340)

	ASQ (MMBF/yr)
Original Run, Alternative P	442.7
(Maximum Timber, No Below Cost, Non-declining Revenue)	
Effect of No Below Cost Constraint	- 0.0
Effect of Non-declining Revenue Constraint	- 34.8
Effect of VC 4 Difficult Constraint	- 45.1
Effect of Isolated Operability Constraint	- 41.7
Effect of 7% of ASQ from Difficult Operability	- 0.2
Effect of 30% of Acres Harvested from VC4	- 12.6
Original Run with all Additional Constraints	353.8

The most recent assessment the evaluation report used, determined that 24 MMBF (6 percent) of the ASQ was defined as isolated operability in Alternative P. The maximum reduction to the ASQ the evaluation report expected was 5.5 percent (total isolated operability timber lands 6 percent - historic harvest level of isolated operability timber lands 0.5 percent).

Improvements to the ASQ

Forest Inventory

The evaluation report stated this AOS factor would not have any affect on the ASQ. The small positive growth predicted by TIG (<1 percent) would be offset by the mortality rate of sawlog yields in the existing over-mature sawlog strata. This could be considered a "wash".

Better Response Data

The evaluation report stated this AOS factor would not have any affect on the ASQ. According to the evaluation report, it was not anticipated that research would provide justification for including lands currently classified as not restockable within 5 years after final harvest or including lands with no response information.

Higher Harvest Volume

Again, the evaluation report believed this AOS factor would have no affect on the ASQ. Until better indications that the inventories underestimated the standing volume or that not all of the scheduled volume could be harvested over time, the report remained conservative.

Falldown - CPOW Layout Summary

During 1994 and 1995 the Thorne Bay Ranger District prepared 121 units from the Central Prince of Wales (CPOW) timber project for offer or release to Ketchikan Pulp Company (KPC).

Standards and guidelines were implemented during unit layout. At times, applying standards and guidelines resulted in proposals for deferral of acres within a unit or entire units. An example is unit 588-203. The unit was planned at 62 acres. During layout, crews identified the presence of karst within and adjacent to the unit. The Forest Geologist visited the unit on two occasions. He determined that karst was exceedingly well developed throughout the unit, with a very deep (>10 feet) epikarst. Numerous collapse features and at least four large streams that disappeared into the karst system were located. One of the cave systems yielded the highest level of bat use found to date, contributing to the overall significance of karst in the ecosystem. The Geologist determined the karst in this unit was found to be of high or extremely high vulnerability and recommended to the District Ranger that the unit be deferred from both timber harvest and road construction as per the mitigation measures in the CPOW ROD (item #31 pages 38 and 39). The recommendation was implemented and zero acres were released.

Acres were deleted from units and deleted from the suitable timber base if those acres were included in buffers by the Tongass Timber Reform Act (TTRA) of 1990. An example is unit 590-276. During field layout four streams were located in this unit that were not identified at the planning stage. Two of these streams provided fish with required habitat, and necessitated 100-foot no-cut buffers along each side. The buffers amounted to 4 acres of timber deleted from the suitable timber base. Acres were proposed for deletion from the suitable timber base if standards and guidelines could not be applied. For example, unit 579-205 was planned at 69 acres. During layout, field crews determined that 80 percent of the unit's side slopes exceeded 75 percent, with some slopes up to 130 percent. Fifteen Class III streams were also located within the unit. A Soil Scientist field reviewed the unit and recommended to the District Ranger it be deleted from the offering and the suitable timber base. This recommendation was based on very high MMI soils encountered and evidence of previous landslide and soil creep activity. This recommendation was implemented and was proposed for deletion from the suitable timber base.

Alternately, there were situations during layout that extend harvest boundaries of units to better apply standards and guidelines. For example, unit 598-222 was planned at 31 acres. Field verification during layout found that if the back line of the unit was moved from the bottom of a small draw up to a small ridge line, suspension requirements could be improved over high mass movement soils. Moving the back line equated to a three acre addition. This addition was implemented to form a more logical setting for timber harvesting and to better apply mitigation measures in the ROD (item #2 page 30) for high mass movement soils.

APPENDIX A

Differences between planned acres as outlined in the ROD and actual acres measured in the field also occurred during field verification. Planned acres were determined by digitizing units into a geographic information system (GIS) from 1991 aerial photos. Actual acres were measured using a technical forestry process called traversing. For example, unit 579-213 is bordered on two sides by non-commercial forest land (non-CFL), another side by a previously harvested unit, and the fourth side abuts another CPOW unit. Unit 579-213 was laid out to the form and function of the ROD: the actual size is 43 acres as compared to the planned size of 41 acres. This 2 acre difference is termed as a GIS mapping discrepancy in analysis of unit change letters.

Table A-5 displays the summation of acres deferred, deleted or added by resource concern.

**Table A-5
Summary of Acres Deleted, Deferred or Added by Resource Group for 121 Units in the CPOW Timber Project.**

Planned Acres: 5,142			
Resource Concern	Added	Deferred (Soft)	Deleted (Hard)
Wildlife		258 acres	
Fisheries	4 acres		245 acres
Soils/Water Quality	3 acres		286 acres
Logical Settings	175 acres	37 acres	
Non-CFL		8 acres	230 acres
Visuals	1 acre	4 acres	
Karst		104 acres	
GIS Discrepancies	49 acres	34 acres	
Logging Feasibility		63 acres	
Total	232 acres	- 508 acres	- 761 acres
Net Loss = 1,037 acres			

Deferred acres are considered **soft falldown** as they are not excluded from the suitable timber base. Deleted acres are considered **hard falldown** as they are excluded from the suitable timber base.

Table A-6 summarizes the change when deferred (soft), deleted (hard), and added acres are compared against the planned acres.

**Table A-6
Summary of Difference in Planned Acres vs. Actual Acres Based on Hard and Soft Falldown for CPOW Layout**

Units Released	Units Not Released	Acres Planned	Actual Acres	Gross Added Acres	%	Gross Soft Acres	%	Gross Hard Acres	%	Net Acres Lost	%
116	5	5,142	4,105	+232	+4.5	-508	-9.9	-761	-14.8	-1037	-20.2

Source: Unit Changes - CPOW Project Area, May, 1995.

Appendix B

**Control Lake
Cumulative Effects Study**

Control Lake Cumulative Effects Study

The Final Control Lake Cumulative Effects Study report is not available at the time this document went to the printer. It is expected to be available this winter. The data is available upon request, is part of the CPOW Supplement planning record, and is incorporated by reference.

This study was initiated to update resource information including soils and streams data that were obtained through field reconnaissance of on-going projects as well as through intensive aerial photo analysis on project areas identified in the Ketchikan Area ten year sale plan. This report is also to include logging system transportation analyses (LSTA) for suitable timber identified within these project areas. Timber suitability standards used were those proposed in the Proposed Revised Forest Plan Alternative P (1991).

Results of the updated LSTAs are intended to provide starting points for timber sale project planning using up-to-date resource information. Cumulative effects of timber harvest on social and environmental issues may be more accurately estimated based on the updated resource information and LSTAs.

Preliminary results of this study indicate that 75,205 acres of suitable old-growth timber is located within the CPOW project boundary. This does not include any harvest units approved by the CPOW ROD. The Final Supplement to the CPOW FEIS incorporates much of the results of the updated LSTA. As this number differs substantially from the 50,288 acres identified by the CPOW MELP, this Appendix concludes with a comparison of the updated LSTA and the CPOW MELP.

The following tables (Table B-1 through B-X) provide a summary of the identified suitable acres within the CPOW project area: Resource Codes; Operability Classes; Timber Resource Land Suitability Determination; Summary Classification of Suitable-Available Land by Operability Class and Risk Class; and Detailed Classification of Suitable-Available Land.

There are several important facts to remember while reviewing the figures presented in this appendix:

- This is still preliminary data and is subject to change just as the total suitable old-growth acreage figure changed from the 71,140 acres reported in the Draft Supplement to the 75,205 acres reported in the Final Supplement.
- The updated LSTA for the CPOW project area treated the units cleared for harvest by the CPOW Record of Decision (July 1993) as second growth. The 75,205 acres of suitable old-growth does not include any CPOW ROD unit acres.
- The amount of second growth reported for the CPOW project area would seem to be at odds with that reported in the CPOW DEIS, FEIS, and Supplement. This is a function of how suitability was determined. The CPOW environmental documents assumed that all previous harvest on NFS lands occurred on suitable lands. The updated LSTA identified suitable lands first, and then went on to determine how much of that was old-growth and how much was second growth. Previous harvest in beach fringe and estuary buffers would now be considered unsuitable.
- The updated LSTA identified 4,539 acres of suitable old-growth timber as encumbered. Of this total, 3,218 acres have been conveyed to either the State of Alaska or Sealaska Corporation and are no longer National Forest System lands. The remaining acres (1,321) identified as encumbered are broken out as follows:
 - 504 acres - State selection, low priority
 - 798 acres - Sealaska Corporation, unlikely to be conveyed
 - 19 acres - mistakenly identified as encumbered

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APPENDIX B

- We believe that lands selected but not yet conveyed are at low to moderate risk of conveyance.
- Unclassified lands are those suitable lands that have not yet been assigned an operability class. Most of these acres will be assigned to an operability class when the report is completed.
- Risk factors are subject to change based on Forest Plan Revision and field reconnaissance to verify on-site conditions.

Table B-1

Resource Codes

Areas Dropped from the Suitable Base

Based on Topographic Mapping

90 Area with > 90% slope, generally > 20 acres

Based on Aerial Photo Analysis

C Cliff area, generally < 20 acres
S Slide Area
M New MMI 4 area
L Area with low timber volume (< 8 MBF/acre)
RIP New riparian soils area

Areas Identified as Being at Risk of Being Dropped from Suitable Base

High Risk

Based on Topographic Mapping

70 Area with > 70% and < 90% slope, generally > 20 acres

Based on Aerial Photo Analysis

V Area is dominated by steep V-notches
E Area contains an excessive # of streams
RH Potential regeneration problems due to high elevation
RA Potential regeneration problems due to avalanche

Based on Other Analysis

HK High vulnerability karst area

Note: Areas were also classified as high risk if they were classified as both MK and HCA

Moderate Risk

MK Medium vulnerability karst area
HCA Large and medium HCAs based on modified VPOP

None to Low Risk

Based on Other Analysis

LK Low vulnerability karst area

Table B-2
Operability Classes

Normal	Logging systems ¹ = HL, RS, LS, SS, SL, SH
Difficult (HE1)	Helicopter (yarding distance < ½ mile)
Difficult (HE2)	Helicopter (½ mile < yarding distance < 1 mile)
Isolated (HE3)	Helicopter (yarding distance > 1 mile)
Isolated (Cable)	Cable yarding, but requires an excessive amount of road construction relative to harvestable timber volume.

1/ HL = Hi-lead
 RS = Running skyline
 LS = Live skyline
 SS = Standing skyline
 SL = Slack line
 SH = Shovel

APPENDIX B

Table B-3	
Timber Resource Land Suitability Determination (per 36 CFR 219.14) CPOW Project Area	
Total Land Area (National Forest System lands only, including encumbered)	329,175
Nonforest Land - original GIS mapping	11,980
additions due to new lakes	208
Total Forest Land	316,987
Forest Land not capable of producing crops of industrial wood	4,688
	312,299
Forest Land Physically Unsuitable -due to MMI4-original GIS mapping	25,529
-due to MMI4->90% slope mapping	981
-due to MMI4-updates during LST	940
-due to McGilvery Soils	777
	284,072
Forest Land - Inadequate Information - original GIS mapping	117,942
- updates during LSTA	261
	165,869
Forest Land withdrawn from Timber Production - ANILCA Wldrns/N.M.	
TTRA Wilderness	0
TTRA LUD II	5,793
TTRA Stream Buffer	12,420
Miscellaneous	0
Tentatively Suitable Forest Land	147,656
Forest Land not appropriate for Timber Production	
Due to Management Requirements	
Riparian Area - expanded stream buffers	3,164
lake buffers	530
riparian soils	3,122
updates during LSTA	705
	140,135
Due to Multiple-use Objectives	
Eagle Next Buffers	272
Beach Fringe	5,841
Estuary Fringe	2,922
SUITABLE FOREST LAND	131,100
Unsuitable Forest Land:	185,887
Nonforest Land	12,188
TOTAL NATIONAL FOREST SYSTEM LAND	329,175

Table B-4
Summary Classification (in acres) of Suitable Land by Operability Class and Risk Class for the CPOW Project Area

Suitable-Available Forest Land		131,100	UNCLAS
Normal Operability	None to Low Risk	32,693	5,797
Normal Operability	Moderate Risk	8,663	1,707
Normal Operability	High Risk (Encumbered Land)	2,261	142
Normal Operability	High Risk (Physical/Biological)	7,386	1,451
Normal Operability	High Risk (Both)	260	20
TOTAL		51,263	9,117
Difficult (HE1) Operability	None to Low Risk	5,677	
Difficult (HE1) Operability	Moderate Risk	1,570	
Difficult (HE1) Operability	High Risk (Encumbered Land)	419	
Difficult (HE1) Operability	High Risk (Physical/Biological)	1,547	
Difficult (HE1) Operability	High Risk (Both)	0	
TOTAL		9,213	
Difficult (HE2) Operability	None to Low Risk	1,356	
Difficult (HE2) Operability	Moderate Risk	415	
Difficult (HE2) Operability	High Risk (Encumbered Land)	991	
Difficult (HE2) Operability	High Risk (Physical/Biological)	525	
Difficult (HE2) Operability	High Risk (Both)	0	
TOTAL		3,287	
Isolated (HE3) Operability	None to Low Risk	48	
Isolated (HE3) Operability	Moderate Risk	21	
Isolated (HE3) Operability	High Risk (Encumbered Land)	695	
Isolated (HE3) Operability	High Risk (Physical/Biological)	0	
Isolated (HE3) Operability	High Risk (Both)	0	
TOTAL		764	
Isolated (Cable) Operability	None to Low Risk	1,238	
Isolated (Cable) Operability	Moderate Risk	280	
Isolated (Cable) Operability	High Risk (Encumbered Land)	31	
Isolated (Cable) Operability	High Risk (Physical/Biological)	12	
Isolated (Cable) Operability	High Risk (Both)	0	
TOTAL		1,561	
Second Growth	None to Low Risk	35,314	
Second Growth	Moderate Risk	4,753	
Second Growth	High Risk (Encumbered Land)	1,036	
Second Growth	High Risk (Physical/Biological)	14,259	
Second Growth	High Risk (Both)	533	
TOTAL		55,895	
ALL	None to Low Risk	82,123	
ALL	Moderate Risk	17,409	
ALL	High Risk (Encumbered Land)	5,575	
ALL	High Risk (Physical/Biological)	25,180	
ALL	High Risk (Both)	813	
TOTAL		131,100	

APPENDIX B

Table B-5

Detailed Classification (in acres) of Suitable Land by Owner Type, Operability Class and Risk Factor for the CPOW Project Area

RISK FACTORS

None to Low = None yet identified or low vulnerability karst
 HCA = Previously designated habitat conservation area
 MK = Medium vulnerability karst
 HK = High vulnerability karst
 70 = Area has average slope > 70%
 V = Area is dominated by steep V-notches
 E = Area contains an excessive # of streams
 RA = Regeneration concerns due to avalanche
 RH = Regeneration concerns due to high elevation

Owner-Type Operability	Risk Factors	Acres	Owner-Type Operability	Risk Factors	Acres
1N	None to Low	32,693	2N	None to Low	2,257
1N	HCA	7,755	2N	HCA	
1N	MK	908	2N	MK	4
1N	HK	5,145	2N	HK	251
1N	MK, HCA	277	2N	MK, HCA	
1N	HK, HCA	1,017	2N	HK, HCA	
1N	70	24	2N	E	9
1N	70, V	47	2N		
1N	E	206	2N		
1N	E, HK	115	2N		
1N	V	490	2N		
1N	Other	65	2N		
		48,742			2,521

Owner-Type Operability	Risk Factors	Acres	Owner-Type Operability	Risk Factors	Acres
1 D(HE1)	None to Low	5,677	2 D (HE1)	None to Low	419
1 D(HE1)	HCA	1,540	2 D (HE1)	HCA	
1 D(HE1)	MK	30	2 D (HE1)	MK	
1 D(HE1)	HK	75	2 D (HE1)	HK	
1 D(HE1)	MK, HCA	1	2 D (HE1)	MK, HCA	
1 D(HE1)	HK, HCA	81	2 D (HE1)	HK, HCA	
1 D(HE1)	70	298	2 D (HE1)		
1 D(HE1)	70, HCA	44	2 D (HE1)		
1 D(HE1)	E	4	2 D (HE1)		
1 D(HE1)	V	834	2 D (HE1)		
1 D(HE1)	V, HCA	135	2 D (HE1)		
1 D(HE1)	V, 70, HCA	75	2 D (HE1)		
		8,794			419

Table B-5 (continued)

Owner-Type Operability	Risk Factors	Acres	Owner-Type Operability	Risk Factors	Acres
1 D(HE2)	None to Low	1,356	2 D (HE2)	None to Low	991
1 D(HE2)	HCA	415	2 D (HE2)	HCA	
1 D(HE2)	MK		2 D (HE2)	MK	
1 D(HE2)	HK	4	2 D (HE2)	HK	
1 D(HE2)	MK, HCA	6	2 D (HE2)	MK, HCA	
1 D(HE2)	HK, HCA	82	2 D (HE2)	HK, HCA	
1 D(HE2)	V	343	2 D (HE2)		
1 D(HE2)	V,HCA	90	2 D (HE2)		
1 D(HE2)			2 D (HE2)		
1 D(HE2)			2 D (HE2)		
1 D(HE2)			2 D (HE2)		
1 D(HE2)			2 D (HE2)		
		2,296			991

Owner-Type Operability	Risk Factors	Acres	Owner-Type Operability	Risk Factors	Acres
1 I(HE3)	None to Low	48	2 I(HE3)	None to Low	695
1 I(HE3)	HCA	21	2 I(HE3)	HCA	
1 I(HE3)	MK		2 I(HE3)	MK	
1 I(HE3)	HK		2 I(HE3)	HK	
1 I(HE3)	MK, HCA		2 I(HE3)	MK, HCA	
1 I(HE3)	HK, HCA		2 I(HE3)	HK, HCA	
1 I(HE3)			2 I(HE3)		
1 I(HE3)			2 I(HE3)		
1 I(HE3)			2 I(HE3)		
1 I(HE3)			2 I(HE3)		
1 I(HE3)			2 I(HE3)		
1 I(HE3)			2 I(HE3)		
1 I(HE3)			2 I(HE3)		
		69			695

Owner-Type Operability	Risk Factors	Acres	Owner-Type Operability	Risk Factors	Acres
1 I (Cable)	None to Low	1,238	2 I (Cable)	None to Low	31
1 I (Cable)	HCA	280	2 I (Cable)	HCA	
1 I (Cable)	MK		2 I (Cable)	MK	
1 I (Cable)	HK	12	2 I (Cable)	HK	
1 I (Cable)	MK, HCA		2 I (Cable)	MK, HCA	
1 I (Cable)	HK, HCA		2 I (Cable)	HK, HCA	
1 I (Cable)			2 I (Cable)		
1 I (Cable)			2 I (Cable)		
1 I (Cable)			2 I (Cable)		
1 I (Cable)			2 I (Cable)		
1 I (Cable)			2 I (Cable)		
1 I (Cable)			2 I (Cable)		
		1,530			31

APPENDIX B

Table B-5 (continued)

Owner-Type Operability	Risk Factors	Acres	Owner-Type Operability	Risk Factors	Acres
1 2nd Growth	None to Low	35,314	2 2nd Growth	None to Low	971
1 2nd Growth	HCA	2,334	2 2nd Growth	HCA	
1 2nd Growth	MK	2,419	2 2nd Growth	MK	65
1 2nd Growth	HK	13,593	2 2nd Growth	HK	533
1 2nd Growth	MK, HCA	145	2 2nd Growth	MK, HCA	
1 2nd Growth	HK, HCA	507	2 2nd Growth	HK, HCA	
1 2nd Growth	V	5	2 2nd Growth		
1 2nd Growth	V	6	2 2nd Growth		
1 2nd Growth	V, 70, HCA	2	2 2nd Growth		
1 2nd Growth	E	1	2 2nd Growth		
1 2nd Growth			2 2nd Growth		
1 2nd Growth			2 2nd Growth		
		<u>54,326</u>			<u>1,569</u>
Owner-Type Operability	Risk Factors	Acres	Owner-Type Operability	Risk Factors	Acres
1 Unclass	None to Low	5,797	2 Unclass	None to Low	139
1 Unclass	HCA	1,429	2 Unclass	HCA	3
1 Unclass	MK	278	2 Unclass	MK	
1 Unclass	HK	1,357	2 Unclass	HK	20
1 Unclass	MK, HCA	16	2 Unclass	MK, HCA	
1 Unclass	HK, HCA	71	2 Unclass	HK, HCA	
1 Unclass	E	3	2 Unclass		
1 Unclass	V	4	2 Unclass		
1 Unclass			2 Unclass		
1 Unclass			2 Unclass		
1 Unclass			2 Unclass		
1 Unclass			2 Unclass		
		<u>8,955</u>			<u>162</u>

CPOW MELP and Updated LSTA Comparison

The CPOW MELP established a potential harvest unit pool of 50,288 acres as documented in the CPOW FEIS. Preliminary data from the updated LSTA for the CPOW project area established a potential harvest unit pool of 75,205 acres. The results of these studies include 31,250 acres common to both. The 31,250 acres common to both do not include the 9,836 acres of timber harvest cleared by the CPOW Record of Decision. The CPOW ROD acres were considered to be second growth in the updated LSTA. This leaves approximately 19,000 acres unique to the MELP (which does include the CPOW ROD acres), and approximately 44,000 acres unique to the LSTA.

The following discussion explains why the two studies arrived at different conclusions and accounts for those differences.

The larger acreage attributed to the LSTA is the result of different direction given to the ID Team that conducted each analysis. The CPOW MELP was done as a means of identifying potential harvest units that would be at low risk of litigation and not require the approval of other agencies or entities to implement. As such, potential units in the Honker Divide, units on lands withdrawn for selection, or units that would require rights-of-way across non-National Forest System lands were not considered. On the other hand, the updated LSTA for the project area did identify suitable timber in these areas though they were flagged as risk factors.

Another difference between the MELP and the LSTA is that the MELP used an 8 percent grade limit for planned road construction. The LSTA used a 15 percent grade limit for planning purposes. It is recognized that planning at any given standard will result in short pitches that exceed the planned grade. In effect, the difference in road grade standard would result in a greater probability in achieving road access to all units planned for such access in the MELP, and would pose a lesser probability of achieving roaded access to all units planned for such access in the LSTA.

A small factor in the difference between the results of the MELP and the LSTA is that the MELP avoided the placement of harvest units on over steepened slopes, which is generally considered to be 75 percent. The LSTA used 90 percent slopes as an upper limit for timber suitability but also identified those potential units with slopes between 70 and 90 percent. For the LSTA, this amounted to 488 acres.

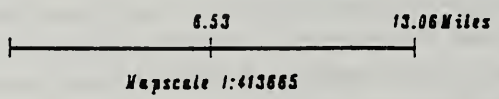
An additional difference between the two analyses is that the LSTA started with all suitable old-growth based on Draft Revision Alternative P standards and coded those acres not suitable for, or withdrawn from, timber harvest consideration. The CPOW IDT did not have time to complete that phase of the task in conjunction with development of the MELP.

The LSTA disaggregated identified suitable acres in three categories: none to low risk, moderate risk, and high risk. These were based on several physical or biological risk factors. The risk factors used included slope, karst vulnerability, V-notches, excessive numbers of streams, and relationship to habitat conservation areas proposed at one time. The degree of risk is subject to change based on legislation, executive order, and Forest Plan Revision or amendment.

Figures B-1 and B-2 represent small scale depictions of the areas considered as suitable timber in the CPOW MELP and the updated LSTA for the project area. These figures are presented for visual comparison and are not intended to facilitate detailed site-specific analysis. Small geographic features such as lakes and rivers are not shown on these plots.

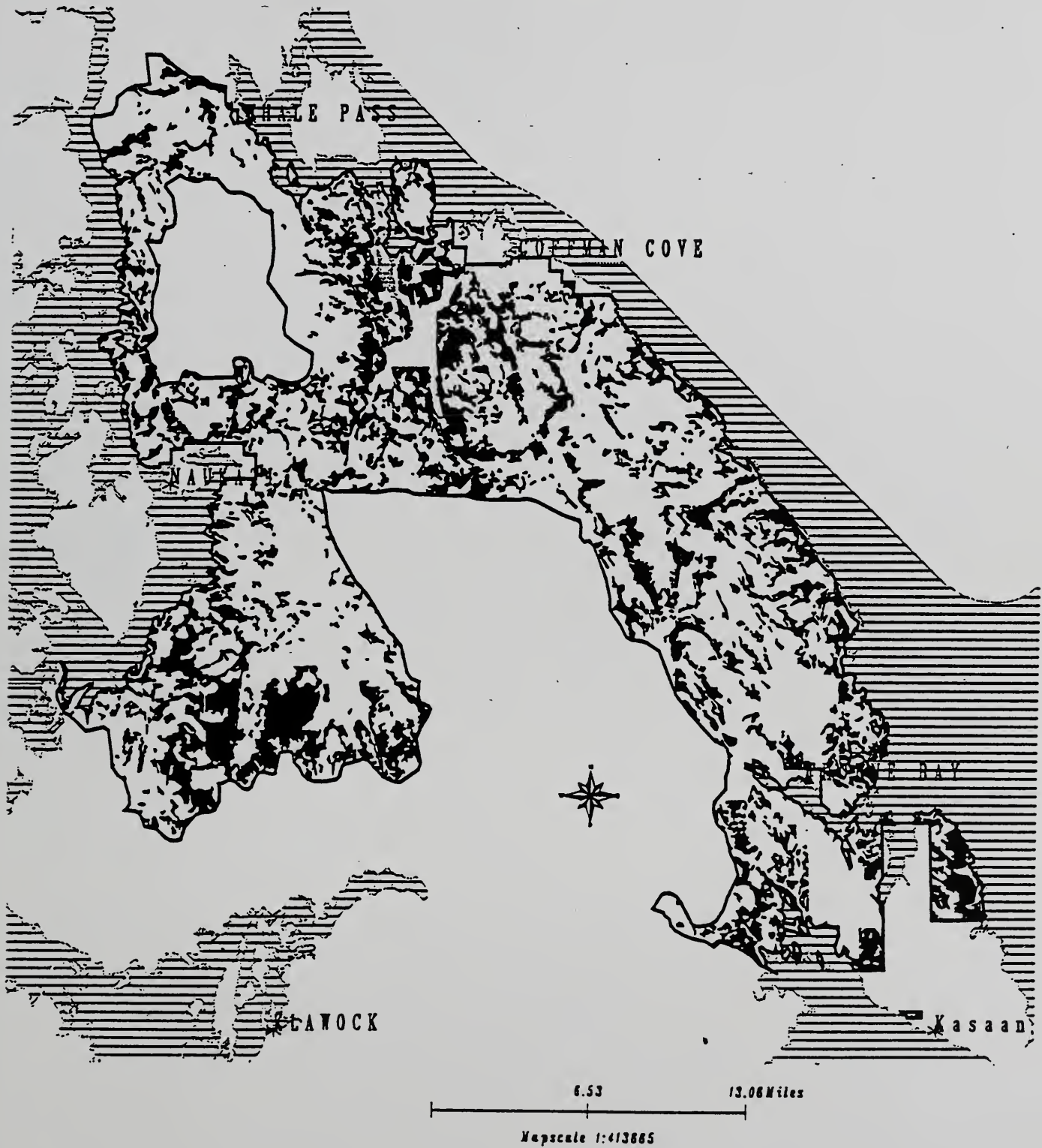
APPENDIX B

Figure B-1
Suitable Timber Identified in the CPOW MELP



- ▨ Salt Water
- Suitable Acres
- Project Boundary

Figure B-2
Suitable Timber Identified in the Updated LSTA for the CPOW Project Area



▨ Salt Water

■ Suitable Acres

— Project Boundary

Appendix C

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DISTRIBUTION LIST

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APPENDIX C

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Appendix D

**Effects of Falldown on
Wildlife Habitat Capability**

Effects of Falldown on Wildlife Habitat Capability

Analysis of the effects of the CPOW alternatives on wildlife habitat in the FEIS were based on a site specific analysis utilizing wildlife habitat capability models as the Management Indicator Species identified for the project.

Normally, falldown results in a lesser impact to wildlife than that displayed in the CPOW FEIS or in the TLMP Draft Revision. It is difficult to precisely predict the actual positive changes in habitat capability resulting from projected falldown because falldown percentages are not site specific. Most habitat capability models are driven not only by acres of habitat change, but also by habitat quality. Variability in such factors as elevation, aspect, and volume class of timber has different effects on habitat capability for different wildlife species. As an example, harvesting low elevation, high volume timber on a south facing aspect would reduce deer habitat more than harvesting the same number of acres of high elevation, low volume timber on a north aspect.

One method to estimate potential changes to wildlife habitat capability based on projected falldown, is to use the projected falldown as a percentage of the planned project. Applying that percentage to the estimated project effects on wildlife populations would result in an estimate of what would not occur to wildlife. For example, if the CPOW FEIS stated that deer habitat capability would be reduced by 200 deer, and there is a projected falldown of 20 percent, the actual reduction in deer habitat capability would be 160 deer. In this example, the anticipated effects of implementing the project would be a reduction of deer habitat capability by only 160 (rather than 200) when falldown is taken into consideration, i.e. 40 more deer could be expected to find suitable habitat than previously estimated. Table D-1 displays a summary of projected changes in habitat capability by CPOW FEIS alternative.

APPENDIX D

Table D-1
Effects of Reduced Harvest Due to Falldown on Habitat Capability to 1996 by Alternative. Figures in
Parentheses are Those Displayed in the CPOW FEIS.

Species	1954	1993	1	F2	F3	F4	F5	F6
deer	14,942	10,245	10,245	9,981 (9,934)	9,996 (9,952)	9,987 (9,942)	9,967 (9,918)	9,990 (9,945)
black bear	552	517	517	515	515	515	515	515
marten	671	499	499	482 (479)	482 (479)	488 (486)	489 (487)	488 (486)
otter	192	168	168	168	168	168	168	168
hairy woodpecker	7,725	3,395	3,395	3,213 (3,181)	3,212 (3,182)	3,209 (3,186)	3,205 (3,172)	3,222 (3,192)
brown creeper	17,725	5,594	5,594	5,320 (5,272)	5,330 (5,284)	5,326 (5,279)	5,318 (5,270)	5,361 (5,319)
Vancouver Can. goose	902	667	667	644 (640)	641 (637)	644 (640)	641 (637)	643
bald eagle	518	375	375	374	375	374	374	374
grey wolf	33	25	25	24	24	24	24	24

-Assumes all previous harvest was volume class 6 and 7.

-Source: Matson 1992. Data derived from GIS data base and interagency habitat capability models.

-Table adopted from Table 3-76 in CPOW FEIS (page 3-173).

-Table adjusted to account for 15% hard falldown in project implementation.

Table D-2 displays past, present, and future habitat capability estimates for the CPOW project area.

Habitat capability models for the CPOW project estimate population of animals the project area can support. Capability numbers for 1954 and 1993 are unchanged from the CPOW FEIS. Upon completion of the CPOW project (year 1996), numbers are predicted based on a hard falldown rate of 15 percent experienced in project implementation. The habitat capabilities for the year 2040 were adjusted from reductions predicted in the CPOW FEIS, a factor of 15 percent hard falldown that reflects a potential suitable timber base 15 percent smaller than predicted.

Table D-2

Foreseeable Changes in Habitat Capability, 1954-1996, including Cumulative Impacts to Year 2040 (Data derived from GIS data base and interagency habitat capability models).

Species	Habitat Capability 1954	Habitat Capability 1993	Habitat Capability 1996	Habitat Capability 2040
Sitka black-tailed deer*	14,942	10,245	9,967	9,681 (9351)
black bear	552	517	515	490 (468)
marten*	671	499	489	467 (445)
river otter	192	168	168	168
hairy woodpecker*	7,725	3,395	3,205	3,058 (2,875)
brown creeper	17,725	5,594	5,318	5,105 (4,839)
Vancouver Canada goose	902	667	641	621 (597)
bald eagle	518	375	374	373
gray wolf	33	25	24	22 (21)

- 1996 habitat capability is based on Alt. F5. Changes from 1954 to 1993 assumes all previous harvest was vol. Class 6 and 7.

- Table adopted from Table 3-77 in CPOW FEIS (page 3-77).

*/ Does not consider effects of forest fragmentation or road densities.

1996 figures account for 15 percent falldown in the CPOW project.

2040 figures account for 15 percent falldown of the total suitable timber base.

Appendix E

Reconnaissance Falldown

Reconnaissance Falldown

An important and early step in the NEPA process for timber sale projects is the completion of field reconnaissance (recon) for proposed harvest acres within the project area. Field recon helps ensure that; 1) a proposed action has been identified before a Notice of Intent (NOI) or scoping letter is issued; 2) the proposed action has been identified in enough detail for the public to identify the site-specific issues; and 3) the proposed action is feasible and could be implemented (May 23, 1994 Regional Forester memo to Forest Supervisors, file designation 1950).

Through field recon, units may be identified for deferral from consideration for the proposed project, or deleted from the suitable timber base. Deferrals are considered soft falldown and include harvest postponements attributed to wildlife, visual management objectives, karst, logging feasibility, estuary buffers, adjacency, proportionality, cumulative watershed harvest thresholds, and encumbered lands. Deletions are considered hard falldown and affect the suitable timber base. Examples of hard falldown include TTRA buffers, very high MMI soils, non-commercial forest land, and conveyed lands.

During the field season of 1992, the CPOW, Control Lake, Lab Bay, and Polk Inlet projects underwent field recon. The following are summaries of the findings of those efforts.

The 199 CPOW units field reviewed totaled 9,089 acres. The results were that approximately 454 acres were deferred and 818 acres were recommended for deletion from the suitable timber base. Ten units were deferred or deleted in their entirety. These figures amount to soft falldown of 5 percent and hard falldown of 9 percent for field recon of potential CPOW unit pools. The remaining acres were used to develop alternatives for the CPOW Draft EIS.

The Control Lake unit pool prior to recon amounted to 13,569 acres. Field recon resulted in a deferral of 741 acres and deletion of 1,559 acres. This results in a soft falldown of 5 percent and hard falldown of 11 percent for field recon in the Control Lake project (see Table E-1).

Table E-1
Control Lake Reconnaissance Falldown

Resource Concern	Deferred Acres Soft	Deleted Acres Hard
Wildlife		
Fisheries		238
Soils/Water Quality		778
Logical Settings		
Non-CFL		543
Visuals	66	
Karst		
GIS Discrepancies		
Logging Feasibility	29	
Adjacency	535	
Estuary Buffer		
Encumbered	111	
Acres Deferred or Deleted	741	1,559

Note: Whole units dropped from the Control Lake EIS unit pool (13,569 acres) following recon (source: Control Lake Timber and Vegetation Resource Report and Harza NW database).

APPENDIX E

The Lab Bay unit pool prior to recon amounted to 6,626 acres. Field recon resulted in a deferral of 1,750 acres and deletion of 326 acres. This results in a soft falldown of 26 percent and hard falldown of 5 percent for field recon in the Lab Bay project (see Table E-2).

**Table E-2
Lab Bay Reconnaissance Falldown**

Resource Concern	Deferred Acres Soft	Deleted Acres Hard
Wildlife		
Fisheries		134
Soils/Water Quality		50
Logical Settings		
Non-CFL		142
Visuals	135	
Karst		
GIS Discrepancies		
Logging Feasibility	30	
Adjacency	219	
Estuary Buffer	10	
Proportionality	1,072	
Cum. Watershed Peak	202	
State Selected (proposed)	82	
Acres Deferred or Deleted	1,750	326

Note: Whole units dropped from the Lab Bay EIS unit pool (6,626 acres) following recon (source: Harza NW database and Lab Bay DEIS, Table B-1)

The Polk Inlet unit pool prior to recon amounted to 7,798 acres. Field recon resulted in a deferral of 644 acres and deletion of 426 acres. This results in a soft falldown of 8 percent and hard falldown of 5 percent for field recon in the Control Lake project (see Table E-3).

Table E-3
Polk Inlet Reconnaissance Falldown

Resource Concern	Deferred Acres Soft	Deleted Acres Hard
Wildlife	244	
Fisheries		37
Soils/Water Quality		273
Logical Settings		
Non-CFL		116
Visuals	118	
Karst		
GIS Discrepancies		
Logging Feasibility		
Adjacency	220	
Estuary Buffer		
Proportionality		
Cum. Watershed Peak	62	
Encumbered		
Acres Deferred or Deleted	644	426

Note: Whole units dropped from the Polk Inlet EIS unit pool (7,798 acres) following recon (source: Polk Inlet EIS Planning Record and Harza NW database)

A weighted average for the four projects resulted in 10 percent soft falldown and 8 percent hard falldown that would be expected to occur during the recon phase of a project. The 8 percent hard falldown factor is used in conjunction with a 15 percent hard falldown implementation factor to best reflect changes to the suitable timber base encountered during project planning and implementation (see Table E-4).

Table E-4
Summary of Whole Unit Reconnaissance Falldown — Control Lake, Lab Bay, Polk Inlet, and CPOW Projects (results in acres)

Project	Unit Pool	Soft Ac. Deferred	%	Hard Ac. Deleted	%	Total	%
Control Lake	13,569	741	5%	1,559	11%	2,300	17%
Lab Bay	6,626	1,750	26%	326	5%	2,076	31%
Polk Inlet	7,798	644	8%	426	5%	1,070	14%
CPOW ¹	9,089	454	5%	818	9%	1,272	14%
Total	37,082	3,589		3,129		6,718	
Weighted Average			10%		8%		18%

1/ Proportion based on whole unit falldown. See following text for details regarding falldown encountered during CPOW project field reconnaissance.

APPENDIX E

Tables E-5 and E-6 display by project area, categories and acres of soft falldown thought to be at moderate to high risk of not being harvested at some point in the future. These figures are used in Chapter 4 of the Final Supplement during the discussion of risk to future harvest on both the CPOW project area and Prince of Wales Island as a whole. Soft falldown that results in postponing harvest until the next project is considered to be not at risk. Soft falldown that is the result of resource protection measures or potential land conveyances is considered to be at some risk. Moderate and high risk soft falldown that occurs during field recon amount to less than 2 percent of the total 10 percent soft falldown.

**Table E-5
Soft Falldown at High Risk of Not Being Harvested**

Project	Recon Area Acres	Concern	Acres	%
Control Lake	13,569	Encumbered	111	0.81
Lab Bay	6,626	State Selected	82	1.20
Polk Inlet	7,798		0	0.00
CPOW	9,089	Caves/Karst	120	0.32
Total	37,082		313	
Weighted Average (rounded to 1%)				0.72

**Table E-6
Soft Falldown at Moderate Risk of Not Being Harvested**

Project	Recon Area Acres	Concern	Acres	%
Control Lake	13,569	Visuals ¹	66	0.49
Lab Bay	6,626	Visuals, Estuary ²	78	1.12
Polk Inlet	7,798	Goshawks ³	22	0.31
CPOW	9,089	Cultural Resource ⁴	35	0.39
Total	37,082		201	
Weighted Average (rounded to 1%)				0.70

- 1/ Attributed entire 66 acres deferred from Lab Bay for visuals to "moderate risk" due to lack of documentation and the two LUD II areas in the project area.
- 2/ Attributed half the 135 acres deferred from Control Lake for visuals to "moderate risk" due to the Honker canoe route in the project area. Attributed entire 10 acres deferred for estuary buffers to "moderate risk".
- 3/ Attributed 10% of the 224 acres deferred for wildlife to goshawk nest buffers.
- 4/ Attributed entire 35 acres deferred for cultural resources to "moderate risk".

CPOW Field Recon Falldown

Based on comments received on the Draft Supplement regarding falldown on the CPOW project during field recon of the project, we examined the data in the database FINLUNIT.DBF. We compared the results with figures submitted in comments on the Draft.

The comments stated that 200 units had been field reviewed, totaling 9,119 acres. Of these, only 189 units were found to be suitable totaling 8,015 acres, leading to the conclusion that this represented a 12 percent falldown that was not accounted for in the Draft Supplement. The source of this information was to be found in the CPOW Planning Record in a database entitled "FINLALTN.DBF."

While we did not find the database "FINLALTN.DBF," we did locate database "FINLUNIT.DBF" which appears to be the database quoted. This database indicates that 199 units (9,089 acres) were field reviewed and 10 units (402 acres) were deleted or deferred from harvest. In addition, 89 units were decreased by a total of 855 acres as a result of field recon. This reduction in acres is approximately 14 percent of the acres intended for field recon, as opposed to 12 percent stated in the comment letter.

The figures in the comment letter do not take into account acre increases in units field reviewed. It is not clear whether the proposed unit increases were the result of including harvest from adjacent identified harvest units or were the result of finding additional suitable acres adjacent to a unit that were thought to be unsuitable prior to field review.

Of the 10 units eliminated (402 acres), 3 units (154 acres) were for significant cave protection or goshawk protection. This is considered soft falldown. Seven units (248 acres) were eliminated for not meeting suitability requirements including regeneration problems, low volume, high percentage of McGilvery soils, and possible fragmentation of stands by stream buffers.

The reasons for eliminating portions of units were not trackable. Many of the units reduced in size were originally shown as having no outstanding resource concerns, were field reviewed and reduced in size, but with no additional status codes indicating whether TTRA buffers, riparian soils, or other concerns were the driving force behind the unit changes. For other units, resource concerns listed may have included adjacency constraints, potential goshawk presence (both soft falldown factors), and potential very high MMI soils (a hard falldown factor) requiring a field review. Adjustments made for each factor, if any, are not discernable.

The proportion of the 402 acres in the 10 units dropped based on field recon is about 9 percent hard falldown and 5 percent soft falldown. Applying this proportion to the entire acreage reduction (1,257 acres) including whole units dropped and units reduced in size results in 818 acres of hard falldown and 454 acres of soft falldown. The acreage does not total exactly as the percentages have been rounded to the nearest whole number.

Conclusion

The 14 percent reduction in the potential unit pool (not considering any unit additions) is not out of line with data gathered during the field recon phase of other major timber projects on Prince of Wales Island. The data from the CPOW project field recon effort should be included with data from the other three projects. A weighted average was developed for a field recon falldown factor applicable to any planned timber project on the CPOW project area as well as Prince of Wales Island.

Appendix F

Response to Comments

Responses to Comments

Appendix F includes the annotated written comments received on the Draft Supplement to the CPOW Environmental Impact Statement and provided Forest Service responses to letters.

Availability of the Draft Supplement was announced in the *Federal Register* on August 11, 1995 with a deadline for public comment of September 25, 1995. Copies were mailed to individuals, organizations and agencies who responded to an inquiry of interest form mailed on April 10, 1995. A press release announcing the availability of the Draft Supplement and comment period was distributed to local newspapers radio and television stations.

Seven individuals, organizations, and agencies submitted written comments on the Draft Supplement.

The substantive comments from the seven letters have been annotated. The Forest Service response to each annotation follows the comment letter. Following is a list of letters received, their corresponding annotation code, and what page the letter begins.

Letter	Code	Page
Alaska Department of Fish and Game	ADFG	F-2
Jerry Jones	JJ	F-5
Ketchikan Pulp Company	KPC	F-11
Sierra Club Legal Defense Fund	SCLDF	F-14
Pete Smith and Valerie White	SW	F-37
William R. Shoaf	WRS	F-39
United States Department of the Interior	USDI	F-55

Comments of the Alaska Department of Fish and Game

TONY KNOWLES, GOVERNOR

DEPARTMENT OF FISH AND GAME

SOUTHEAST REGIONAL OFFICE
HABITAT AND RESTORATION DIVISION

P.O. BOX 240020
DOUGLAS, ALASKA 99824-0020
PHONE: (907) 465-4290

September 25, 1995

Both ✓ Rev ✓
Brad - for Sup
DAVC if Planning

Mr. Robert Vaught
Tongass National Forest
Ketchikan Area
Federal Building
Ketchikan, Alaska 99901

Dear Mr. Vaught

Re: CPOW Draft Supplement to the FEIS

Due to less than adequate staffing levels and other concurrent deadlines for addressing federal timber sales and associated issues, we will not be submitting detailed comments to the CPOW Draft Supplement to the FEIS. However, we concur that harvest projections, falldown, sustainability, and the concerns associated with these issues are very important. The state's review comments on the CPOW DEIS and FEIS expressed concerns for the lack of a sustainable timber harvest within that project area, and discussed the resulting social and biological conflicts with other resources. Please refer to our department's DEIS comments (pages 2-3) of November 25, 1992, and FEIS comments (pages 5-6) of September 8, 1993 regarding these issues within the CPOW planning area. Our concerns at this time remain much the same as they were when we originally commented on these issues.

ADF & G - 1

ADF & G - 2

Additionally, we have similar concerns within adjacent project areas on Prince of Wales and the surrounding islands. For our most recent expression of concerns regarding these issues, please refer to our Lab Bay DEIS comments of September 26, 1995. One shortcoming of the falldown analysis in the Lab Bay DEIS is also applicable to the CPOW Draft Supplement FEIS. This deficiency is that the FS and others recognize that both wildlife and karst do not currently have adequate long-term protection, but neither wildlife viability or sustained yields for hunters, nor karst protection concerns have yet been considered in the calculation of long-term falldown estimates. Consequently, the FS timber harvest calculations currently used to compute "sustainability" are based upon a flawed "best-case" scenario. This results in overly optimistic estimates which fail to explain that other resource values such as wildlife and karst will not be maintained under the

ADF & G - 3

ADF & G - 4

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Comments of the Alaska Department of Fish and Game

ADF & G -4 | falldown estimates presented. This issue needs to be more carefully analyzed not
(cont) | only in the CPOW final supplement to the FEIS, but it should also be thoroughly
discussed in the forthcoming Control Lake DEIS. The CPOW and Control Lake
project areas are very closely connected (they over-lapped in the original scoping
document) and the FS has this opportunity to pro-actively address these issues
within the Control Lake project area.

Thank you for the opportunity to comment.

Sincerely,



Lana Shea
Regional Supervisor

cc: J. Gustafson, H&R, Ketchikan
J. Ferguson, ADEC, Juneau
J. McAllister, ADNR, Juneau
L. Marshall, DGC, Juneau
K. Titus, DWC, Juneau
R. Holmes, SF, Juneau
S. Marshall, CFMD, Juneau

JG/LS/jg

APPENDIX F

Responses to the Alaska Department of Fish and Game

ADFG-1 Alaska Department of Fish and Game (ADF&G) comments on the Central Prince of Wales Draft Environmental Impact Statement (CPOW DEIS) relative to timber harvest pertained to the amount of harvest that occurred prior to the CPOW project, scheduled harvest of an additional 20,000 acres by the end of the Long-term Contract in 2004, and the projected harvest of the remaining 33,000 acres over the last 50 years of the rotation.

These concerns were addressed in the Final EIS for the CPOW project. Planned harvest figures through 2004 and available acres for harvest between 2004 and 2054 were updated in the CPOW Supplement. See response to SCLDF-11.

ADFG-2 ADF&G's comments on the CPOW FEIS regarding "Timber harvest calculations and sustainability," focused on the use of TLMP Draft Revision Alternative P estimate of suitable timber as opposed to those of the CPOW Multi-entry Layout Plan (MELP); the belief that new harvest figures improperly considered harvest of previously designated retention as well as slopes in excess of 75 percent; and the increased volume of the next entry in the CPOW project area from 270 mmbf to 356 mmbf. See Response to SCLDF-1.

These concerns were addressed in the CPOW Final EIS, the CPOW Record of Decision (ROD), the Regional Forester's appeal decision (November 23, 1993), and the review of the Regional Forester's appeal decision issued by the Chief's Appeal Reviewing Officer (February 2, 1994). See response to WRS-4.

ADFG-3 Both wildlife viability and karst and cave protection are concerns for any project being planned. Adjusting allowable sale quantities (ASQs) is addressed through the Forest Plan revision or amendment process. The potential for changes to the available timber supply is addressed in the Supplement. If the ASQ is changed, timber harvest schedules will be changed accordingly. If, based on falldown, future harvest is measurably less than planned by TLMP (1979a) or predicted by the TLMP Draft Revision, the results of lowered harvest levels would be reflected in lesser effects on other resources.

ADFG-4 "Sustainability", in the statutory sense, is not being calculated for the project area as sustainability is not required on project areas. See response to SCLDF-1. We have looked at historic harvest levels as well as programmed harvest over the next ten years, and compared these figures with potential harvest over the remaining 50 years of the rotation (through 2054).

Protection of cave resources is required by the Federal Cave Resources Protection Act of 1988. Complying with this law will mean avoiding harvest of some otherwise suitable forest lands. While this level of protection has not yet been entered into ASQ calculations, this has been addressed as a potential change to the suitable timber base in the CPOW Supplement. Karst and cave resources are the subject of one of the many assessments developed recently as part of the TLMP Revision effort. The Revised Supplement to the Draft EIS for the Tongass Land Management Plan Revision is expected to be issued in December 1995 and a Final EIS is expected in June 1996.

The potential changes to wildlife habitat resulting from implementation of the CPOW project and anticipated harvest through the end of the rotation were documented in the CPOW DEIS and FEIS. Reductions in habitat capability for several important species were documented. While changes in habitat capability do not suggest species will be extirpated from the project area, it is recognized that not all members of the public are satisfied with lowered habitat capabilities for some species. The potential changes to the timber supply that may result from additional habitat protection measures, whether through Habitat Conservation Areas (HCAs) or similar strategies is discussed in the Supplement. Wildlife population viability, goshawks, wolves, and marbled murrelets are also the subjects of assessments developed recently in the TLMP Revision effort and will be addressed in the Revised Supplement to be issued December 1995.

Comments of Jerry Jones

Forest Supervisor
 Region 10, Tongass National Forest
 Federal Building
 Ketchikan AK 99901

Oct. 2, 1995

Dear Forest Supervisor:

I am making the following comments regarding the Central Prince of Wales (CPOW) Draft Supplemental Environmental Impact Statement (the supplement).

- JJ-1 | I did not receive a copy of the draft or a questionnaire regarding a desire to receive one even though I am an original appellant in this case. Therefore I am asking you to accept my comments even though they are past the deadline.
- JJ-2 | The supplement is an invalid way to make sustained yield projections and to calculate allowable sale quantity in the CPOW area for four reasons.
- JJ-3 | The 1979a forest plan could not possibly take into account past and future native land selections on Prince of Wales Island so the areawide allowable sale quantity (ASQ) numbers on the island are necessarily too high.
- JJ-4 | The Forest Service description of weaknesses in the Ireland Group report and the Forest Service review of the Ireland Group report both admit the falldown rates attributed to native selection are not accurate for Prince of Wales Island.
- JJ-5 | Furthermore, the preface to the draft states that in the future, more of the heavy logging will have to occur in the southern part of the island.
- JJ-6 | This statement fails to take into account that Haida Corp. is currently logging the best remaining timber in the southern part of the island in the portage area and that all native lands will be almost 100% clearcut in the near future.
- JJ-7 | The supplement takes great pains to explain that on-the-site examination of units indicated a 14.9 % falldown rate. This figure was then used along with logging transportation systems as the hard falldown rate for the project area.
- JJ-8 | Even though the supplement recognizes that native selections should be included in the hard falldown figure; they are ignored in projecting falldown on the project area.
- JJ-9 | This skipping back and forth using project data to establish falldown rates and regional numbers to justify a higher (ASQ) guarantees that an accurate picture of sustainability will not be given.
- JJ-10 | Another example of using phony numbers and omissions to

Comments of Jerry Jones

- justify the CPOW FEIS is in providing timber employment numbers for various island communities.
- JJ-10
(cont) For example, no timber employment numbers are given for the combined Craig-Klawock community areas even though they are the largest population centers on the island. Yet very specific information is provide for communities more dependent on Ketchikan Pulp Company (KPC) Some people like the majority of the Naukiti Homeowners Assoc. are portrayed as being dependent on KPC when in fact the majority have no relation to the company or its operations.
- JJ-11 Likewise, independent operators in the Thorne Bay area are portrayed as being dependent on KPC for roads and material as if KPC is the only operator on the island capable of building road and logging sizable units.
- JJ-12 There is no discussion of the amount of timber necessary to operate these businesses apart from KPC or the benefits of offering this timber for sale to independent operators.
- JJ-13 Moreover, there is a failure to recognize that most timber jobs on the west side of Prince of Wales are provided by native corporations and no provision is being made by the Forest Service to continue these jobs through an independent sale program once native timber is cut.
- JJ-14 Another omission is the failure to discuss falldown rates as it relates to steeper slopes. Historically, the easier timber was logged first to help offset increased camp and transportation costs.
- JJ-15 The supplement fails to recognize the fact that higher elevations yield more defect in the timber and consequently more falldown. The 1979a forest plan recognizes the low timber yield associated with steeper slopes by not considering timbered areas with slopes steeper than 75%.
- JJ-16 Yet there is no discussion of how increasing the average road grade from 8% in the Multiple-Entry Layout Plan (MELP) to 15% in the regional plan would affect falldown rates.
- JJ-17 The falldown numbers are for units included under the MELP plan and the added acres have not been field verified.
- JJ-18 Finally, the supplement discusses the Lab Bay community as if it still exists. There is a failure to recognize that logging camps are not permanent communities and that the long-term contract is the only justification for their existence. Once the contract is over; these camps will close.
- JJ-19 Therefore these camps should not receive the same consideration as permanent island communities.

Comments of Jerry Jones

JJ-20

Indeed, any discussion of CPOW's effects on community stability should look at the whole employment picture on Prince of Wales and how 10,000 acres of clearcuts will affect future employment opportunities on the island as a whole.

Sincerely,



Jerry Jones

1

APPENDIX F

Responses to Jerry Jones

- JJ-1 On April 10, 1995 over 700 individuals (including the commentor) were mailed a letter from Forest Supervisor David D. Rittenhouse explaining the Supplement to the Environmental Impact Statement (SEIS) process and describing the focus of the analysis. The letter also explained that those wanting to remain on the CPOW mailing list needed to fill out the enclosed self-addressed form and mail it back to the Ketchikan Area. Approximately 85 individuals, organizations, and agencies returned the forms. These who did so remained on the mailing list and were subsequently mailed a Draft Supplement. There is no record that the Agency received a reply from the commentor.
- JJ-2 The Supplement provides additional information regarding falldown that was not included in the CPOW FEIS. Much of the additional information was related to the suitable timber base for both the CPOW project area and Prince of Wales Island. The additional information presented the most accurate and current estimate of suitable timber that could be harvested over the remainder of the rotation (2054).
- Allowable sale quantity (ASQ) is the maximum quantity of timber that may be sold each decade from a National Forest. This quantity, expressed in board feet, is calculated for the Tongass NF using timber utilization standards specified in the Alaska Regional Guide, the number and type of acres available for timber management, and the intensity of timber management. The ASQ was calculated at 4.5 billion board feet per decade for the Tongass NF. The ASQ was not calculated for individual project areas in general, or the CPOW project area in particular.
- JJ-3 As stated above, ASQ is the maximum amount of timber that can be sold each decade, not the amount that necessarily will be sold each decade. While true that the original Tongass Land Management Plan (TLMP 1979 a) did not take into account future land selections on Prince of Wales Island, future forest plan revisions will reflect these land selections as well as other suitable land base changes to better refine the ASQ. Our analysis of the project area takes into account selections and the selection period has now closed.
- JJ-4 The Irland Group Report and the Forest Service Evaluation of the Irland Group Report both identified falldown levels expected to occur to the ASQ as a result of National Forest System (NFS) lands being conveyed to third parties. Both reports identified this falldown level for the Tongass National Forest as a whole, not on a project level basis. The Draft Supplement did not state that falldown rates attributed to native selection are not accurate for Prince of Wales Island. We believe that falldown levels arrived at by both reports are not accurate for individual projects or to the CPOW project in particular.
- JJ-5 The Draft Supplement Stated that to maintain historic or near historic harvest levels on Prince of Wales Island, timber harvest will need to focus more on Southern Prince of Wales Island and less on Northern Prince of Wales.
- JJ-6 The Supplement does not fail to account for conveyed National Forest System lands. The 525,636 acres of scheduled commercial forest land (CFL) for Prince of Wales Island and the 71,666 acres of scheduled CFL for the CPOW project area identified in Table 4-4 of the Draft Supplement do not include conveyed lands. The harvest projections made in this supplement for the remaining scheduled CFL are for National Forest System lands only. See response item JJ-8. The decision to be made regarding the CPOW project will be based on planned and future harvest on NFS lands.
- JJ-7 Since completion of the Draft Supplement, an additional 22 CPOW units were field prepared and released. These units were analyzed for falldown along with the previous 99 CPOW units analyzed for falldown (Draft Supplement Tables A-5 and A-6). The hard falldown changed slightly from 14.9 percent to 14.8 percent and is reflected in Tables A-5 and A-6 of the Final Supplement. The Control Lake Cumulative Effects Analysis LSTA, revised since the Draft

Responses to Jerry Jones

Supplement was released, also changed. The total estimate of potentially suitable timber now exceeds TLMP (1979a) scheduled CFL. For this project area, there is no planning falldown.

- JJ-8 The Supplement does not ignore land selections in projecting future timber harvest potential. The Supplement analyzed all National Forest System lands (including encumbered lands) to determine estimates of suitable timber. Until encumbered lands are conveyed, they are still part of the National Forest System. The Supplement recognizes that encumbered lands are at low to moderate risk of conveyance. Chapter 4 of the Final Supplement displays the effects to the suitable timber base should these lands be conveyed. See response item JJ-6.
- JJ-9 The Supplement interdisciplinary team (IDT) determined that regional falldown levels (The Irland Group Report's 23 percent net rate and The FS Evaluation of The Irland Group Report's 9.6 percent hard falldown rate) were not accurate reflections of expected falldown rates for individual projects in general or the CPOW project in particular. Detailed analysis of the change in acres for CPOW planned and implemented units provide a more realistic picture of expected falldown for this project and future projects implemented on Prince of Wales Island. We included data from The Irland Group Report and the FS Evaluation of The Irland Group Report in the Supplement to ensure all studies completed on falldown (either Tongass-wide or Area-wide) were disclosed and analyzed.
- JJ-10 One of the factors analyzed in the Supplement was potential timber supply on Prince of Wales Island. Timber harvest can have a direct effect on community stability for Prince of Wales Island communities as employment statistics suggest. The CPOW FEIS analyzed community stability and the importance of timber supply for four communities (Thorne Bay, Coffman Cove, Whale Pass, and Naukati). Timber supply is also important to the rest of the island's communities. (Draft Supplement pages 4-9 through 4-11).
- Timber employment number are shown in both Draft and Final Supplements for the communities of Craig and Klawock. Of the 1,637 residents in Craig, 409 are employed in an agriculture, forestry and manufacturing field (Draft Supplement, page 4-11). The community of Klawock has 103 of the 267 employed residents working in timber or timber related fields. Response item JJ-18 discusses the Naukati Homeowners Association.
- JJ-11 The Draft Supplement stated that the Long-term Sale indirectly affects the potential for growth in the new Goose Creek subdivision (Draft Supplement page 4-10). The Supplement recognizes there are other operators on Prince of Wales Island capable of building road and logging large units.
- JJ-12 This was not discussed as it is outside the scope of the Supplement. The purpose for the Supplement is to present additional information on falldown and the implication for future timber supply. Based on that information, the Forest Supervisor will decide to continue the CPOW project in whole or in part or halt it. Halting the project and offering the remaining volume to independent operators is not a consideration.
- JJ-13 We have not included native corporation lands in calculations of the remaining CFL on Prince of Wales Island; these lands are not included in the National Forest System. The USDA Forest Service is committed to the needs of independent operators. The Thorne Bay RD proposes to offer for independent bidders approximately 6 to 18 MMBF on outer islands of western Prince of Wales Island in 1996.
- JJ-14 Appendix A of the Draft Supplement identified 283 acres of suitable timber land deleted for soils/water quality resource concerns. Since the Draft was completed, an additional 3 acres were deleted from the additional 22 units, arriving at 286 acres deleted for soils/water quality.

APPENDIX F

Responses to Jerry Jones

The majority of these 286 deleted acres were for very high mass movement index (MMI) soils. Unit 579-205 was deleted entirely from the Slide/Lava offering and the suitable timber base due to over steepened slopes and numerous water quality streams (Draft Supplement, Appendix A, page 9). Excessively steep slopes and unstable soils are accounted for in MELPs, LSTAs, and during field implementation.

It is true that initial entries were historically implemented on relatively "easy" logging ground to reduce initial roading and camp costs.

JJ-15 The Supplement defines falldown as "...a situation when the amount of timber harvested (expressed in acres or volume) in a project area is less than the planned or projected timber harvest. Acres are the most common unit of measure used in the planning and layout phases of a project." (page 1-3). The IDT recognizes that defect varies between timber stands or given areas. We chose to analyze falldown based on acres because acreage differences are more readily available.

The TLMP (1979a) did not schedule timber harvest on areas of excessively steep slopes or which contained very high MMI soils. The National Forest Management Act (NFMA) regulations define as unsuitable for timber harvest lands where:

"Technology is not available to ensure timber production from the land without irreversible resource damage to soils productivity, or watershed conditions." (36 CFR Part 219.14 (a)(2))

That some of the stands on these unsuitable acres may have higher defect is not a factor in the suitability analysis.

JJ-16 The updated LSTA did not increase the average road grade from 8 percent to 15 percent. The 15 percent grade standard is an upper planning limit that would allow access to more potential suitable timber than would an upper limit of 8 percent.

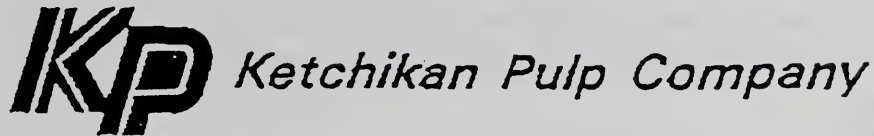
JJ-17 The field implementation falldown levels identified in the Draft and refined for the Final Supplement were based on units identified from the MELP unit pool. This was discussed as a weakness of the CPOW Layout summary on page 3-2 of the Draft Supplement. All acres offered are field verified and laid out. The additional suitable acres identified by the updated LSTA have not been field verified in the CPOW project area.

JJ-18 The Supplement does not discuss Lab Bay as a community that still exists. On page 1-3 of the Draft it was stated that both Naukati and Lab Bay are logging camps. It was further stated that Lab Bay was closed in March 1994 due to KPC completing harvest operations; and that Naukati is a small, unincorporated community with a homeowners association. There has been no attempt to define logging camps as incorporated communities.

JJ-19 See response item JJ-18.

JJ-20 Timber harvest on Prince of Wales Island has an effect on community stability. Similarly, proposed future timber harvest on the Cleveland Peninsula (which has had very limited timber harvest in the past) will provide jobs for timber operators who would commute to job sites while maintaining homes and families in their current communities.

Comments of the Ketchikan Pulp Company



Post Office Box 6600
Ketchikan, Alaska 99901
U.S.A.

TEL 907/225-2151
FAX 907/225-8260

September 25, 1995

Mr. Bradley Powell
Ketchikan Area Forest Supervisor
USDA Forest Service
Tongass National Forest
Federal Building
Ketchikan, Alaska 99901

Re: CPOW Project

Dear Mr. Powell:

KPC-1 | Ketchikan Pulp Company (KPC) urges the Forest Service to continue the implementation of the CPOW project as planned, without further delay.

KPC-2 | We recognize the problem of hard falldown and the problems associated with soft falldown. However, the immediate negative effects of halting the implementation of the CPOW project would have a far greater impact to KPC and the communities dependent on the remaining volume than the potential benefit that may result in the future. The Draft Supplement of the CPOW FEIS states that the future benefit is an average of 1% per year more volume after the year 2004 than the current projected harvest if CPOW is allowed to continue as planned.

KPC-3 | The Draft Supplement of the CPOW FEIS also states the negative effect of halting the implementation of CPOW is an immediate reduction of 10 MMBF average per year from 1995 through the year 2004. The Draft Supplement also states, "...the rest of the CPOW project would have to be rescheduled at a much later date..."; there is no volume currently in the timber pipeline to make up for the loss of the remaining CPOW volume.

KPC-4 | KPC is currently running the pulp mill, but due to the reduced timber inventory caused by late offerings, not meeting KPC's contractual obligation, a lack of pipeline volume and hard and softfall down KPC has been forced to reduce the Ketchikan Sawmill and Annette Sawmill to one shift each. A further reduction in volume would substantially

OPERATING DIVISIONS

WARD COVE PULP MILL
THORNE BAY LOG

KETCHIKAN SAWMILL
TUXEKAN LOG
NAUKATI LOG

ANNETTE HEMLOCK SAWMILL
EL CAPITAN LOG

TL510.A95

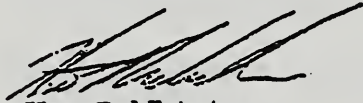
Comments of the Ketchikan Pulp Company

Mr. Bradley Powell
September 25, 1995
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compound the problem.

- KPC-5** | KPC does not want the continued implementation of CPOW halted. KPC urges the Forest Service to continue the implementation of CPOW immediately.
- KPC-6** | We have some suggestions to reduce hard falldown and we will address them in future correspondence, as we have detailed them in the past.

Sincerely,



Kent P. Nicholson
Contract Manager

KPN:ak

cc: R. D. Lewis
O. J. Graham
A. T. Reinhart
Rep. Bill Williams
Sen. Robin Taylor
Rep. Jerry Mackie
Alaska Congressional Delegation

Responses to the Ketchikan Pulp Company

- KPC-1 Offerings to KPC from the CPOW project have proceeded as planned. The volume planned for offering in FY-96 and beyond is the subject of the analysis presented in the Supplement to the CPOW EIS.
- KPC-2 Comment regarding immediate negative effects of halting implementation of the CPOW project is noted. If the CPOW project were to be halted and the volume rescheduled for harvest after the end of the Long-term Contract in 2004, the project area could average an 8 percent higher average annual harvest from 2004-2054 (36 mmbf versus 33 mmbf) than if the project were completed as planned. Considering timber harvest on Prince of Wales Island as a whole, the difference in potential average annual harvest from 2004-2054 is less than 1 percent.
- KPC-3 The effects of halting implementation of the CPOW project on planned volume to be offered from the project area during the ten years between now and 2004 is recognized and displayed in Chapter 4. Halting the project would result in a reduced average annual harvest of approximately 8 MMBF through year 2004.
- KPC-4 It is recognized that halting implementation of the CPOW project would reduce projected timber volumes offered over the next ten years. The effects of this occurring is analyzed and displayed in Chapter 4 of the Final Supplement.
- KPC-5 Comment noted.
- KPC-6 We are never going to eliminate hard falldown. The increased emphasis on field verification of unit pools should help reduce hard falldown encountered during project implementation by shifting the identification of these areas to the planning and reconnaissance phase of each project.

Comments of the Sierra Club Legal Defense Fund



Sunset, Mt. McKinley

Ansel Adams

SIERRA CLUB LEGAL DEFENSE FUND, INC.

The Law Firm for the Environmental Movement

325 4th Street Juneau, Alaska 99801 (907) 586-2751 FAX (907) 463-5891

September 25, 1995

Forest Supervisor
Ketchikan Area, Tongass National Forest
Federal Building
Ketchikan, AK 99901

Re: Comments on Central Prince of Wales Draft Supplemental Environmental Impact Statement.

Dear Forest Supervisor:

The Sierra Club Legal Defense Fund, Inc., submits these comments concerning the Central Prince of Wales ("CPOW") Draft Supplemental Environmental Impact Statement (hereinafter "the Supplement") on behalf of Southeast Alaska Conservation Council, Tongass Conservation Society, Prince of Wales Conservation League, and The Wilderness Society.

Under the National Environmental Policy Act ("NEPA"), environmental impact statements must contain a reasonably thorough discussion of the environmental consequences of the proposed action. Seattle Audubon Society v. Espy, 998 F.2d 699, 703 (9th Cir. 1993). To provide this "full and fair discussion" of environmental impacts, 40 C.F.R. § 1502.1, the EIS must make the relevant evidence available to all concerned and give a reasoned analysis of that evidence. Friends of Endangered Species, Inc. v. Jantzen, 760 F.2d 979, 989 (9th Cir. 1985). The goal is informed decisionmaking and public participation. Idaho Conservation League v. Mumma, 956 F.2d 1508, 1519 (9th Cir. 1992).

SCLDF - 1

The principal failing of the Supplement is that it does not squarely address the ultimate consequence of falldown: logging under the Ketchikan Pulp contract cannot be sustained over the 100-year rotation. This means that too much forest is being cut in too short a period, impairing the future of the Project Area and concentrating the damage to wildlife and other non-timber resources.

SCLDF - 2

Reasoned analysis of the evidence concerning falldown leads inevitably to the conclusion that levels of current and past logging in the Project Area cannot be sustained. The multitude of numbers contained in the Supplement all compute to this: once falldown is considered together with realistic estimates of remaining unlogged acres truly available in the



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SCLDF - 2
(cont) Project Area, far less forest remains for the second half of the rotation than has been cut in the first half pursuant to the Ketchikan Pulp contract. This critical issue, which gave rise to the primary claim brought by these plaintiffs, is obscured by the Supplement's barrage of data and unfocused analysis.

I. THE SUPPLEMENT LACKS A REASONED ANALYSIS OF WHETHER LOGGING PURSUANT TO THE KETCHIKAN PULP CONTRACT IS SUSTAINABLE IN THE CPOW PROJECT AREA.

SCLDF - 3 The Supplement discloses a welter of data which is further tangled by unhelpful analysis. Instead, the Supplement should discuss the history and context of the falldown controversy, explain the accumulated evidence and studies proving a vastly reduced forest base than previously disclosed, highlight the conflicting treatment of falldown in the CPOW Draft and Final EISs, and address the controversy by providing an accurate understanding of how much forest has been cut versus how much remains for the future.

A. The Supplement Contains No Discussion of Long-standing Agency Concerns About Falldown's Impacts on Sustainability.

SCLDF - 4 The first attempt to understand the implications of falldown in the Ketchikan Area was the Under-run Option Development Task Force Report dated January 31, 1992 (attached as Exhibit 1). This Task Force Report raised the central issue of whether an accurate assessment of the forest base would indicate that logging under the Ketchikan Pulp contract is unsustainable, yet neither the Report nor this issue is addressed directly in the Supplement.

SCLDF - 5 According to the Task Force Report, a scientific approach to a sustained yield analysis, including a site-specific determination of the forest remaining, likely would show that the contractual volume of logging was unsustainable and would thereby "reduce KPC's (and the public's) expectations for wood from National Forest Lands." Report, p. 22. Understanding how much forest has been cut and how much remains for the future, which is the purpose of this Supplement for the CPOW Project Area, should lead to logging that "would be more easily attainable and sustainable" and "management on a sustainable basis." pp. 22-23.

SCLDF - 6 The Task Force characterized this approach as "probably the only long-term solution to the find the wood game." p. 22. The Report also recognized that an honest, scientific evaluation of sustainable logging might risk a lawsuit from Ketchikan Pulp and "heat from local politicians and KPC to drive the economy over the short term." p. 23.

SCLDF - 7 This Task Force Report was buttressed by the Irland Report. As disclosed in the Supplement, Irland's forest-wide study recommended a falldown reduction of at least 25% from planned logging volumes. Undisclosed in the Supplement are Irland's assessments that

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SCLDF - 7 (cont) current logging unsustainably "borrows...cut potential from the future" and that "it will be necessary in the long run to reduce the planned ASQs." Irland Report, pp. 46-47.

The concerns expressed in the Task Force Report and Irland Report received further validation in a letter from Dr. K. Norman Johnson, inventor of the computer program used by the Forest Service to calculate a sustainable sale quantity. Dr. Johnson wrote:

SCLDF - 8 Eventually; the effects of unrealistic timber targets become visible, if not this year or the next year, then the next decade. When they do, the harvest levels drop precipitously as the land is given time to recover. Then, as in the Pacific Northwest, we all wonder why we did not realize this problem when there was time to correct it.

Letter from Dr. K. Norman Johnson to William R. Shoaf, September 17, 1994 (attached as Exhibit 2).

B. The Supplement Fails to Articulate and Resolve the Conflicting Findings of the Draft and Final CPOW EISs.

SCLDF - 9 Following the 1992 Task Force Recommendation, the CPOW Multi-Entry Layout Plan (MELP) was the first scientific, site-specific study of the remaining forest in the Project Area which is truly available for logging. Based on the MELP, the CPOW Draft EIS stated that past and present logging were unsustainable in the Project Area.

SCLDF - 10 According to the Draft EIS, only 53,101 acres remained in the Project Area for potential logging through 2054, in contrast to 81,709 acres that were logged in the CPOW Project Area from 1954-1993. p. 3-103. This high-volume logging over the past 39 years averaged 2095 acres per year. p. 2-31. If each acre averaged 30 MMBF, the average annual cut had been about 63 MMBF. Id.

SCLDF - 11 The Draft EIS gave two further perspectives that illustrated how much of the potential forest for the future would be logged by completion of the Ketchikan Pulp contract in 2004. First, it showed that the past logging, when combined with the CPOW sale and another sale planned for 1999, would result in 75% of the available forest acreage having been logged by 2004, leaving only 25% of the available acreage for the next 50 years of the planned 100-year rotation. p. 3-103 and Table 3-39.¹ Second, it showed that the average cut on this available acreage for the years 2004-2054 would be only 659 acres per year (16-20 MMBF year, depending on the per acre volume); a dramatic drop from the past cut of over 2000 acres per

¹ Adding 81,709 acres logged to the 53,101 available acres identified by the MELP resulted in a total Project Area timber base of 134,810 acres. The CPOW sale and the sale planned for 1999 together would log about 20,100 acres, for a total acreage cut through 2004 of 101,809, or 75.5% of the 134,810 total available in the Project Area.

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SCLDF-11
(cont) year. p. 3-104 and Table 3-40.² Given probable future increases in protection for fish, wildlife, subsistence, and karst, the likely future cut from the Project Area was even lower, perhaps only 10 MMBF per year. *Id.*

In commendably straightforward language, the Draft EIS disclosed one of numerous consequences of this future absence of forest because of unsustainable logging under the Ketchikan Pulp contract:

SCLDF-12 Following completion of the long-term contract in 2004, there will not be sufficient volume remaining in the Project Area to sustain employment at current or historic levels. The result may be a significant disruption in local communities and logging camps within the Project Area...

p. 2-32 (emphasis added).

SCLDF-13 In contrast, the Final EIS swept the problem under the rug by substituting acreage predictions from Alternative P from the 1991 Draft TLMP Revision in place of the site-specific results from the CPOW MELP. Alternative P scheduled 114,016 acres from the Project Area, in contrast to the MELP's conclusion that only 50,288 acres truly were available.³

SCLDF-14 Using the much higher acreage prediction from Alternative P, the Final EIS asserted that only 51% of the available acres in the CPOW Project Area will have been logged through completion of the long-term contract in the year 2004. pp. 3-140, 141, 143; Tables 3-55 and 3-57. Further tables showed that the future annual cut from the Project Area during the years 2004-2054 would average about 2000 acres per year, only slightly less than the historical

SCLDF-11 ² 53,101 available acres identified by the MELP less 20,128 acres to be cut in CPOW and the 1999 timber sale leaves 32,973 remaining acres for the period 2004-2054. 32,973 divided by 50 years yields 659 acres per year.

SCLDF-13 ³ The Final EIS updated the CPOW MELP, the calculation of acres logged in the past, and the size of the timber sale scheduled in 1999, leading to slightly different numbers. The Final EIS stated that the MELP showed 50,288 available acres in the Project Area, in contrast to the 53,101 disclosed in the Draft EIS. The Final EIS calculated that past logging in the Project Area totaled 78,526 acres, slightly less than the 81,709 stated in the Draft EIS. Final EIS, p. 110. The Final EIS disclosed the 1999 timber sale was scheduled at 356 MMBF, or 12,478 acres, in contrast to the 270 MMBF and 10,000 acres stated in the Draft EIS. Final EIS, pp. 3-140, 3-141.

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average. pp. 3-332-335. Based on these inflated estimates, the Final EIS falsely assured the public that

SCLDF - 14
(cont)

Following completion of the Long-Term Contract in 2004;...there will be sufficient volume remaining in the Project Area to sustain employment at current or historic levels. This indicates that local timber-dependent communities and logging camps within the Project Area can depend on a steady, sustainable timber supply through the end of the first rotation. [2054].

p. 2-42 (emphasis added).

SCLDF - 15

The focus of the Supplement should be to resolve this discrepancy between the Draft and Final EISs by informing the public whether logging under the Ketchikan Pulp contract is sustainable in the CPOW Project Area and, perhaps, for a larger area such as Prince of Wales Island. The inevitable conclusion from the studies disclosed in the Supplement is that Ketchikan Pulp logging is not sustainable, and the only open issue is exactly how bad the situation is. The Supplement neither states this conclusion plainly nor provides an understandable analysis of the issue.

C. The Studies and Analyses Disclosed In the Supplement Prove That Logging Under the Ketchikan Pulp Contract Is Unsustainable In the CPOW Project Area and, Generally, on Prince Of Wales Island.

The most important numbers *contained in the Supplement* are summarized in the following table:

SCLDF - 16

Table A	
Estimated Available Acreage Remaining in the CPOW Project Area	
Control Lake Analysis	71,410 acres
CPOW MELP	50,288 acres

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The most important number *missing from the Supplement* is calculated in the following table:

Past Logging in CPOW Project Area	78,526 acres
Current Planned Logging in CPOW Project	10,128 acres
1999-2004 Planned Logging in CPOW Project Area	<u>12,478 acres</u>
TOTAL PROJECTED ACRES LOGGED BY 2004	101,132 acres

SCLDF - 16
(cont)

Straightforward examination of this basic information shows that Ketchikan Pulp logging in the Project Area is grossly unsustainable even before falldown is factored in. As shown in Table B, the logging planned in the CPOW sale and the 1999-2004 sale will total 22,606 acres.⁴ Subtracting this amount from the highest estimate of remaining acres available in the Project shown in Table A (71,410 acres), leaves only 48,804 acres remaining at the close of 2004, in contrast to the 101,132 acres logged by that date.

SCLDF - 17

In a 100 year sustainable rotation, after 50 years, 50% of the available timber should be left. However, the above tables illustrate clearly that, even using the highest available acreage estimate *and without discount for falldown*, by year 50 of the Project Area rotation (2005), 101,132 acres, or two thirds (67%) of the available acres in the Project Area already will have been logged, leaving only 48,804 acres, or one third (33%) for the future.

SCLDF - 16

⁴The acreage to be logged in the CPOW sale and the planned 1999 sale is not discounted for falldown because the volume requirements of the Ketchikan Pulp contract are constant. Thus, while substantial falldown surely will occur, the Forest Service asserts that the total stated acreage must be cut from somewhere in the Project Area to supply the contractually-scheduled volume. Final EIS, Appendix A.

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Table C reflects data from the Supplement showing that, because of falldown, even fewer acres will be available than predicted by either the Control Lake Analysis or the CPOW MELP:

SCLDF - 18

Table C	
Likely Falldown Reductions From Estimated Available Acreage	
Actual CPOW Implementation	25% (15% "hard"; 10% "soft")
Iriand Report	25%, minimum
USFS Evaluation of Iriand	26% (5% "hard"; 21% "soft")

SCLDF - 19

Despite the obvious convergence of these three estimates around 25%, the Supplement identifies 15% as the likeliest estimate of falldown. Applying this reduction to the estimate of available timber from the Control Lake Analysis leaves 60,698 acres available before the CPOW sale.⁵ Subtraction of the 22,606 acres scheduled for CPOW and the 1999 sale leaves only 38,092 acres remaining for the years 2005-2054.

SCLDF - 20

Therefore, the best case for the future of the CPOW Project Area (using the highest estimate of available acreage and the lowest estimate of falldown) is that, if the CPOW sale and the 1999 sale go forward, 73% of the available acreage will have been logged by the year 2004, leaving only 27% remaining for the next 50 years.⁶

SCLDF - 21

The 38,092 remaining acres available in 2004 averages to only 762 acres per year over the second fifty years in the rotation, in comparison to the 1954-2004 average of over 2000 acres per year. And this is the best case scenario!

SCLDF - 22

Future falldown is likely to be even greater than the 25% experienced so far in CPOW because these CPOW units were designed to be of "low risk, non-difficult operability." Supplement, p. 3-3. As future projects move into units with higher risk and more difficult operability, greater falldown is likely. Also, whether considered falldown or outright reductions in the timber base, less acreage probably will be available in the future because of (1) greater protection of streams and watersheds, as called for in the USFS 1995 Anadromous Fish Habitat Assessment, (2) greater protection for subsistence uses, as the Revised TLMP

SCLDF - 19

⁵ 71,410 acres minus (.15)(71,410) equals 60,698 acres.

SCLDF - 20

⁶ 78,526 past acres logged plus 60,698 available acres totals 139,224 acres available over the 100-year rotation. 101,132 total acres logged by the year 2004 is 73% of 139,224.

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SCLDF - 22 | must comply with Section 810 of ANILCA, (3) greater protection to assure the viability of
(cont) | old-growth dependent wildlife, and (4) greater protection of karst resources.

SCLDF - 23 | If the actual acreage available is less than the estimate from the Control Lake Analysis,
| or if falldown averages more than 15%, or if additional acreage is not available for
| clearcutting because of necessary protections for fish, wildlife, subsistence, or karst, then the
| future timber availability only becomes more dismal.⁷ In any event, even the best-case data
| demonstrates that tomorrow's forest has been cut and is being cut to satisfy the high-volume
| appetite of the Ketchikan Pulp contract.

SCLDF - 24 | The same analysis leads to similar conclusions for the entirety of Prince of Wales
| Island. We hesitate to attach too much weight to the Island-wide figures in the Supplement
| because site-specific evaluations of actual timber availability, such as the CPOW MELP and,
| perhaps, the Control Lake Analysis, have not been performed on Prince of Wales. We believe
| that, as more information is gathered, the likely future cut will drop lower than the projections
| in the Supplement.

SCLDF - 25 | According to Figure 4-3 of the Supplement, between 1960 and 1990, logging on Prince
| of Wales Island averaged 154 MMBF per year. The only circumstance under which that
| average, or anything close to it, can be maintained from 2004 to 2054 is if the acreage
| scheduled under the 1979 TLMP is accurate, Supplement p. 4-4, which it plainly is not. See
| infra Section II.b. Considering timber production only, the best case for the future of POW
| Island given in the Supplement "could be as much as" about 136 MMBF per year. pp. 4-13,
| 4-14. Other, more likely falldown scenarios outlined in the Draft EIS show future timber
| availability between 105 MMBF and 117 MMBF per year, possibly going as low as 88 MMBF
| per year, all substantially less than the average cut during the first half of the rotation.
| pp. 4-4, 4-5, 4-6, 4-18.

SCLDF - 26 | By all available measures, logging at current or planned Ketchikan Pulp contract levels
| is unsustainable. Better information only will help to define exactly how unsustainable this
| logging is, without changing this critical conclusion.

SCLDF - 27 | The touchstone of NEPA is to ensure informed decisionmaking and public
| participation. California v. Block, 690 F.2d 753, 757 (9th Cir. 1982). The CPOW
| Supplement does not meet this standard because it fails to state explicitly what is obscured in
| its hodgepodge of numbers: that logging pursuant to the Ketchikan Pulp contract is not

SCLDF - 23 | ⁷ For example, if the Control Lake Analysis estimate is used along with a 25% falldown
| estimate, the total Project Area timber base is 132,084 acres, and the percentage to be logged
| by 2004 is 76.6% (101,132/132,084). If the CPOW MELP is used, combined with a 15%
| falldown estimate, the total Project Area timber base is 121,271, and the percentage to be
| logged by 2004 is 83%.

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SCLDF - 27 | sustainable in the CPOW Project Area and appears to be unsustainable on Prince of Wales
(cont) | Island.

II. THE SUPPLEMENT OMITTS FURTHER SIGNIFICANT CONCLUSIONS AND EXPLANATIONS, RENDERING IT CONFUSING AND MISLEADING.

The Supplement contains numerous instances of inadequate or faulty analysis leading to questionable conclusions. The most notable inadequacies are outlined below.

SCLDF - 28 | A. The Supplement Proves That Alternative P From the 1991 Draft TLMP Revision Is Totally Unrealistic. But Never States This Plainly Or Explains The Exaggeration:

SCLDF - 29 | Alternative P from the 1991 Draft TLMP Revision scheduled 114,096 acres for logging in the CPOW Project Area from 1991 to 2054. This scheduled acreage is totally unrealistic in light of the Control Lake Analysis (71,410 acres actually available), the CPOW MELP (50,288 acres actually available) and the falldown that will reduce available acreage even further.

SCLDF - 30 | If the rest of the acreage scheduled under Alternative P is as wildly exaggerated as its schedule for the CPOW Project Area, then the ASQ under Alternative P vastly overestimates what truly is available from the forest. Thus, it is senseless and misleading to assert that it is "not appropriate" to compare Alternative P to the more accurate estimates of available acreage disclosed in the Supplement. Supplement, p. vi. The great discrepancy between Alternative P and more realistic evaluations of available forest demands further explanation.

SCLDF - 31 | Moreover, if Alternative P is no more "planned" than any other alternative, why were both the Draft and Final EISs tied to Alternative P, and why did the Control Lake Analysis use standards and guidelines from Alternative P?

SCLDF - 32 | Since the Alaska Congressional delegation is trying to impose Alternative P as the new forest plan, a more extensive discussion of the apparent gross errors and overestimates in Alternative P could not be more timely and appropriate to the debate over the future of the Tongass.

B. The Supplement Reverts to Timber Schedules and Estimates from the 1979 TLMP Without Considering Whether These Outdated Schedules Still Are Accurate.

SCLDF - 33 | The Supplement jettisons Alternative P and substitutes schedules from the 1979 TLMP. Supplement, p. vi. The Supplement does not mention, much less discuss, a great deal that has changed since the 1979 TLMP, rendering its schedules a wholly inaccurate basis for analysis.

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SCLDF - 34

The 1979 TLMP did not prohibit highgrading, did not consider impacts to subsistence as now required by ANILCA, did not contain a defensible wildlife viability strategy as now required under the NFMA, did not have a karst protection strategy, and did not consider the need for greater stream and watershed protection as called for in the 1995 Anadromous Fish Habitat Assessment. The Supplement does not consider or explain whether the 1979 TLMP schedules remain even close to accurate in light of these factors; it shifts its analysis from Alternative P to the 1979 TLMP without recognizing or reconciling the many additional legal constraints that will reduce the acres and volumes scheduled under the 1979 plan.

SCLDF - 35

The ASQ from the 1979 TLMP certainly is overstated because that Plan does not reflect any of these current considerations. Since the available and scheduled acreage under a legally sufficient TLMP Revision is likely to be less than the acreage scheduled under the 1979 TLMP, the future sustainability problem correspondingly is worse than is reflected in the Supplement.

C. The Shift From Solely a Project Area Analysis in the Draft and Final EISs to an Island-Wide Analysis in the Supplement is Inadequately Supported.

SCLDF - 36

As outlined above, the Draft and Final EISs focused on whether logging in the Project Area was sustainable, with some consideration given to other Project Areas on North Prince of Wales, such as Lab Bay. In an implicit recognition of the severely unsustainable logging in the CPOW Project Area, the Supplement attempts to shift the focus to the entirety of Prince of Wales Island, making entirely new claims that "community stability is linked to levels of timber harvest on the island" and that small communities in the Project Area "have developed...based in large part on historic timber harvest on the island as a whole." Supplement, p. 4-9.

SCLDF - 37

The Supplement provides no data or analysis to support these claims, rendering them a transparent attempt to cloud the fact that the future forest of this specific Project Area is being cut now to satisfy the KPC contract. In truth, all of north Prince of Wales Island appears to be headed for future forest shortages; the Draft EIS for the Lab Bay timber sale states that Ketchikan Pulp logging is unsustainable in that Project Area as well. Lab Bay Draft EIS, pp. 2-9 to 2-14; see also p. 3-128 (there will be a decrease in future timber available to north POW). NEPA requires an honest and complete discussion of what this unsustainable logging on North Prince of Wales means to the future of the small communities, small timber operators, and wildlife and other natural resources, rather than the Supplement's bland, conclusory, and unsupported assurances. Seattle Audubon Society v. Moseley, 798 F. Supp. 1473, 1479 (W.D. Wash 1992).

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D. The Draft Supplement Errs in Its Assumptions About and Treatment of "Soft" Falldown.

The Supplement commits several errors in its treatment of so-called "soft" falldown, which the Supplement defines as deferral of logging on suitable forest land. p. 1-4.

SCLDF - 38

First; this broad definition seems to include not only economic falldown, as discussed in the Supplement, but also deferrals to protect fisheries, wildlife, and karst. If so, it is illogical to assume that all of these acres will be cut at some point in the future because protection for these resources is likely to get more strict, not less. Accordingly, the reasonable assumption is to treat these deferrals as "hard" falldown.

Second, the Supplement mistakenly reduces "soft" falldown by subtracting acres added to the logging units. Acres added to logging units do not reduce falldown. Rather, these acres are part of the truly available timber base that, once logged, are unavailable for at least the 100-year rotation. It is false and misleading to imply that falldown is reduced because other acres are substituted.

SCLDF - 39

Third, the expectation that timber prices will rise in the future, without discussion of the range of factors affecting timber economics and concrete evidence concerning these multiple factors, does not justify an assumption that all economic falldown will be logged in the future. The evidence in fact supports an opposite assumption—economic falldown has continued despite great swings in timber prices and such falldown will likely continue. For example, logging costs also have increased regularly. If costs continue to rise, economic falldown probably will remain at least as significant as at present.

SCLDF - 40

For all of these reasons, so-called "soft" falldown should be counted as reducing available acreage.

SCLDF - 41

E. The Supplement Fails to Disclose the Timber Sale Scheduled for 1999 and Fails to Compare Logging Under the Ketchikan Pulp Contract to the Forest Remaining for 2004-2054.

The Draft and Final EISs disclosed a very large timber sale scheduled for 1999 and considered the impact of this sale; as well as the CPOW timber sale, in evaluating the amount of forest that will remain in the Project Area for the second half of the rotation (2004-2054), after the expiration of the Ketchikan Pulp contract. Draft EIS, p.3-102; Final EIS, p. 3-140. The Supplement fails to address or consider this sale and, in general, fails to compare future forest availability to the high volume consumed by 2004 pursuant to the Ketchikan Pulp contract.

SCLDF - 42

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SCLDF - 43 Thus, the Supplement's assertions about the number of "CPOW-sized projects" potentially remaining in the Project Area, Supplement pp. 3-9, 4-3, are meaningless because the public is not clearly informed (1) that several of these potential projects will occur before 2004; and (2) that logging through the expiration of the contract in 2004 will have exhausted most of the available forest in the Project Area. For assessing sustainability, the future potential forest availability must be directly compared to the forest already logged and planned to be logged under the Ketchikan Pulp contract.

F. "Fallup" Is Insignificant and Misleading.

SCLDF - 44 The Supplement introduces the concept of "fallup," defined as logging more acres than planned, and misleads the public by leaving the impression that fallup might offset falldown. Examples of "fallup," such as available acres misclassified as unavailable, have proven to be so rare as to be insignificant. Moreover, since falldown measures the difference between planned acres and acres that actually can be cut, any fortuitous additions to planned acres are reflected in the overall falldown measurement, rendering "fallup" a meaningless concept. The discussions of "fallup" should be eliminated.

CONCLUSION

SCLDF - 45 The Supplement discloses much useful data concerning falldown, but fails to provide complete information or meaningful analysis leading to the critical conclusion — that timber sales under the Ketchikan Pulp contract have logged most of the forest in the Project Area, leaving relatively little forest for the future, whether for logging or other purposes.

SCLDF - 46 Once the unsustainable use of the CPOW Project Area is acknowledged, the only reasonable long-term decision is to halt or, at least, reduce the CPOW timber sale. A sustainable future for the area, its people, and its communities already is impaired. Proceeding as planned pursuant to the Ketchikan Pulp contract will heighten the unsustainable cut and hasten the day when the forest is exhausted.

We request that the Forest Service modify the Final Supplemental EIS to address and incorporate the points raised in these comments and modify the Record of Decision to stop or reduce the CPOW timber sale.

SIERRA CLUB LEGAL DEFENSE FUND, INC.

BY: Douglas A. Ruley
Douglas A. Ruley

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SCLDF-1 This comment identifies the wrong issue. The issue addressed by this Supplement is how much suitable timber remains for harvest on the project area and the allocation of harvest over the next decade compared with potential harvest in future decades. The question to be answered is: can planned harvest levels on the CPOW project area over the next decade (including the remainder of the CPOW project) be maintained in future decades based on estimates of suitable timber remaining including falldown factors?

There is no assurance of an even flow of timber from any given project area for each year or each decade. Initial entries into areas have traditionally harvested proportionally more timber and more easily accessible timber than later entries. This is done to offset high initial roading and logging camp costs (Alaska Regional Guide, p. 2-48). Future entries would have proportionately lower harvest volumes. There are project areas on the Ketchikan Area, such as the Cleveland Peninsula, that have experienced little to no harvest to this point. Substantially less than 50 percent of the suitable timber has been harvested in the first 50 years of the timber rotation.

The contention that logging under the KPC contract is unsustainable is a conclusion that cannot be reached based on the analysis of timber supply on one project area. Sustainability is a legal requirement that applies to a National Forest rather than a project area. Whether or not Long-term Contract commitments can be met on the Tongass National Forest and how much suitable timber will remain for harvest on the Tongass and the Ketchikan Area beyond the end of the contract in the year 2004 is beyond the scope of this Supplement.

SCLDF-2 See response to SCLDF-1. That potential harvest of timber in the CPOW project area may be lower than has occurred historically has been documented and discussed in the Supplement. This is not relevant to the decision to be made. The decision to be made is how much of the CPOW project should be re-allocated to harvest in future decades based on what is planned for harvest in the next ten years as compared with potential harvest in the decades beyond.

SCLDF-3 See response to SCLDF-1. Several estimates of suitable timber supply were discussed in the Draft Supplement including the CPOW MELP, the Control Lake Cumulative Effects Analysis, The Irland Group Report, and the Forest Service Response to the Irland Group Report. Several estimates of falldown that occur during project implementation were documented and discussed. Those included implementation falldown that has been documented during the implementation of the CPOW project (since updated with the addition of 22 units), as estimated by the Irland Group, and as estimated by the Forest Service Response to the Irland Group Report. In addition, falldown that may occur during field recon has been documented and discussed in relation to the CPOW project and other projects on Prince of Wales Island. The Supplement has accurately portrayed how much timber has been cut in the past and how much may be harvested in the future. Potential timber harvest projections are based on the Agency's best assessment of falldown and suitable timber estimates but possible scenarios based on other viewpoints are also documented and disclosed.

SCLDF-4 The Under-run Option Development Task Force was charged with the task of developing options for dealing with under-run (falldown) of approximately 4,000 acres in the 89-94 Operating Period offerings. This team of three people had two weeks to complete the project, was not charged with determining the acres available under each option, nor was it charged to describe legal implications of each option developed. The Task Force was not directed to develop options for sustainable yield analysis. The report was never adopted by the Agency nor were any of the recommendations adopted as official policy.

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The draft report did not provide an in-depth look at falldown. This report alluded to an under-run (falldown) of approximately 4,000 acres on the 1989-94 Operating Period for the Long-term Sale EIS (89-94). The 89-94 EIS cleared for harvest over 28,000 acres. Falldown (nowhere does this draft report discuss whether the 4,000 acres is hard or soft falldown) of 4,000 acres amounts to slightly more than 14 percent. The Draft Under-Run Report itself suggests that suitable timber was deleted from harvest units at the request of KPC, where helicopter logging was not considered as an option, where it was unclear whether or not commercial volume was present, and where misinterpretation of standards and guidelines may have occurred because of time constraints (page 6 of the report). If that remaining falldown was considered as hard falldown (i.e. unsuitable for harvest), the falldown rate for the project would have been slightly under 11 percent. This represents a lower implementation falldown rate than experienced in implementation of the CPOW project.

SCLDF-5 It appears that the Task Force was alluding to potential timber yield on the area covered by the 89-94 Long-term Sale Offering and perhaps the Primary Sale Area. In the same paragraph quoted in the comment, the Report indicates uncertainty about the findings of such a scientific approach by stating that "(i)f the results indicate entries on Cleveland Peninsula, South Revilla, and other Islands (sic) are necessary to meet sustained yield... the public should be informed soon." The implication is that, whatever problems the Task Force identified on the 89-94 Long-term Sale operating area, sustained yield could be met on the Ketchikan Area by harvesting timber in other locations on the Area.

The Ketchikan Area is working to develop "an accurate assessment of the timber base" with the Control Lake Cumulative Effects Analysis. This report, nearing finalization, will provide an in-depth, comprehensive summary of suitable timber in project areas identified by the ten year sale plan on the Ketchikan Area. Much of this report will be the result of compiling site-specific field reconnaissance for on-going project EISs, intensive aerial photo reviews, and updated soils and streams information. The CPOW Supplement uses only a portion of the data from that analysis to assess potential future harvest on the CPOW project area and on Prince of Wales Island as related to community stability.

SCLDF-6 See response to SCLDF-5. The Task Force Report contained a number of opinions regarding potential legal implications. The Task Force was directed to develop options for dealing with a perceived falldown of 4,000 acres on the 89-94 Operating Period Offering Area, not to develop options for determining sustained yield on the Ketchikan Area, nor to speculate on what the Task Force would consider an appropriate future harvest level for either the 89-94 Offering or the Ketchikan Area.

SCLDF-7 What is lacking from the quotes of The Irland Report are statements such as the following: "There is no need for haste in making a decision to reduce ASQ's...," (page 47) and "(w)e are unable to see what material harm will come from maintaining present harvest levels for 5-10 more years (but looking beyond the year 2000 is more problematic). Further, the forest needs to bolster the current timber supply significantly, which will require a major effort to offer higher volumes until 1996. This is true no matter what long-term ASQ is recommended," (page 48).

It is recognized that future harvest levels on the CPOW project area, as well as on Prince of Wales (POW) as a whole, may be lower than historic harvest. ASQ changes are made through Forest Plan revisions or amendments, not project specific environmental documents.

The issue to be resolved in this Supplement to the CPOW FEIS and subsequent Record of Decision for the Supplement, is whether or not to continue the CPOW timber project based on

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planned harvest in the next ten years as compared with potential timber harvest levels in the decades beyond.

- SCLDF-8 Dr. Johnson also states that sustainable harvest level is a forest planning issue rather than a project issue. He also qualifies his statement in assuming the MELP analysis is reasonably accurate. The MELP did not represent an exhaustive search for and delineation of all suitable timber lands in the project area. The MELP identified low risk harvest units for the CPOW project to consider. Additional studies are being completed which will provide more accurate depictions of suitable timber without ignoring suitable timber thought to be at risk.
- SCLDF-9 The Under-run Option Development Task Force did not recommend any of the options covered in its report. The CPOW MELP did not constitute the "first scientific, site-specific study of the remaining forest in the Project Area which is truly available for logging." There were MELPs or LSTAs performed for other operating period EISs that included the CPOW project area. For example, the 89-94 LSTA that preceded the 89-94 Operating Period EIS identified approximately 56,000 acres of suitable timber in the project area. There are only 18,000 acres of suitable timber common to both the CPOW MELP and the 89-94 LSTA on the project area. It should be noted that MELPs and LSTAs are developed to identify areas from which a site-specific project is identified. They are not meant to reflect a total suitable timber pool from which all future timber projects will be developed. A new MELP and/or LSTA is developed prior to the initiation of any major timber harvest project. The Control Lake Cumulative Effects Analysis effort was directed to identify all suitable acres within standards and guidelines of the Draft Forest Plan Revision Alternative P, which provides a better picture of what may be available for harvest in the future. It should be noted that even this latest effort will not result in identification of every acre of suitable timber in the project area. Overlooked are those areas identified as having soil complexes with a majority of soils which would render timber harvest unsuitable. There are soils within those complexes that would allow timber harvest. These are some of the areas identified by the CPOW project as suitable when a comparison with the TLMP suitable timber grid would have rejected them as unsuited for timber harvest.
- SCLDF-10 The CPOW Draft EIS indicated that the 53,000 acres identified in the MELP constituted the only available timber remaining for harvest in the project area. The MELP did not identify all potentially suitable acres, just those to be considered for the CPOW timber project. That figure was adjusted to approximately 50,000 acres in the Final EIS and past harvest on the project area was shown as nearly 78,526 acres. Other suitable timber figures developed since the CPOW project was planned give more realistic estimates of suitable timber on the project area. The updated LSTA, for example, identified over 75,000 acres of suitable timber on the project area remaining after the completion of the CPOW project. This is very nearly equal to the 78,526 acres of harvest on the project area that had occurred prior to the CPOW project.
- SCLDF-11 The suitable acres identified by the MELP are those that posed a low risk of being challenged through appeal, not the total suitable timber available for harvest in the future. The MELP presents but one of several suitable timber scenarios in the project area. Adding past harvest of 78,526 acres, the CPOW project of 9,836 acres, and planned harvest of approximately 3,000 acres through the year 2004 yields total second growth of 91,362 acres. This represents 56 percent of the total suitable acres identified in the updated LSTA. Without falldown, this would represent a potential harvest of 1,444 acres per year (approximately 39 MMBF). The Supplement discusses the potential effects of not harvesting soft falldown thought to be at risk in future timber projects.

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How much timber has been harvested in the past is not at issue. The issue to be resolved is how much timber is to be cut in the next ten years, including the CPOW project, and how much is available in the decades beyond through the end of the rotation.

Planned harvest for the CPOW project area through the year 2004 after completion of the CPOW project is approximately 3,000 acres. This is based on the Ten Year Sale Plan ending in 2004 which includes all projects in the planning stage. This does not affect the total available timber remaining in the project area at the end of the current CPOW project.

SCLDF-12 See response to SCLDF-11.

SCLDF-13 This Supplement analyzes in much greater depth, than did either the Draft EIS or the Final EIS, the strengths and weaknesses of various estimates of suitable timber remaining in the project area beyond the year 2004.

SCLDF-14 Through 2004, planned harvest and past harvest will total approximately 91,000 acres. Depending upon which suitable timber projection is most accurate, this would represent 76 percent (using the most conservative figure) to 53 percent (using the least conservative figure) of the suitable timber in the project area. Whatever the number, the decision remains one of how to allocate the remaining timber harvest over the next ten years and decades beyond.

The average annual harvest over the next ten years on the project area, including the remainder of the CPOW project, is approximately 629 acres per year yielding 17 MMBF. The lowest estimate of annual average harvest through the end of the rotation, taking into account 23 percent falldown, is 10 MMBF. The CPOW MELP provides the next lowest estimate at 14 MMBF per year. The updated LSTA and combinations of the MELP and LSTA would result in average annual harvest of 29 to 33 MMBF taking into account falldown.

SCLDF-15 The focus of this Supplement is to consider whether or not to continue to implement the remainder of the CPOW project based on a comparison of what is planned for harvest in the next ten years with the potential harvest in the decades beyond given additional information regarding falldown. Sustainable harvest is a requirement for a Forest, not a project area. There is no plan for even flows of timber from any given project area.

During NEPA analysis for the CPOW project, there were two estimates of suitable timber for the project area: the CPOW MELP and TLMP Draft Revision Alternative P. The CPOW MELP estimate was not used for the Final EIS and ROD for several reasons. According to the CPOW ROD.....*"this project level analysis did not have an objective of redetermining the lands suitable for future timber harvest for the entire project area. It was to identify relatively low risk to environmental concern units, which are suitable for timber harvest, meet Forest Plan standards and guidelines, and to display the effects associated with their harvest. The purpose of the project's MELP was to identify potential units, not exclude areas from harvest over the long-term"* (CPOW ROD, p. 8). The Draft Supplement displays historic harvest levels, planned harvest levels for the next ten years, and potential future harvest levels both for the CPOW project area and POW as a whole. The Supplement clearly displays this and displays the effects of continuing or halting the CPOW project on future harvest potential.

SCLDF-16 The figures shown in Table B are accurately reported for the Draft Supplement. Past logging in the project area is correct, though the revised figure for the Control Lake Cumulative Effects Analysis updated LSTA is now 75,205 acres of suitable timber, and does not include the

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9,836-acre CPOW project. The updated LSTA treated the CPOW project ROD units as second growth. Current planned logging in the CPOW project is 9,836 acres, not 10,128 acres. The CPOW ROD (August 1993) cleared for harvest 9,836 acres. The 1999-2004 planned logging based on the ten year sale schedule, is approximately 3,000 acres (80 mmbf). This totals 91,362 acres of harvest by the year 2004.

Deducting the additional 3,000 acres of harvest (1999-2004 ten year sale schedule) from the 75,205 acres in the updated LSTA would leave 72,205 acres of timber available over the remainder of the rotation, if there were no falldown, and assuming the updated LSTA is the most accurate assessment of available suitable timber. Timber harvest prior to 2004 is the sum of current second growth (78,526 ac), planned CPOW harvest (9,836 ac), and planned ten year sale schedule through 2004 (3,000 ac): This amounts to 91,398 acres of second growth in the year 2004, the first half of the rotation. Harvest in the second half of the rotation would come from the 72,205 acres remaining available for harvest. This 72,205 acres represents 44 percent of the identified suitable timber base on the project area. If previous harvest is compared with the suitable timber in the combined MELP and LSTA, the remaining 91,243 acres represents 50 percent of the suitable timber base on the project area.

SCLDF-17 The contention that sustainable harvest requirements must be placed on project areas, and further, that not more than 50 percent of the harvest must have occurred by the mid-point of a 100-year rotation is incorrect. For any project area, an even flow of timber is not guaranteed, not planned for, nor even approached in actual practice. Initial entries into non-roaded areas are planned to harvest more timber than would be done in later entries. This is done to offset high initial roading and logging camp costs. Following this logic means 50 percent of the suitable timber on Cleveland Peninsula should be harvested to date.

See response to SCLDF-1. Sustainability is not a requirement imposed upon a project area but rather on a National Forest. Using harvest cleared by the CPOW ROD (9,836 acres) and planned harvest through 2004 as indicated by the ten year sale plan (3,000 acres) approximately 72,000 acres would remain for harvest, assuming the updated LSTA is the most accurate assessment of available suitable timber. This amounts to 44 percent of the identified suitable timber in the project area. If the combined MELP and LSTA are assumed to be the best assessment of suitable timber, harvest prior to 2004 represents 50 percent of the total suitable timber in the project area.

SCLDF-18 Implementation falldown documented in the layout of CPOW units to date resulted in falldown of 20 percent, of which nearly 15 percent is hard falldown (reductions to the suitable timber base) and 5 percent soft falldown (which remain in the suitable timber base). See Appendix A, Final Supplement.

SCLDF-19 The Supplement identifies the 15 percent figure as the most accurate assessment of hard falldown occurring during project implementation. Again, soft falldown does not result in a reduction of the suitable timber base. The possible effects of soft falldown never becoming available for harvest is displayed in the Supplement. Reducing the suitable timber estimate by 15 percent is displayed in the Supplement, but the CPOW project and those planned in the ten year sale plan total only 12,836 acres rather than the 22,606 acres indicated in the comment. Implementing CPOW and the ten year sale plan would leave 72,205 acres (55,598 acres accounting for 23 percent falldown) available for harvest over the remainder of the rotation through 2054, assuming the updated LSTA is the most accurate assessment of available suitable timber.

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SCLDF-20 By 2004, 91,362 acres will have been harvested (not accounting for falldown) which represents 56 percent of the identified suitable timber in the project area, if we use the updated LSTA estimate as the best indicator of suitable timber available for harvest in the future.

SCLDF-21 The 53,464 remaining acres available in 2004 (given 23 percent recon and implementation falldown) would yield an average annual harvest of 1,069 acres through 2054. In comparison, harvest on the CPOW project area over the next ten years will average approximately 629 acres. See response to SCLDF-1.

SCLDF-22 Falldown in CPOW implementation to date has equaled 20 percent rather than 25 percent. Of the ROD acres planned, only 15 percent has not been implemented because planned harvest was found to be actually unsuited for timber production. Application of the CPOW implementation falldown analysis to areas beyond those identified in the CPOW ROD is a recognized inherent weakness.

Whether or not potential changes to the suitable timber base occur in the future is speculative at best. One has only to look at the controversy surrounding Habitat Conservation Areas to realize that. Any changes to the suitable timber base that result from the TLMP Revision will be reflected in future timber harvest schedules.

We have been conservative in our approach to protecting significant cave resources. When more information is known, we may propose for harvest more acres than are currently being protected. As an example, areas of high vulnerability karst not considered for harvest in a project area during the development of a unit pool, or not selected for inclusion in one or more of the alternatives in an EIS, may be considered for future harvest.

SCLDF-23 See responses to SCLDF-1 and SCLDF-22.

SCLDF-24 See response to SCLDF-22. We believe we have projected harvest on Prince of Wales using the best information available at this time. We have also displayed the falldown factors that come into play during project reconnaissance and implementation including the potential for soft falldown not being harvested in the future.

The comment questions projecting timber availability across Prince of Wales as a whole, because site-specific analyses have not been performed on the island as a whole. Previous comments, however, express no hesitation to apply a disparity between Draft Revision Alternative P suitable timber estimates for the CPOW project area and suitable timber estimates derived in the MELP to the Ketchikan Area as a whole. See also SCLDF-36.

SCLDF-25 According to our figures, a total of 5,920 mmbf will have been harvested on Prince of Wales between 1954 and 2004. This amounts to an average annual harvest of 116 MMBF. Our best projections, including updated suitable timber information from the CPOW project area and given a 15 percent implementation falldown and 8 percent reconnaissance falldown probability, would result in a range of potential average annual harvest of 51 MMBF to 175 MMBF during the period of 2005 through 2054. These projections assume the CPOW project is completed as planned. Other possible combinations of suitable timber estimates and project level falldown are displayed, some of which result in numbers lower than historic harvest levels.

Taking into account 23 percent hard falldown, likely harvest beyond 2004 on Prince of Wales is going to be higher than is planned over the next ten years. Even taking into account 7 percent soft falldown thought to be at risk in the future, potential harvest could exceed planned levels of 69

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MMBF over the next ten years. Only the most conservative estimate of suitable timber would result in a lower harvest level (Table 4-12).

Reiterating our response to SCLDF-1, the question to be answered, the decision to be made, is how to allocate the remaining suitable timber harvest over the next ten years and the decades beyond. Will planned harvest over the ten year sale schedule exceed potential harvest in the decades beyond the year 2004? Only the most conservative of the five suitable timber estimates and the highest potential levels of falldown would result in annual average harvest less than that planned over the next ten years.

SCLDF-26 Even though the range of potential average annual harvest of 51 MMBF to 175 MMBF beyond the year 2004 includes possible harvest levels that exceed the historic harvest of the previous 51 years on POW, sustainability is measured on a National Forest basis.

The decision to be made is how to allocate the remaining suitable timber harvest over the next ten years and the decades beyond. Only the most conservative of the five suitable timber estimates and the highest potential levels of falldown would result in annual average harvest less than that planned over the next ten years.

SCLDF-27 The Agency's estimates of the timber supply for the CPOW project area and Prince of Wales Island are portrayed in the Draft Supplement and have been revised with updated information from the Control Lake Cumulative Effects Analysis in the Final Supplement. In addition, a falldown factor is now accounted for during the reconnaissance phase of project planning. Several estimates of available timber supply and different falldown estimates are discussed and displayed. Several combinations of suitable timber supply estimates and different levels of falldown are displayed including the combinations that would result in the lowest potential future harvest. The information is displayed including the rationale for determining what estimates of available timber and falldown are most applicable.

By most accounts presented in the Supplement, timber harvest planned over the next ten years on the CPOW project area and on Prince of Wales is less than potential timber harvest in the decades beyond 2004. Potential timber harvest on the Cleveland Peninsula and on Revilla Island must be taken into consideration before Area-wide sustainability statements could be made.

SCLDF-28 Because of the controversy surrounding Alternative P, the Final Supplement addresses TLMP Draft Revision Alternative P suitable timber estimates for the CPOW project area. The disparity between Draft Revision Alternative P estimates and site specific estimates from the CPOW MELP and the updated LSTA is recognized. The relevance of Alternative P suitable timber projections to the decision to be made is minor because of the availability of site-specific data for the project area. This site-specific data allows for better analysis of suitable timber remaining in the project area and a more reasoned decision regarding the allocation of harvest of that timber.

Updated resource inventories stemming from the Control Lake Cumulative Effects Analysis have been sent to the TLMP Revision Team for use in the TLMP Revision effort. Information on falldown encountered during the CPOW project has also been forwarded to the Revision Team for inclusion in one of its 16 resource assessments recently released for public review.

SCLDF-29 See response to SCLDF-28.

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- SCLDF-30 The differences between the updated LSTA suitable timber estimate and Draft Revision Alternative P suitable timber estimate for the CPOW project area is discussed in the Final Supplement. See response to SCLDF-28.
- SCLDF-31 See response to WRS-4.
- SCLDF-32 Additional discussion is included in the Final Supplement regarding differences between the updated LSTA and Draft Revision suitable timber estimates. The choice of Alternative P is outside the scope of this Supplement.
- SCLDF-33 TLMP (1979a) scheduled CFL is the basis for establishing the allowable sale quantity on the Tongass National Forest and the Ketchikan Area. The scheduled CFL for the CPOW project area based on the TLMP (1979a) was 212,178 acres of a total CFL of 247,798 acres. These figures were obtained from a 1989 database for all management areas and VCUs for the Ketchikan Area. These figures were proportionally adjusted to reflect changes in land ownership and land use designations within the project area. The scheduled CFL for the project area, based on new land status proportions, is 150,192 acres. When the 78,526 acres of second growth are deducted, this results in remaining scheduled CFL of 71,666 acres.
- The scheduled CFL figures for TLMP (1979a) take into account amendments to the Forest Plan through 1989. The proportional reduction in scheduled CFL for the project area takes into account changes in LUDs resulting from TTRA and additional land conveyances to other ownership. The end result, is that the 71,666 acres of scheduled CFL on the project area represents implementation of the Forest Plan on the project area given current direction, standards, and guidelines. There is flexibility for each project planned to determine where best and how to harvest a portion of those acres. The planning process for each project determines how best to approach wildlife viability, significant cave protection, subsistence needs, and stream and watershed protection based on site-specific information.
- SCLDF-34 This Supplement discusses potential changes to the suitable timber base for reasons of additional karst and significant cave protection, anadromous fish habitat protection, and HCAs. These potential changes will come about through revision or amendment of the Forest Plan. If these changes result in a different ASQ, a new timber harvest schedule would be put in place and any potential reductions to harvest would be documented and discussed in a decision document open to public review and comment. The 1985-86 amendment to the Forest Plan stated that the ASQ of 4.5 billion board feet per decade could still be programmed though a minor modification in the distribution of each Administrative Area's contribution to that quantity was necessary to account for land status changes. TLMP, as Amended, complies with NFMA implementing regulations (36 CFR 219) for population viability using a combination of LUD I, LUD II, and the retention factors method that prohibits scheduling of otherwise operable and suitable timber. It is recognized that this approach has been the subject of recent debate. TTRA proportionality requirements did not remove lands from harvest consideration but rather required that timber harvest in support of the Long-term Contracts be distributed over volume classes proportional to their occurrence within each management area.
- SCLDF-35 How these issues are dealt with in a future Forest Plan Revision is open to speculation. Should a Revision become finalized and a different ASQ result, adjustments would be made in the scheduled timber harvest to reflect that change.
- SCLDF-36 The reason we looked into scheduling of timber harvest on Prince of Wales is because we believe it is relevant to community stability. Community stability is not solely based on timber harvest

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within one project area. It is also related to timber harvest on Prince of Wales as a whole. The Supplement focused on falldown and potential timber supply, comparing potential future timber harvest with historic timber harvest. The Supplement also documented and discussed planned harvest over the next ten years, then discussed the implications of halting the CPOW project and completing the CPOW project as planned.

SCLDF-37 The Draft Supplement discussed the varying degrees of community dependence on timber harvest. The CPOW DEIS discussed the estimated consequences of the CPOW project on twelve widely spread communities on Prince of Wales, Revilla, and Annette Islands. The communities discussed in the Supplement developed to varying degrees on timber harvest, not all of which occurred in the CPOW project area. The projected decline in timber harvest volume over the ten year sale schedule and its relative effect on community stability is discussed in the Supplement. The future benefits of canceling or significantly diminishing the CPOW project must be weighed against the immediate disruption to community stability that would occur now.

SCLDF-38 The definition of soft falldown has been clarified to include discretionary protection of other resources as well as for reasons of economics. The risk that some soft falldown may never be rescheduled for harvest is considered and the effects displayed on potential future harvest volumes.

SCLDF-39 The definition of falldown is the difference between planned and actual timber harvest. The areas that are harvested to the limits of each setting may result in the harvest of a minor number of acres outside planned harvest unit boundaries. Not to do so would often result in isolating timber which would not be economically feasible to harvest in a future entry. This should not be considered as harvest of timber now that should be available in the future. Harvest of acres outside planned unit boundaries depicted in a Record of Decision does not necessarily constitute a reduction of the suitable timber base for future entries. In some cases, those acres may have been thought to be unsuitable (low volume, MMI 4, McGilvery soils) during the planning process but are found to be suitable during unit layout. If those acres are not part of an adjacent unit identified for harvest in the next entry, then clearly, these minor acre additions cannot be considered as harvesting now what should have been planned for the future. See also response to WRS-15.

SCLDF-40 The possibility that economic soft falldown may never be harvested is discussed and the effects on potential future timber harvest plans is displayed in the Supplement. That it occurs has been documented. That it may continue is discussed.

We believe that real timber values will continue to increase, making timber previously thought to be uneconomical to harvest, subsequently economical (Alaska Stumpage Prices: Revised projections, Brooks and Haynes, April 1995, p. 2). ANILCA 706(b) reports done annually reflect that fact. In August 1995 the TLMP Revision Team released 16 science assessments and resource analyses. The Timber Price Projections and Demand Analysis draft paper projects stumpage prices to remain constant for pulp while they are expected to increase for sawlogs (in constant dollars).

Logging with helicopters was once thought to be uneconomical, yet is fairly commonplace. During the field season of 1995 two helicopters were utilized in yarding timber on the Ketchikan Area. There were instances where planned conventional settings were logged by helicopter. Long-term Sale unit 585-222 was offered at 29 acres. The unit was designed for conventional yarding systems (skyline and shovel), and included building a temporary road to access a setting. During harvest operations, approximately half of the unit's timber was yarded by helicopter. The temporary road was not built, increasing protection to a water quality stream in the setting. This

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harvest operation is unique because the unit has a specified road running through its full length, and the external yarding distances averaged less than 400 feet. Although the unit was designed for conventional harvest systems, it was more economical to use a helicopter harvest system.

SCLDF-41 See response to SCLDF-40.

SCLDF-42 This comment is incorrect. The Supplement addresses projected harvest on the CPOW project area through 2004 using the most recent ten-year sale schedule. The ten-year sale schedule is developed using best professional judgement, budget outlooks, and projected workforce levels. It affords the best forecast of what is planned over the next ten years and is updated periodically. As much as four years elapse between the inception of a project and implementation of the project as documented in a Final EIS and ROD. The only projects appearing in the ten-year time line in the CPOW project area are the Ratz, Tuxecan, and Luck Lake EISs, and a number of small sales.

SCLDF-43 The use of the phrase "CPOW-sized projects" is intended to help put into perspective the amount of timber potentially available for harvest in the CPOW project area upon completion of the CPOW project. After completion of the CPOW project, an additional 80 MMBF is planned for harvest in the project area by the year 2004. This amounts to about 3,000 acres of harvest, which is nowhere close to "several of these [CPOW-sized] projects." The estimate of potentially harvestable timber remaining in the project after the year 2004 is documented and displayed in the Supplement.

Ignoring for a moment that sustainability is measured on a Forest-wide basis, the contention that future harvest must be compared with past harvest is incorrect. The decision to be made is how to allocate the remaining harvest of suitable timber in the project area. Is the harvest planned over the next ten years less than or greater than potential timber harvest over the remaining decades?

SCLDF-44 Fallup is a term that may be defined as: Situations when the amount of timber harvested (acres or volume) in a project area is greater than planned; or areas previously considered as unsuitable for harvest but are now found to be suitable based on field verification. One of the recognized strengths of the CPOW MELP is that it was not the result of looking only at potential timber harvest on lands identified as suitable by Draft Revision Alternative P. Sixteen percent of the CPOW harvest unit acres as laid out occur in places where the updated LSTA would not have considered harvest. This suggests that concerted efforts to identify additional suitable timber in areas overlooked or misidentified as unsuitable may result (has resulted) in additional acres that may be considered for timber harvest. If a 15 percent falldown is considered significant, then it would seem that a 16 percent fallup factor should also be noted as an important factor. We are reluctant to extrapolate this 16 percent fallup factor to other project areas as we have no hard data on other project areas to indicate whether or not this is a common occurrence.

SCLDF-45 These comments assert that the decision to continue or halt the CPOW project must
SCLDF-46 be based on comparison of future harvest with harvest that has occurred in the past. This is not correct. That potential harvest of timber in the CPOW project area may be lower than has occurred historically has been documented and discussed in the Supplement. This is not relevant to the decision to be made. The decision to be made is one of allocation of harvest on the project area based on what is planned to be cut over the next ten years in comparison to what the potential future harvest could be. The decision must take into account the benefits of such a decision over the short term with long term benefits. The Supplement clearly documents, displays, and discusses past timber harvest volumes, planned timber harvest over the next ten years, and provides an estimate of potential future harvest after the end of the long-term contract in 2004.

Responses to the Sierra Club Legal Defense Fund

Timber harvest over the next ten years in the CPOW project area will amount to approximately 17 MMBF per year for this decade if the remainder of the project is implemented. If halted, average annual harvest on the project area will amount to approximately 10 MMBF per year. Potential timber harvest on the project area ranges from 10-33 MMBF average annual harvest 2005-2054, depending on which suitable timber estimate is used, taking into account falldown of 23 percent, and the continuation of the CPOW project. If the project is halted, and the harvest rescheduled beyond 2004, average annual timber harvest could range from 14-36 MMBF, which also takes into account 23 percent falldown. These figures, as well as anticipated effects upon communities near and adjacent to the project area, provide the basis for making a reasoned decision as to whether or not to continue the CPOW project.

The contention that logging under the KPC contract is unsustainable is a conclusion that cannot be reached based on the analysis of timber supply on one project area. Sustainability is a legal requirement that applies to a National Forest rather than a project area.

There is no assurance of an even flow of timber from any given project area for each year or each decade. Initial entries into areas have traditionally harvested proportionally more timber and more easily accessible timber than later entries. This is done to offset high initial roading and logging camp costs. Future entries would have proportionately lower harvest volumes. There are project areas on the Ketchikan Area, such as the Cleveland Peninsula, that have experienced little to no harvest to this point, substantially less than 50 percent of the suitable timber in the first 50 years of the timber rotation.

Comments of Pete Smith and Valerie White

Pete Smith
 Valery White
 Po Box WWP (Whale Pass)
 Ketchikan, AK 99950

September 23, 1995

Forest Supervisor
 USFS, Ketchikan Area
 Federal Building
 Ketchikan, AK 99901

Dear Forest Supervisor,

SW - 1 This letter is to comment on the CPOW Draft Supplemental EIS. We did not receive a copy of this document even though we have been involved with this project since the beginning. Even after requesting a copy from the SO, we were not sent one.

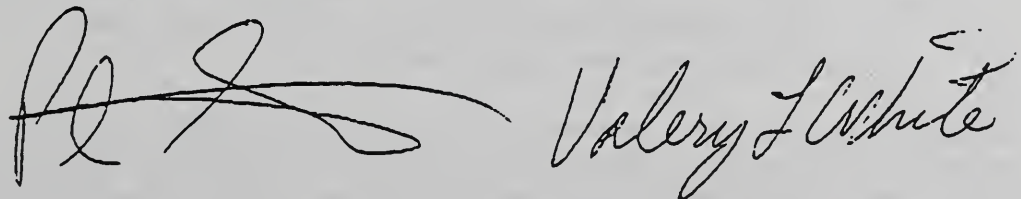
SW - 2 Small communities on Prince of Wales Island depend on the old growth forest, but industrial scale logging at an unsustainable level destroys our future. Small timber sales and more emphasis and support for local processing would provide many more local jobs and pave the way for a true sustained yield harvest. The Forest Service cannot expect to harvest most of the old growth timber on the island and still maintain community stability and viable wildlife populations. If logging continues at planned levels through 2054, most of the old growth forest will be gone, along with subsistence opportunities, recreation, and tourism. In the interest of maintaining economic stability on Prince of Wales Island, it is unrealistic to base sustainability on the whole Tongass. This practice may be feasible in a small forest, but because the Tongass is in an archipelago setting and communities are scattered and isolated, it is only logical to plan for economic stability and sustainability by sale area.

SW - 3 Specifically, the Supplement is confusing and incomplete. It fails to address the critical issue of logging under the KPC contract being sustainable. It goes on and on about various aspects of falldown, but does not correlate that with the sustainability issue. The CPOW DEIS showed us that the CPOW Area has been cut at an unsustainable rate, but the FEIS used different information to come up with a different conclusion. The Supplement should have resolved this

SW - 4 difference but it did not. The Supplement uses information from the 1979 TLMP where the DEIS and FEIS used information from the 1991 Draft TLMP Revision.

SW - 5 It appears to us that the Forest Service is grasping at straws to try to get the figures to show that logging on Prince of Wales Island is in control. It doesn't take a rocket scientist to fly over the island and see that things are not that rosy. In the Supplement (page 4-11) it says, "The majority of local residents expressed the importance of the timber industry for wage earning residents of Whale Pass." Maybe in 1990 this was true for some of the residents, but now in 1995 the majority of the residents clearly realize that the island and especially the area around Whale Pass is being clearcut too fast. We know that our children are going to be struggling to make a living here if logging continues as it is!

Sincerely



Valery White

Responses to Pete Smith and Valerie White

- SW-1 On April 10, 1995 over 700 individuals (including one to each of the commentors) were mailed a letter from Forest Supervisor David D. Rittenhouse explaining the Supplement process and describing the focus of the analysis. The letter also explained that those wanting to remain on the CPOW mailing list needed to fill out the enclosed form and mail it back to the Ketchikan Area. Approximately 85 individuals, organizations and agencies returned their forms. These individuals, organizations and agencies remained on the mailing list and were subsequently mailed a Draft SEIS. There is no record of either commmentor returning this form.
- SW-2 The Tongass Land Management Plan (TLMP (1979a) allows an average annual harvest of up to 450 MMBF on the Tongass National Forest. Allowances are made for the retention of otherwise suitable timber in each management area and value comparison unit (VCU) specifically for the protection of wildlife habitat. Wildlife habitat is further provided by areas of noncommercial forest land and commercial forest land that will not be harvested by law (LUD II, Wilderness, TTRA buffers), Forest Plan standards and guidelines (AHMU buffers, very high MMI soils), or economic and feasibility considerations (blind leads, suitable timber fragmented by stream protection buffers). It is recognized that there is the potential for significant reductions in subsistence-related wildlife resources. These have been documented in the CPOW FEIS and Record of Decision (ROD). There will continue to be opportunities for tourism and recreation, though there may be disagreement regarding quality of those opportunities in areas dedicated to timber production (LUD IV, and to a lesser extent, LUD III). This has been discussed and decisions made during the formulation of the TLMP.
- By statute, sustainability requirements are imposed on a National Forest basis, not a project area basis. The CPOW Supplement, however, recognizes local conditions and analyzes past, current, and potential timber harvest volumes both on the CPOW project area and Prince of Wales (POW) Island as a whole.
- SW-3 It is true, the Supplement does not address whether or not harvest under the Long-term Contract is sustainable. Meeting timber volume commitments is a Tongass-wide issue and is outside the scope of this Supplement. The Supplement looks at historic, ten-year sale plan, and potential timber harvest levels on both the project area and POW. Future timber harvest, planned and potential, will be affected by estimates of remaining suitable timber and project level falldown. The Forest Service has presented what it believes to be the most realistic of these estimates, but has also displayed the range of possibilities. Project sustainability, in and of itself, is not a legal requirement; it is somewhat related to community stability, which is an issue. The planned and potential timber harvest scenarios are compared with historic harvest levels and potential effects on communities are narratively addressed.
- SW-4 The CPOW DEIS and FEIS did reach different conclusions regarding potential future harvest levels. The differences between those two conclusions are addressed in the ROD for the CPOW FEIS and will not be repeated here. The Supplement presents additional information regarding timber supply and falldown both on the CPOW project area and on POW, and displays possible implications for community stability.
- SW-5 The quoted statement from the Supplement was taken from the 1994 Control Lake EIS Subsistence Resources Inventory Report. The reference to the year 1990 pertains to the latest census report, not the year of the subsistence report. It seems unlikely that a majority of residents would have changed its mind regarding the importance of the timber industry for wage earning residents in Whale Pass in the year since this report was completed.

Comments of William R. Shoaf

September 21, 1995

Brad Powell, Forest Supervisor
Tongass National Forest
Federal Bldg
Ketchikan, AK 99901

Mr. Vaught:

Thank you for the opportunity to comment on the CPOW Draft Supplement to the FEIS. I am commenting as a local resident, property owner, subsistence user, and commercial fisherman. Consequently, the proposed action has the potential to markedly affect my lifestyle and economic well-being.

WRS-1

I still am deeply concerned at the Purpose and Need statement for this project -- to contribute no more and no less than 290 mmbf to the continued execution of the KPC lng-term contract. There is the insinuation that this sacred 290 mmbf is somehow emblazoned in the Forest Plan and therefore must be duly executed with no consideration given for any other alternative volume. Yet when I recently FOIA-ed your office for any and all information contained in the Forest Plan that exactly 290 mmbf was scheduled for this project area during this time frame, I was told there was no such information within the existing Forest Plan (imagine my surprise!), but there was "one document within the scope of your request" in the Draft FEIS Proposed Forest Plan. This single document provided to my FOIA request was a 10 year timber sale schedule dated October 13, 1992 -- over one year after the Notice of Intent (i.e., to harvest 85 mmbf) for CPOW was published in the Federal Register, and after the CPOW DEIS had been published. CPOW alternatives had already been "eliminated from detailed study" because they didn't meet "defined purpose and need" (CPOW DEIS page 2-5). This is a classic example of the 'tail wagging the dog'. The fact of the matter is that there isn't even any capability within the TLMP timber base to disaggregate project area specific volumes for specific timeframes.

WRS-2

I'm going to suggest another scenario for the Purpose and Need for CPOW, as well as for Lab Bay, North Revilla, and Polk Inlet. In 1991, the Ketchikan Area planning staff were working on the sequel to the 1989-94 LTS EIS. The Ketchikan Area Planning Staff Officer and the Timber Staff Officer had a meeting with the Regional Forester to discuss a volume target for this project. The Planning Staff Officer made a proposal for 600 mmbf, to which the Regional Forester replied 'less than half that amount'. The Planning Staff Officer replied 'OK, 300 mmbf', to which the Regional Forester replied 'I said LESS than half that amount'. The Planning Staff Officer said 'OK, 290 mmbf', and THAT became the target volume for CPOW -- not some purported commandment from TLMP. This story is true, by the way. It is also interesting that the combined target volumes for Lab Bay (85 mmbf), Polk Inlet (125 mmbf), CPOW (290 mmbf), and North Revilla (200 mmbf) sum to exactly 600 mmbf. What a coincidence! The Forest Service is

Comments of William R. Shoaf

- WRS-2 (cont) attempting to pass off an arbitrary management decision as a self-proving fact and then assert that it is stated in the existing Forest Plan. It simply isn't so.
- WRS-3 Finally, the Purpose and Need speaks to a necessity of providing 205 mmbf to KPC annually. KPC Contract Clause B0.52 clearly specifies a maximum average annual cut over a 5-year period of 192.5 mmbf. Also, now that the entirety of the Tongass National Forest (instead of just the Ketchikan Area Primary Sale Area) is being used to feed the KPC contract, I feel it is time to reallocate the amount of timber each project must deliver. I formally request the Purpose and Need for this project be reformulated and new set of alternatives developed which are freed from the burden of having to meet such a tightly defined purpose and need statement, which has no foundation other than whim.
- WRS-4 OK, why the swicheroo? The CPOW Draft EIS said the CPOW MELP was the predictor of future timber supply, the Final EIS said the TLMP Revision Altn P was the predictor, and now the Draft Supplement to the FEIS said TLMP 1979 was the predictor. What's it going to be for the Final Supplement to the FEIS -- some cuff notes from the Alaska Congrssiional delegation? This project is totally out of control.
- WRS-5 The Draft Control Lake Cumulative Effects Analysis contained a new MELP for the CPOW project area, and this MELP came up with 71,410 acres. The CPOW MELP came up with only 50,288 acres. Recently I FOIAed your office to determine if the Control Lake version was permitted to plan harvest units on selected-but-not-conveyed State and Native lands and to design transportation systems over non-National Forest System lands. Since the Forest Service violated FOIA by not responding within 10 days, I can only assume the Control Lake version did in fact plan timber harvest units/roads on these lands, which totalled 25,291 acres. The CPOW MELP eliminated these lands from consideration, as part of a 'good neighbor' policy by Ketchikan Area officials. Had the CPOW MELP assumptions permitted analysis of these lands (as did Control Lake), it is likely the two MELP's would have reached very similar conclusions. Nontheless, I formally request the Final Supplement to display the Control Lake Cumulative Effects Analysis MELP proposed harvest units displayed on a map which also shows the CPOW MELP units. It would be very interesting to observe the differences, and I think it would be a great idea to develop a detailed alternative which focuses exclusively on units identified in the Control Lake version, but not on the CPOW version.
- WRS-6
- WRS-7

Comments of William R. Shoaf

Regarding the Draft Control Lake Cumulative Effects Analysis: this is a very elusive document -- referenced in both the Draft Supplement to the CPOW FEIS and the Lab Bay DEIS. This document is quoted extensively, and, in fact, becomes the de facto be-all-end-all statement on planning falldown. Yet it is unavailable for public review. How convenient. I suggest you publish this oft-

WRS-8

referenced document, send it to your mailing list for Lab Bay and CPOW, and extend the comment period.

In reading the development of the falldown factors, I had mixed feelings. The overall methodology was sound and was well written; the Forest Service is to be commended for that. However, the rationale for calculation of individual factors was deeply flawed. The conclusion reached is that falldown is best approximated by 15.4%, which represents 0.4% estimated planning falldown PLUS (key word here) 15% layout implementation falldown. This figure is grossly understated, and I formally challenge it.

WRS-9

The 0.4% planning falldown was incorrectly calculated by comparing the total acreage (71,410 acres) derived in the Control Lake version of the CPOW MELP with the 1979 TLMP suitable-available acres (71,666). Yet on page 3-8 of the CPOW Draft SEIS it clearly states that 71,410 acres was derived from the much larger TLMP Draft Revision Alternative P suitable-available base (114,260 acres). This yields yields a planning falldown of $(114,260 - 71,410) / 114,260$, or 38%. More importantly, it yields $100 - 38$, or 62% implementation during planning; this is a key point.

WRS-10

Comparing the Control Lake MELP results to the 1979 TLMP suitable-available base is worse than apples and oranges; for instance, it would be necessary to remove all the proposed harvest units on old-growth retention because 1979 TLMP didn't permit harvest on these areas. It is my opinion that Control Lake results were compared to 1979 TLMP results simply to come up with a lower planning falldown factor -- there can be no other rationale for doing so.

WRS-11

There is mention of a soft falldown factor of 6%, which is attributed strictly to economics (Draft SFEIS, page 3-1). There is mention of deferrals for HCA's, NFMA adjacency, karst, cumulative watershed and visual disturbance, etc., but there is the implicit assumption that ALL of these deferred acres will be harvested in the future. This is like opening the refrigerator, lifting the lid off last week's leftovers, closing the lid, and vowing to eat it for supper tomorrow night -- it simply isn't likely to happen. While I agree that it would be overly pessimistic to calculate soft falldown as if NONE of these

WRS-12

Comments of William R. Shoaf

WRS-12
(cont)

deferred acres would never be harvested, it is unconscionable to assume they ALL would be harvested. Worse, when it comes to deriving the final falldown factor, even the optimistic 6% figure is ignored. For the sake of agreement, I will subscribe to the 6% soft falldown for economics, but bump it up another 4% (wild guess is all) to account for deferred acres which are never going to be harvested in the future. Therefore, I suggest pegging soft falldown at 10%, but refer to it as 100 - 10 = 90% implementation for soft falldown; this is a key point.

WRS-13

The 15% CPOW layout hard falldown factor is based solely on differences in CPOW ROD acres vs. CPOW layout implementation

acres. This 15% figure ignores falldown that occurred when the CPOW MELP units were initially field reconned between the CPOW DEIS and the ROD. A total of 200 units were field reconned, totalling 9,119 acres. Based on this field recon, only 189 units totalling 8,015 acres were found to be suitable for timber harvest to be brought forward in the CPOW FEIS/ROD (SOURCE: CPOW Planning Record database "FINLALTN.DBF".) This represents 12% planning falldown at the get-go, or 100 - 12 = 88% implementation during field recon; this is a key point.

WRS-14

Furthermore, the unit acreages listed in the CPOW ROD were understated because they excluded potential buffers for unverified streams, which were not shown on the unit card maps. This resulted in a lowball estimate (in many cases) for the unit acres, in a deliberated attempt to mask falldown.

WRS-15

I formally challenge the 15% hard falldown factor from the ROD vs. layout acres, because the latter includes layout outside the ROD boundaries (unit expansion). These expanded acres are being cashed in now, and will not be available when the adjacent timber stand is harvested, so falldown will be even higher in the future. This is classic 'rob Peter to pay Paul'. Information the Forest Service has provided to FOIA requests indicate falldown for the first 4 CPOW offerings totals 24%, NOT 15%:

OFFERING	ROD ACRES	DELETED ACRES	NET ACRES
Magnificent 7	288	45	243
Logjam	667	128	539
Halfway House	1116	296	820
Slide/Lava	1157	316	841
	<u>3228</u>	<u>785</u>	<u>2443</u>

The REAL falldown totalled 785 acres from a ROD total of 3,228 acres, which is 24%, based on the Forest Service's own

Comments of William R. Shoaf

WRS-15 | information. More importantly, it yields $100 - 24\% = 76\%$
 (cont) | implementation during layout; this is a key point.

WRS-16 | The CPOW MELP units were criticized in the CPOW Draft SEIS (page
 3-2) as having identified 'relatively low risk units' and that
 'future projects within the CPOW project area may experience
 higher falldown rates as the remaining comparatively high risk
 units are harvested'. So it seems overly optimistic for the
 Forest Service to project future layout falldown on an admittedly
 lowball number. I also note that the 15% figure ignores
 differences in planned vs. cruised volume/acres, as a result of
 harvest of the lesser productive stands within each volume class
 strata (a direct result of years of high-grading), as well as
 necessarily reduced harvest per acre from non-clearcut
 silvicultural prescriptions. But for the sake of brevity, I will
 ignore these items for the moment.

WRS-17 | OK, several times I have mentioned key points regarding
 'implementation' vs. 'falldown' factors. It is mathematically
 incorrect to calculate the probability of several successive
 events' occurrence (such as planning falldown followed by soft
 falldown followed by recon falldown followed by layout falldown)
 as the SUM of their respective probabilities -- rather it is the
 PRODUCT of their individual probabilities. In other words, they
 are multiplicative, not additive. Not only did the Forest Service
 ignore and underestimate the falldown factors, but they combined
 them incorrectly when they ADDED planning falldown to layout
 falldown.

WRS-18 | The REAL falldown is calculated by the planning implementation
 factor (62%) multiplied by the soft falldown implementation
 factor (90%) multiplied by the recon implementation factor (88%)
 multiplied by the layout implementation factor (76%). This yields
 an overall implementation factor of 37%, or a falldown factor of
 63%. That's right, 63% falldown! I submit that this is a much
 more accurate assessment of falldown, albeit still conservative.
 I formally request the Forest Service recalculate falldown
 factors. Remember, this issue is 'how much of the Forest Plan
 timber base is actually implementable' -- NOT 'how much of an
 individual layed out harvest unit can't be logged'.

WRS-19 | I object to statements in the Draft SEIS alluding to harvests of
 second growth in 80-90 years. Sure, there will be some limited
 harvest of the very best sites that were high-graded years ago.
 But the fact of the matter is that the overall rotation age for
 the landscape will not be 100 years, but will be a minimum of
 110-130 years -- the age at which the average stand in the
 Tongass timber base (SI = 70) reaches 90% culmination of mean

Comments of William R. Shoaf

- WRS-19 (cont) | annual increment. Using a 100 year rotation age in the timber supply equation is false and misleading; alluding to 80-90 is unconscionable. I am in favor of a 250 year rotation which manages for old-growth forests, not second-growth.
- WRS-20 | Most people acknowledge the need for for a reliable, sustainable timber supply from the Tongass. The Forest Service has adequate information to conclude that this sustainable supply of timber is a lot less than was provided in the past, and it is past time that this information be honestly conveyed to the public. I formally request that you heed the edict of Chief Thomas and hasten the TLMP Revision and delay CPOW (and all other) project(s) until that is accomplished. Until a new Forest-wide and Area-wide ASQ is established by the completed TLMP Revision or an amendment, I formally request your EIS's analyze alternatives covering a wide range of timber volumes. Otherwise, your actions are motivated by need (long-term contract demand) and faulty logic (existing TLMP) rather than on the land's true capability to produce resources at a sustainable level.
- WRS-21 | During future implementation of this project, I request there be no deliberate unit expansion, i.e., harvest outside the sanctioned ROD boundaries. This longtime practice, which was recently abandoned for the CPOW layout, was alive and well during the field recon of the CPOW units (according to the planning record), as there was even a place to check on the recon sheet to determine if there was potential to expand the unit, to what extent, and in which direction. Unit expansion understates the true falldown that is occurring, and reduces viability of future offerings. Unit expansion during implementation of the 1989-94 offerings totalled over 5,000 acres and is what caused the proportionality departures you are facing in ALL Management Areas within the Lab Bay and Polk Inlet project areas. These proportionality departures are also contributing factors to the excessive cost and delay of this projects. Because many of the same Forest Service officials who condoned this illegal 'acre neutral' policy are still in place, you are asking the public to swallow a great deal to believe unit expansion will disappear forever. The Forest Service's past actions don't warrant such blind faith.
- WRS-22 | APPENDIX A from the CPOW FEIS is completely out of date, especially Table 1, which shows Polk Inlet coming on line in 1993 (instead of 1995); Lab Bay, Control Lake, and Upper Carroll coming on line in 1994 (none are out the GATE yet -- pun intended; Heceta (cancelled), Sea Level, and Three Creeks in 1995 (where are they?). This APPENDIX sure doesn't state much of a case for "reasons for scheduling the Environmental Analysis for

Comments of William R. Shoaf

WRS-22
(cont) | the CPOW". APPENDIX A needs to be updated.

WRS-23 | For years I listened to Bob Vaught's analogy to explain the narrow purpose and need for the CPOW project. Remember the one, 'if the purpose and need was to build a hospital on Gravina Island, why would I consider an alternative that builds a firehall on Prince of Wales?' Please allow me to make my own analogy. Suppose instead of selling timber, the Forest Service was an egg distributor, with a huge inventory of eggs in cartons. Now suppose that you knew you had a number of cartons that didn't have any eggs at all (planning falldown), there were more cartons that had eggs that were rotten and that nobody wanted to buy (soft falldown), and that all the rest of the cartons contained an average of 3 broken eggs (recon and layout falldown). Now further suppose that you had to calculate how fast you could sell your eggs (sustained yield) before it was necessary to replenish your inventory of eggs (rotation age). Now stretch your imagination and suppose you calculate your selling rate as if you didn't have any problems at all with your eggs (CPOW FEIS and ROD, TLMP, etc.). When it's time to actually sell a carton of eggs, you find one of the cartons that has some fresh ones in it (NEPA). Then you open that carton, find that there are 3 broken ones in it, so you raid 3 eggs from one of the other cartons (unit expansion). Obviously, you may be able to fill the first few egg orders, but will become less able to do so in the future as you run into empty, rotten, and raided egg cartons.

WRS-24 | Mr. Powell, this analogy is the reason the Chief required you to do the CPOW supplement. But you still haven't counted the eggs right. Go back and do it again.

WRS-25 | I believe that the Forest Service has many hard-working intelligent people, capable of producing the highest level of natural resource science. It is my personal opinion that the CPOW Draft Supplement to the FEIS is not a product of that high level of science, but rather has been intentionally bastardized by individual officials to rationalize arbitrary actions of a purely political considerations, with little if any foundation in science (e.g., a March 1995 working document that says the TLMP Revision wanted to be able to use the assumption that falldown was 15% on the Ketchikan Area and ZERO on the Chatham and Stikine Areas). It is my personal opinion that the actions of these individual officials are a clear violation of 18 U.S.C Sections 2073 and 1001 of the U.S Criminal Code, and that the Nation, as well as the Forest Service, could benefit from a hard look. Obey the law and tell the truth indeed!

WRS-26 | Thank you again for the opportunity to comment.

Comments of William R. Shoaf

Sincerely,

W.R. Shoaf

Bill Shoaf
6526 Rodgers Pass
Ketchikan, AK 99901

Responses to William R. Shoaf

- WRS-1 The purpose and need for action stated in the CPOW FEIS was "in part to help satisfy the three-year current timber supply requirement of the Long-term Contract with Ketchikan Pulp company (KPC)." "For the purpose of this project the volume has been determined to be approximately 290 MMBF, a volume that reflects a management decision based on the most current schedule to provide a three-year timber supply of 615 MMBF for the KPC Long-term Contract." The proposed action was "to harvest approximately 290 million board feet of timber from an estimated 10,000 acres" of the project area. The CPOW Record of Decision (ROD) cleared for harvest 267 MMBF from 9,836 acres which meets that stated purpose and need for the project. Please note also, a typographical error, that the Notice of Intent for the CPOW project published in the Federal Register indicated a proposed action of harvest of 290 MMBF, rather than 85 MMBF.
- Appendix A of the CPOW FEIS (Appendix A, Table 1, p. 6-7) displays the role of the CPOW project in meeting current timber supply needs and projected harvest through the year 2004.
- The purpose and need for the CPOW project was challenged through administrative appeal by Southeast Alaska Conservation Council (SEACC, Appeal #93-10-00-0011). The November 23, 1993 decision of the Regional Forester affirmed the Ketchikan Area Forest Supervisor's determination of the purpose and need for the CPOW project. The Appeal Reviewing Officer for the Chief of the Forest Service affirmed the Regional Forester's appeal decision on this point in a decision dated February 2, 1994. Revisiting the purpose and need for the CPOW project is beyond the scope of the CPOW Supplement.
- WRS-2 The CPOW DEIS and FEIS state that determination of 290 MMBF as meeting the purpose and need for the project was a management decision based on the most current schedule to provide a three-year timber supply of 615 MMBF for the KPC Long-term Contract. The preferred alternative for the Lab Bay project amounts to 66 MMBF, the ROD for Polk Inlet cleared 113 MMBF for harvest, the ROD for CPOW cleared 267 MMBF, and the ROD for North Revilla cleared 205 MMBF. These volumes total 651 MMBF. Totaling the stated volumes of each purpose and need would yield 700 MMBF rather than 600 MMBF as indicated in the comment.
- WRS-3 While Long-term Contract clause B0.52 does specify a maximum average harvest rate per year of 192.5 MMBF, B0.62 states that the "Forest Service shall seek... to maintain a current timber supply in all offering areas that totals at least three years of operations... ." The comment regarding reallocation of timber volumes is noted. The request that the purpose and need for the CPOW timber project be reformulated and new alternatives be developed is noted. Reallocation of harvest across the Tongass National Forest is beyond the scope of the CPOW Supplement. The intent of the Supplement is to document and discuss falldown and its potential effects on timber supply and community stability. Reallocation of timber harvest is a function of the Tongass Land Management Plan Revision process.
- WRS-4 The assertion that the CPOW DEIS used the MELP as the predictor of timber supply on the CPOW project area is correct. The CPOW FEIS indicated that TLMP Draft Revision Alternative P (TLMP Revision Alt P) was a better indication of the potential timber supply on the project area for reasons stated in both the CPOW FEIS (p. 3-106) and the CPOW ROD (p. 8 and p. 15). The CPOW MELP*"did not have the objective of redetermining the lands.....suitable for future timber harvest for the entire project area. It was to identify relatively low-risk to environmental concern units, which are suitable for timber harvest..... The purpose of the project's MELP was to identify potential units, not exclude areas from harvest over the long term"* (CPOW ROD p. 8).

Responses to William R. Shoaf

The Supplement to the CPOW FEIS makes the tie to the Forest Plan (TLMP 1979a), a factor not considered in either the Draft or Final CPOW EIS. TLMP (1979a) establishes the overall direction with its scheduled commercial forest land. Harvest of all scheduled commercial forest land would meet the ASQ of 450 MMBF on the Tongass as a whole. The scheduled CFL on the CPOW project amounted to 71,666 acres. At the time the CPOW project was being formulated and analyzed, the standards and guidelines for the TLMP Revision Alternative P were adopted for the project. This was done to make the CPOW project consistent with the new Forest Plan which seemed imminent. TLMP (1979a) is still in effect. As such, predictions of harvestable timber supply must be measured against that of the Forest Plan.

It should also be noted that project area MELPs and LSTAs are not intended to be predictors of all potentially harvestable forest lands. They are intended to help develop site specific proposed actions for a project and reveal probable areas for the next entry. These analyses are the product of a great deal of professional judgement and reflect the direction given for the formulation of each analysis. There are differences between the CPOW MELP and the Control Lake updated LSTA for the CPOW project area. This is to be expected.

WRS-5 Preliminary data developed for the Control Lake Cumulative Effects Analysis included a logging system transportation analysis (LSTA) for the CPOW project area and all other timber projects on the ten year sale schedule. This was done to improve the information used for projecting cumulative effects on timber supply. Preliminary figures derived from early geographic information system (GIS) coverages showed 71,410 acres identified in the project area as suitable for timber harvest. Refined data from the Control Lake Cumulative Effects Analysis Report (the LSTA) resulted in a revision of that figure to 75,205 acres. Differences between the earlier version of the LSTA and the final version are discussed in the Final Supplement. While the LSTA reports similar suitable timber acreage to those developed in the CPOW MELP, there are units proposed by the MELP not found in the LSTA and vice-versa. For example, the updated LSTA excluded from consideration any soils complexes labeled as unsuitable under Draft Revision Alternative P (1991) guidelines. There are soils within those complexes that permit harvest of timber. These are some of the harvest areas identified in the CPOW MELP as suitable and have been harvested in the CPOW project. This is a result of the two being developed using different methods. Rather than a weakness, this should be construed as a strength as the combined results give us greater potential acreage to check for viable harvest units than would either report by itself. The overlap between the two analyses is 31,250 acres, the number of acres common to both products. The acres considered by the LSTA on selected but not conveyed lands amounts to 4,539 acres. It is unclear how many acres considered for harvest by the LSTA would necessitate obtaining rights-of-way across those unconveyed lands or other non-National Forest System lands.

A response to this Freedom of Information Act request was mailed on September 26, 1995. It included a GIS plot of the updated LSTA and indicated that the questions raised within the FOIA request would be answered with additional analysis to be displayed in the Final CPOW Supplement. The commentor met with CPOW Supplement IDT Leader on Friday October 6 to discuss subjects raised in the FOIA request, and comments on the Draft Supplement. They also reviewed a GIS plot comparing the CPOW MELP with the updated LSTA.

WRS-6 A GIS plot displaying the results of the MELP and the LSTA was generated and made part of the planning record. Small scale versions of the two studies are included in the Appendix of the Final Supplement.

WRS-7 The intent of the CPOW Supplement was not to develop new alternatives for the CPOW project, but rather to analyze information not included in the CPOW FEIS, document and disclose

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findings, and allow the Forest Supervisor to make a reasoned decision whether or not to continue implementing the project. The Final Supplement displays several scenarios using five different estimates of suitable timber that have evolved from the CPOW MELP and the updated LSTA. These estimates include the MELP, the LSTA, their overlap, their combination, and a modified combination of the two studies.

WRS-8 The Control Lake Cumulative Effects Analysis is an on-going analysis that will be made available to the public upon request when it is received by the contractor. The data for the CPOW project are now available in the official planning record for this Supplement at the Ketchikan Area Supervisor's Office. There is time for the public to review the data for the project area and how it was analyzed in the CPOW Supplement. A summary of this information by logging system and risk factor for the CPOW project area is included in Appendix B.

We cannot wait for all possible information before making a decision, nor can we wait for every report to be finalized before going on to another project.

WRS-9 The 15.3 percent figure used in the Draft Supplement was "hard" falldown, combining both planning level hard falldown (0.4 percent) and implementation hard falldown (14.9 percent). This was done to help simplify a complex issue. What is being discussed is an estimate of suitable timber available for harvest which, in the Draft Supplement, was 99.6 percent of the TLMP (1979a) scheduled CFL. Any project that is scheduled from that identified unit pool should then experience a 14.9 percent hard falldown rate. Implementation falldown has been updated for the CPOW project with information from an additional 22 units. Hard falldown is now calculated to be 14.8 percent and soft falldown 5.4 percent. For the purpose of simplicity, hard falldown during implementation has been rounded to 15 percent and soft falldown to 5 percent.

WRS-10 The 0.4 percent planning hard falldown rate discussed in the Draft Supplement was correctly determined by comparing the LSTA estimate of suitable timber with the planned TLMP scheduled CFL of 71,666 acres. Falldown is defined as actual harvest compared with planned harvest. TLMP Draft Revision Alternative P estimates of suitable timber are not planned harvest acres at this time. It should be noted that two of five suitable timber supply scenarios used in the Final Supplement identify suitable timber in excess of the acres of TLMP scheduled CFL. Planning falldown under these scenarios would then be zero.

It is true that the LSTA was developed using Alt P standards and guidelines, the application of which Tongass-wide would have resulted in an ASQ of 418 MMBF. The results of intensive efforts to identify suitable timber on one project area best apply to that project area. While it would appear that 20 percent less suitable timber may be found on the CPOW project area than projected by Alternative P, that may not hold true for other project areas.

WRS-11 It is not necessary to remove all proposed harvest units in designated retention as retention is not a fixed or permanent land allocation. It is established only for the duration of each specific project (CPOW ROD, page 5). The location of retention is re-mapped or re-established for each project based on the best available information at that time. The removal of beach fringe, estuary/stream buffers, lake buffers, and eagle nest buffers etc, from the Control Lake LSTA is roughly analogous to retention in TLMP (1979a).

For the CPOW project area, TLMP (1979a) projected the need to identify 28,478 acres (adjusted for land ownership status) of retention for wildlife habitat. Within the CPOW project area, the updated LSTA identified 16,556 acres of tentatively suitable forest land reserved from harvest in beach fringe and estuary, eagle nests, expanded stream buffers, lake buffers, and riparian soils. In

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addition, TTRA buffers account for another 12,420 acres of habitat reserved from timber harvest.

In total, these protection measures slightly exceed the retention acreage direction established by TLMP (1979a). See response to USDI-7.

TLMP (1979a) proposed that approximately 273,000 acres of suitable and operable timber be "retained" as a means of protecting important wildlife habitat across the Tongass. TLMP Draft Revision Alternative P proposed the use of Land Use Designations (LUDs) to protect important wildlife habitats. The Old-Growth Habitat LUD would have encompassed approximately 247,000 acres across the Tongass National Forest. Additional habitat protection was to have been provided by Beach Fringe and Estuary LUD (approximately 320,000 acres). The Lake and Stream Protection LUD would have provided another 550,000 acres of habitat though 127,000 acres of this LUD would have been available for timber harvest.

WRS-12 Soft falldown of 6 percent in the Draft Supplement was not strictly attributed to economics. Soft falldown has been revised to 5 percent based on information from 22 additional harvest units prepared and offered from the CPOW project since the Draft. Deferrals of units or portions of units in the CPOW project were also made for karst protection, goshawk habitat, blind leads, and otherwise suitable timber stands fragmented by stream courses that made harvest uneconomical (Supplement, Appendix A). Because these types of deferrals do not result in removal of those acres from the suitable timber base (unless or until the Forest Plan is revised), those acres necessarily remain in the timber supply equation, though at risk. The possibility that these deferred acres may not be harvested in the future is addressed and potential effects on long term timber supply is displayed. Increasing soft falldown to 10 percent is not supported by data carefully gathered during implementation of the CPOW project.

WRS-13 The 15 percent hard falldown factor that occurred during implementation of the CPOW project does not account for the falldown experienced during the planning phase of the project. In the Draft Supplement, a 0.4 percent planning hard falldown factor was identified as the most likely to occur. Three of five possible suitable timber scenarios detailed in the Final Supplement identify potentially suitable harvest acres in excess of the 71,666 acres of scheduled CFL for the CPOW project area.

Falldown that occurred during the field recon of 199 CPOW units was a factor in the reduction of the MELP from approximately 53,000 acres to 50,000 acres. Falldown that occurs after the identification of the potential suitable timber but prior to the ROD and implementation was not fully accounted for in the analysis presented in the Draft Supplement. While some of the field recon falldown was taken into account in the reduction of the MELP acres, the full effects of field recon falldown occurring over limited portions of the identified unit pools were not. Application of field recon falldown percentages further reduces the potential harvestable timber that may be found within a project area.

Based on documents from the planning record (Datalib #29362/Certified Administrative Record/ Document #643), field reconnaissance resulted in the deletion of whole units for protection of caves, streams, and soil productivity. Units were also modified resulting in the deletion of acres for the same reasons plus logging feasibility, riparian soils, non-commercial forest land, cultural resources, and goshawk nests. These protective measures resulted in the deletion of 1,272 acres, most of which would be considered unsuitable for timber production.

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Additional information gathered during the field reconnaissance phase of the Polk Inlet, Lab Bay, and Control Lake projects indicates an average of 8 percent hard falldown between the establishment of a potential unit pool and a ROD. In addition, 10 percent soft falldown is encountered. For the purposes of the Final Supplement, the 8 percent hard falldown is combined with implementation hard falldown, and the 10 percent soft falldown is recognized as at risk for future harvest consideration.

WRS-14 As stated in Document #93 of the CPOW Certified Administrative Record, unit boundaries were not redesigned because the precise locations of these unverified streams were not known. The appropriate changes to incorporate buffers were to be made during unit layout. Enough information was known, however, to account for the acreage and volume changes within units to provide additional buffers.

WRS-15 The definition of falldown is the difference between planned (ROD) harvest and actual (net) harvest. Most of the differences between planned and actual timber harvest are the result of harvesting to the limits of an individual setting. To not do so would often result in isolated patches of timber that for reasons of economics might not be harvested in the future. Leaving isolated timber at the margins of a setting would not be responsible or efficient management of National Forest System lands. To characterize this as unit "expansion" would be misleading. Before one could make the case that this "robs Peter to pay Paul," one would have to ascertain whether or not the timber harvested at the margin of a setting would be harvestable from other logical settings adjacent to the unit that had been planned for future entry. Many times there are no adjacent logical settings identified in either the project unit pool, the MELP, or the LSTA. See response to SCLDF-39.

A number of the differences between planned unit boundaries and implemented unit boundaries are the result of mapping discrepancies. Some unit boundaries were intended to abut second growth stands but if laid out exactly as shown on the unit card, may have fallen short of the second growth stand. Adjustments are then made to move the actual unit boundary to the edge of the second growth. When displayed together, the adjustment appears to be an addition to the unit, when in fact, the unit boundary as laid out reflects the intent of the ROD for that particular unit.

In some cases, timber from within a planned unit boundary was deferred because it made sense to leave it standing with adjacent suitable timber to ensure an economically viable logical setting for the next timber project.

Of the four offerings and releases noted in this comment, a total of 426 acres of the planned 3,229 acres were ~~deleted~~ as unsuitable for timber harvest, the majority of which for very high risk of landslide. This amounts to a 13 percent hard falldown rate. In addition, 376 acres were ~~deferred~~ from harvest. These acres were the result of deferrals for karst and goshawk protection, blind leads, fragmented stands uneconomical to harvest, and deferrals to make logical setting for the next entry. The acres of deletions and deferrals were partially offset by 150 acres of harvest that extended beyond the planned boundaries. For the 47 units in the four offerings noted in this comment, this amounted to about 3 acres per unit. If that is considered "robbing Peter to pay Paul," Peter isn't going to notice the loss and Paul is not about to retire in luxury.

WRS-16 The MELP units were not criticized in the Supplement for having been identified as low risk. The weakness highlighted was in extrapolating falldown percentage to projects beyond the 50,288 acres identified in the MELP.

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Implementation records of the CPOW project do not ignore differences in planned versus cruised volume/acre. Each offering on the CPOW project undergoes a change analysis to determine the differences between the planned and implemented units. The Forest Supervisor determines whether or not the cumulative effects constitute a substantial change in the proposed action. The analysis displays changes in many activities and resources. One of these is a comparison of the planned ROD unit volumes with the final cruised unit volumes. Comparing planned volumes to cruised volumes accounts for the harvest of less productive stands, as well as the harvest of more productive stands. Difference between acres of clearcut harvest prescriptions and acres of partial cut harvest prescriptions are documented. The cumulative effects are also displayed in the change analysis summaries.

WRS-17 There are two methods to determine the effects of two levels of falldown. One is the process mentioned in the comment - multiplying the available timber base by a series of successive factors. The other method (the method used in the Supplement) simplifies the analysis by adding the falldown factors and applying it against the suitable timber base followed by comparison of the results with planned harvest as defined by TLMP (1979a) scheduled CFL. The results do differ when comparing the results of the two methods. As an example, start with a timber base of 100 acres and anticipate a planning falldown rate of 10 percent and an implementation falldown rate of an additional 10 percent. Using the method shown in the comment would result in a potential harvest of 81 acres (90 percent of 100 acres times 90 percent of that result). The method used in the Supplement would add the two falldown factors (10 percent plus 10 percent = 20 percent) resulting in an implementation factor of 80 percent that would yield 80 acres of harvest. The greater the percentages, however, the greater the difference between the results of the two methods. The difference between the two methods using a 20 percent planning and 20 percent implementation falldown is the difference between 64 acres and 60 acres respectively. We did not ignore or under-estimate falldown factors in the Supplement. We have elected to simplify, as much as possible, the calculation of the potential effects of falldown by adding the factors. The results are nearly the same and, if anything, yield more falldown than by using the multiplicative method recommended in the comment.

WRS-18 This comment displays falldown in a different manner than that used in the Supplement by utilizing a percentage that could be implemented rather than a percentage that cannot be implemented. To simplify our response and to stay consistent with previous comments, we have converted the commentor's "implementation factors" to falldown percentages.

The assumptions posed in this comment are incorrect. The comment assumes that Draft Revision Alternative P projections of 114,260 acres of suitable timber on the project area represent planned harvest. This is incorrect. The planned harvest for the project area is TLMP scheduled CFL of 71,666 acres. Each of the falldown factors identified in the comment are addressed below.

Planning falldown of 38 percent (planning implementation factor of 62 percent in the comment). Our best estimate for potentially harvestable timber on the project area is the combined results of the CPOW MELP and the updated LSTA which would yield 94,243 acres, well in excess of planned harvest. As such, there is no planning level falldown.

Soft falldown of 10 percent (soft falldown implementation factor of 90 percent). There is no rationale or data presented to support the commentor's additional 10 percent implementation soft falldown factor that would occur between the planning and recon phases of a project. Previously, the commentor indicated (WRS-12) this was the result of a 6 percent soft falldown factor that occurred during implementation increased by an additional 4 percent as the result of a "wild

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guess." Soft falldown has been accounted for during the recon and implementation phases of a project in the Supplement. There is no basis for this additional soft falldown factor.

Recon falldown of 12 percent (recon implementation factor of 88 percent). We have identified a recon falldown factor of 18 percent of which 8 percent is hard falldown and 10 percent is soft falldown. We used the 8 percent hard falldown in the Supplement as an adjustment factor in future potential harvest but also documented and discussed the risk associated with the 10 percent soft falldown.

Layout falldown of 24 percent (layout implementation factor of 76 percent). Falldown encountered during project layout of the 121 CPOW harvest units prepared to date has totaled 20 percent. Of this total, 15 percent is attributed to hard falldown and 5 percent attributed to soft falldown. The 15 percent hard falldown is a reduction to potential timber harvest. The 5 percent soft falldown is at risk for future harvest and that possibility is discussed in the Supplement.

Falldown factor of 63 percent. Our total hard falldown amounts to 23 percent from planning through project implementation. An additional 7 percent may be considered at risk for future harvest consideration.

We believe this to be the most accurate assessment of falldown available. Our falldown calculations can be applied to any estimate of harvestable timber on the project area. There are five estimates of suitable timber for the CPOW project, some of which are less than TLMP scheduled CFL, some of which are greater.

The questions to be answered in this Supplement are these: How do we allocate the remaining timber harvest on the project area between now and the year 2054? Will the long-term benefits of halting or significantly diminishing the CPOW timber project now outweigh the immediate disruption to community stability?

WRS-19

The Supplement does not display harvest of second-growth acres in future timber supply projections. The TLMP recognizes a rotation age of 100 years for regenerated timber stands. It is reasonably foreseeable that increasing demand for timber would one day make intermediate treatments economically viable (commercial thinning). Potential timber volumes that could result from such treatments or shortened rotations were not reflected in potential harvest volumes prior to the year 2054. This was discussed in the context of potential changes to the timber supply. If we are to discuss potential reductions to the timber base, is it not also wise to discuss potential increases based on revised management practices for lands already identified as suitable for timber production?

Basically, what we are saying is that in some places under certain conditions, timber may be harvested at an age younger than 100 years. In other places harvest will occur at a later age.

Regenerated timber stands are regarded as generally culminated in growth at the age that corresponds to 95 percent of the apparent culmination that was calculated from the managed yield projections used in FORPLAN. The minimum age for attainment of Culmination of Mean Annual Increment (CMAI) for stands with site index of 100 is 100 years without thinning and 90 years with thinning. For stands with site index 80, CMAI is attained at age 110 without thinning and age 100 with thinning (Table B-10 TLMP Revision, Appendix B, p. 236).

WRS-20

The TLMP has been amended twice, most recently in 1991. The revision effort begun in the late 1980s will result in a Draft Forest Plan published for public review by January 1996. When a

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Final Forest Plan is approved later in 1996, it too may be amended to reflect changed conditions or new issues. If on-going projects are in conflict with a new Forest Plan, those projects may be modified to bring them into compliance, if necessary. For these reasons, halting or delaying projects is unjustified.

Until a new Forest Plan is approved, TLMP (1979a) remains in effect. As each project is analyzed, the purpose and need for the project and the issues associated with the proposed action guide the development of the alternatives. Commitment to the Long-term Timber Sale Contract is one aspect of the purpose and need for proposed actions. Commitment to the independent timber sale program is another aspect considered in other project proposals.

WRS-21 The Ketchikan Area policy is that the Forest Supervisor approves differences between harvest unit boundaries as planned and as implemented. All CPOW units have undergone an analysis of changes performed by the Thorne Bay Ranger District and forwarded to the Forest Supervisor for review prior to issuing the determination as to whether or not the differences constitute a substantial change to the proposed action, or reveal significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. The Forest Supervisor also determines whether or not a correction or supplement to the environmental documents is necessary before implementing the project.

The analysis of changes and the Forest Supervisor's determination as to the significance of those changes for each of the CPOW timber offerings to date is available to the public. This documentation has been made available to the commentor and others interested in project implementation.

Through 1995, 121 CPOW units were prepared for harvest. A total of 232 acres were included for harvest that are outside the unit boundary as depicted in the ROD. This amounts to 4.5 percent of the planned harvest acres for those 121 units, and averaged only 2 acres per harvest unit. This is a very minor component of the CPOW project thus far in our experience.

WRS-22 The comment is correct. Appendix A of the CPOW FEIS is out of date. The most recent publication, the Control Lake DEIS, contains updated information for all recent timber sale EISs in Appendix A (Control Lake DEIS, incorporated by reference). In this document, CPOW is shown to contribute 267 MMBF, and Polk Inlet 113 MMBF, per their respective Records of Decision.

WRS-23 The ASQ is currently 450 MMBF. From 1952 to 1990 annual timber harvest on the Tongass National Forest has averaged 364 MMBF, or approximately 81 percent of ASQ. As such, the Tongass National Forest has not been forced to "make up for broken eggs."

WRS-24 The Chief of the Forest Service did not require the Ketchikan Area to supplement the CPOW FEIS. This was a decision made by the Ketchikan Area Forest Supervisor. The CPOW Supplement sets forth several possible scenarios regarding falldown, some of which are more plausible than others.

WRS-25 It is our intent to bring to light matters of fact in the CPOW Supplement and to gain as much agreement and understanding of those facts as possible. At that point, decisions must be made. If facts are not in dispute, that will help focus the debate on decisions and risks associated with those decisions. Comments prior to this paragraph will help us lay out the facts.

We have considered the allegations raised in the comment and are not in violation of the law.

Comments of the United States Department of Interior



United States Department of the Interior

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ER 95/627

OCT 4 1995

Mr. Robert L. Vaught
Acting Forest Supervisor
Ketchikan Area
Tongass National Forest
Federal Building
Ketchikan, Alaska 99901

Dear Mr. Vaught:

We have reviewed the July 1995 U.S. Forest Service, *Central Prince of Wales Draft Supplement to the Final Environmental Impact Statement (EIS)*. We offer the following comments for your consideration.

- USDI - 1 | The Draft Supplement to the Final EIS (Draft Supplement) states that the Central Prince of Wales (CPOW) Multi-entry Layout Plan suitable timber base was updated through field reconnaissance and that an estimated 50,288 acres were suitable for timber harvest in the project area. This is 56 percent less timber than Alternative P estimates as suitable for harvest in the project area in the 1991 Draft Tongass Land Management Plan (TLMP) Revision (114,260 acres). The updated logging system transportation analysis identified 71,410 acres available for harvest in the CPOW area, which is 37 percent less than what is identified in
- USDI - 2 | Alternative P. If this discrepancy between Alternative P and what can actually be harvested is reflected across the Tongass, then the amount of suitable timber and the Annual Sale Quantity for the Tongass in Alternative P may be grossly overestimated, possibly to the point where it is not useable for further planning applications. We suggest that this discrepancy be rectified.
- USDI - 3 | We suggest that the Final Supplement to the Final EIS (Final Supplement) state if the falldown estimates include unit expansions of units already cut and/or falldown from preliminary reconnaissance prior to the current unit layout.
- USDI - 4 | We believe that the Draft Supplement should be expanded to more fully address effects the falldown approach in the CPOW project area will have on fish and wildlife populations. The document states that the 1979 TLMP schedules the harvest of 71,666 acres from the project area and that this figure is the baseline against which any estimate of potential timber harvest must be measured. But the 1979 TLMP does not take into account the requirements of the
- USDI - 5 | Tongass Timber Reform Act, Alaska National Interest Lands Conservation Act, wildlife viability (National Forest Management Act), cave and karst protection, or the 1995 Anadromous Fish Habitat Assessment (AFHA). We suggest that this be taken into account.

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USDI-6

The Draft Supplement identified Habitat Conservation Areas, goshawk protection zones, cave and karst allocations, and the AFHA strategy as soft falldown, until such time as decisions are made through the appropriate land allocations process. Page 5 in Chapter 4 states "we assume that soft falldown will occur but will become economically feasible to harvest between now and the year 2054." This statement leads us to assume that the wildlife habitat that is deferred as soft falldown will be harvested during the rotation period, which is only 100 years. We believe that this is not enough time for harvested forest lands to regain the old growth characteristics required by certain species, such as, but not limited to: the Alexander Archipelago wolf, Sitka black-tailed deer, marbled murrelet, Queen Charlotte goshawk, and the Pacific-slope flycatcher. We suggest extending this time period in the Final Supplement.

USDI-7

The Draft Supplement defines hard falldown as "acres that may not be harvested by law or where irreparable resource damage may occur as a result of harvest." (Emphasis added). Some wildlife species require a minimum number of acres of old growth for populations to remain viable, as required by the National Forest Management Act. A certain amount of old growth forest (250 - 300+ years old) should be included as hard falldown when considering old growth dependent species. Not including old growth habitat as hard falldown gives a false perception of the amount of suitable timber available, or it ignores the Forest Service responsibility to maintain viable wildlife populations throughout the Tongass National Forest. If harvest on Prince of Wales Island continues at the rate that it has in the past or is proposed, we believe that certain old growth dependent species may become "irreparably damaged resources." We suggest including old growth habitat as hard falldown.

USDI-8

As stated in our December 15, 1992, comments on the CPOW Draft EIS; our April 9, 1993, comments on the Biological Assessment; and our August 26, 1993, comments on the CPOW Final EIS, we are concerned about the loss of habitat for old growth dependent species on Prince of Wales Island. The cumulative impact of the CPOW, Lab Bay, Polk Inlet, Control Lake, and other planned future old growth timber harvest is expected to broaden current localized impacts into range-wide population declines. We believe this situation should be addressed in the Final Supplement.

Alexander Archipelago Wolf/Sitka Black-tailed Deer

USDI-9

The Fish and Wildlife Service is particularly concerned about the direct and indirect impacts on the Alexander Archipelago wolf population occurring within the project area. A 12-month "not warranted" finding for the wolf was published in the *Federal Register* on February 23, 1995. However, we remain concerned for the wolf's status, especially on Prince of Wales Island, because the island may support as much as a third of the total wolf population in Southeast Alaska (Bowyer, et al. 1994).

USDI-10

Threats to the wolf are: 1) the reduction and long-term degradation of the habitat capability for the wolf's primary prey species, the Sitka black-tailed deer, resulting from clear cutting, and 2) the development of an extensive road system. Clearcutting has a cumulative impact on deer populations by reducing habitat capability. Ultimately, reduced habitat capability associated with various stochastic events will result in reduced populations of Sitka black-tailed deer. In

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- USDI-11 addition, roads increase accessibility for hunters, trappers, and poachers, which increase the legal and illegal take of wolves. Studies have clearly demonstrated a relationship between road density and decrease in wolf populations. Wolves generally are not present where the road densities exceed 0.93 mi/mi² (Mech 1989). The July 6, 1995, draft conservation assessment for the Alexander Archipelago wolf (Kirchhoff, unpublished report) concluded that wolves experience significantly higher mortality in areas with road densities exceeding 0.4 mi/mi². The CPOW Final EIS (Chapter 3, page 170, Table 3-69) states that the existing road density for the CPOW area is 1.1 mi/mi². The CPOW project includes construction of 100 miles of new road, plus five miles of temporary roads, and 78 miles of reconstructed roads, which will increase the CPOW road density to 1.2 mi/mi².
- USDI-12 Although the CPOW Final EIS offers implementation of an access management plan to mitigate road-related wildlife impacts, we are concerned about effectiveness of the Forest Service's road closure policy. The Fish and Wildlife Service has observed that implementation of the policy has been largely ineffective in eliminating or controlling access to areas. Offering road closures as mitigation for adverse impacts on wildlife populations is likely to be of minimal benefit to wildlife if the policy cannot be enforced.
- USDI-13 The Fish and Wildlife Service estimates that within the next 10 to 30 years, given the past old growth timber harvest on Federal, State, and Native corporation lands, significant localized reductions in the wolf populations will occur as more roads are constructed and clearcut areas transform into second growth stands, thus rendering the areas unusable by deer. We believe that the wolf and Sitka black-tailed deer habitat capability models used for analyzing the effects of the CPOW project on wildlife habitats are outdated, overly simplistic, and are not useful in determining population viability (Kiester and Eckhardt 1994). We suggest using more of the empirical information that is available to update these models before an analysis of falldown effects is completed.
- USDI-14
- Queen Charlotte Goshawk
- USDI-15 On June 29, 1995, the Fish and Wildlife Service published in the *Federal Register* its finding that listing the Queen Charlotte goshawk as endangered pursuant to the Endangered Species Act was "not warranted." An important element in this decision was the ongoing interagency conservation efforts and the fact that long-term land management requirements of old growth-dependent species are being addressed through revision of the TLMP. However, the we remain concerned about the status of the Queen Charlotte goshawk.
- USDI-16 The CPOW Final EIS (page 3-38) acknowledges that timber harvest can adversely affect goshawks. The Final EIS states that the Forest Service's 1992 Interim Guidelines for Goshawk Management will be used to manage habitat for any goshawk nests found in the CPOW project area. We have previously stated that we are not convinced those guidelines will protect the viability of the goshawk. The Forest Service has been advised repeatedly by the Fish and Wildlife Service that the interim guidelines are not adequate to protect these birds based on current goshawk information (enclosures). The draft conservation assessment for the northern goshawk (Hayward, et al. unpublished report) suggests that the mean home range for

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USDI-16 (cont) | goshawks is 5,000 to 6,000 hectares (12,355-14,826 acres). The breeding season use areas for five male goshawks in Southeast Alaska varies from 539 to 10,378 hectares. Goshawks have been found to prefer old growth forest and avoid clearcut areas and other non-forested habitat. We believe that the Final Supplement should reflect these findings by including large blocks of old growth habitat as hard falldown to preserve options to manage for goshawk habitat in the project area. We believe that larger areas of old growth forest around goshawk nests during this and future timber sales on Prince of Wales Island may assist in precluding the need to list the goshawk under the Endangered Species Act.

We appreciate the opportunity to review and comment on this document. If you need any clarification of these comments, please contact Carol Hale of the Fish and Wildlife Service, Juneau (907-586-7240).

Sincerely,


Regional Environmental Officer - Alaska

Enclosures

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USDI-1 Comment noted.

USDI-2 As stated in the Draft Central Prince of Wales (CPOW) Supplement, the preliminary results of the Control Lake Cumulative Effects Logging Systems Transportation Analysis (LSTA) did identify 71,410 acres suitable for harvest within the CPOW project area. Since the Draft was completed, the LSTA has been updated and currently identifies 75,205 acres as suitable for harvest within the CPOW project area.

Falldown discrepancies related to the Tongass NF allowable sale quantity (ASQ) will be addressed in the Tongass Land Management Plan (TLMP) Revision process. Modifications to the ASQ are outside the scope of individual projects (including the CPOW Supplement).

USDI-3 The Supplement disaggregated falldown into two main categories; soft falldown and hard falldown. Hard falldown results in reductions to the suitable timber base. Soft falldown results in a deferral of proposed harvest. Analysis of 121 CPOW units indicates a 4.4 percent soft falldown is the net result of a 9.9 percent total soft falldown combined with 4.5 percent additions outside unit boundaries (CPOW Supplement, Appendix A, Tables A-5 and A-6). Additions to units occurred when resource protection could be enhanced, logical settings were completed, and/or GIS mapping discrepancies were identified.

The Final Supplement also includes analysis of reconnaissance falldown that includes hard (8 percent) and soft (10 percent) falldown to better anticipate falldown that occurs from planning through implementation.

USDI-4 The scope of the Supplement as defined by the Ketchikan Area Forest Supervisor in his December 20, 1994 memo is "*to prepare a supplement...on the issues of falldown and sustainability.*" In this case, sustainability was with respect to planned and future timber harvest on the project area.

These issues were raised because of concerns that falldown was not taken into consideration in calculating remaining timber available for harvest on the project area. If an analysis of falldown revealed the necessity of re-allocation of harvest, it would have implications for community stability.

A biological assessment was completed for the CPOW project by an interdisciplinary team (IDT) as required by Section 7 of the Endangered Species Act (as amended). The assessment concluded that alternatives of the CPOW project are not likely to pose adverse impacts to any of the threatened or endangered species known or believed to inhabit the project area when standards and guidelines are implemented (CPOW FEIS, Appendix B). The National Marine Fisheries Service and the USDI Fish and Wildlife Service concurred with the assessment's conclusion (CPOW FEIS, Appendix B).

The selected alternative for the CPOW project proposed harvesting approximately 267 MMBF over 9,836 acres. It is anticipated that the CPOW project will experience 20 percent implementation falldown (15 percent hard and 5 percent soft), resulting in approximately 1,967 fewer acres being harvested. Although difficult to place hard figures on the fish and wildlife populations affected, it is reasonable to assume that a reduction in acres harvested would correlate to a reduction in impacts on fish and wildlife habitat with proportional reductions of adverse effects on habitat capability. Our analysis of falldown indicates that future harvest proposed in planning efforts may be less than projected which translates to less habitat loss than the model indicates.

Responses to the United States Department of Interior

USDI-5 New laws and resource issues have arisen since the original TLMP was approved. TLMP was amended in 1985-86 to, in part, reflect ANILCA (1980), and again in 1991 to reflect Sections 103, 201 and 202 of TTRA (1991). Until TLMP is revised or amended, the TLMP, as Amended (TLMP 1979a), remains in effect and guides the direction for project planning on the Forest.

TLMP (1979a) scheduled commercial forest land (CFL) for the project area was proportionally reduced to reflect changes in land ownership as well as land use designations that have resulted from ANILCA and TTRA.

USDI-6 The Draft Supplement analyzed soft falldown as an economic deferment which could be harvested if economic indices improved. The Final Supplement disaggregates soft falldown into two categories: (1) falldown that is at moderate to high risk of never being harvested; and (2) falldown that is at low risk of never being harvested. Examples of moderate to high risk soft falldown may include buffers around goshawk or eagle nests, buffers around cave/karst features, or encumbered lands which have not yet been conveyed. Soft falldown encountered during field recon of four Prince of Wales Island projects that is at moderate to high risk of never being harvested amounted to 2 percent of the total 10 percent soft falldown. The other 8 percent (low risk soft falldown) includes scheduling deferments for adjacency, proportionality, or watershed thresholds being reached.

Timber lands deferred from harvesting for these situations are still considered suitable for future harvesting and will be re-scheduled, until such time as the lands are either deferred again, or removed from the suitable timber base.

TLMP (1979a) establishes rotation ages for scheduled CFL and this factor determines, in part, the ASQ. As such, the TLMP Revision is the appropriate vehicle for this decision and setting an ASQ is outside the scope of the CPOW Supplement.

USDI-7 The definition of hard falldown used by the Supplement is consistent with 35 CFR Part 219.14—Timber Resource Land Suitability. Lands are not suited for timber production if they meet one of the following criteria:

- (1) The land is not forest land as defined in 36 CFR 219.3.
- (2) Technology is not available to ensure timber production from the land without irreversible resource damage to soils, productivity, or watershed conditions.
- (3) There is not reasonable assurance that such lands can be adequately restocked as provided in 36 CFR 219.27 (c)(3).
- (4) The land has been withdrawn from timber production by an Act of Congress, the Secretary of Agriculture, or the Chief of the Forest Service.

Examples of lands that are not in the suitable timber base include: wilderness areas, lakes and streams, TTRA stream buffers, areas with very high mass movement index (MMI) soils, rock outcrops or bluffs, and lands which are less than 10 percent forested.

Commercial forest lands currently providing habitat for old-growth dependant species may be deferred from harvesting (soft falldown), though these lands would still be considered part of the suitable timber base. The Final Supplement discusses in further detail the potential that some soft falldown may never be harvested (Final Supplement, Chapter 4).

Responses to the United States Department of Interior

This comment seems to confuse retention with deferrals of timber harvest on project areas for specific reasons. Old-growth retention has been deleted before we calculate suitable acres.

The acreage of old-growth habitat set aside under the retention factors method of TLMP (1979a) should not be confused with falldown. The recommended percentages of CFL assigned to old-growth retention are not considered part of the suitable timber base scheduled for harvest during the 100-year rotation. Retention does not contribute to ASQ calculations. See response to WRS-11.

USDI-8 The scope of the Supplement is to provide the Forest Supervisor with additional information regarding falldown and its effect on sustainable timber harvest. The cumulative effects of timber harvest on old-growth dependant species was analyzed and displayed in the CPOW FEIS (pp. 3-9 through 3-38).

The Lab Bay DEIS, Polk Inlet FEIS, and Control Lake DEIS also display the cumulative effects of harvesting old-growth timber on old-growth dependant species.

See also response item USDI-4.

USDI-9 The effect of the CPOW project on gray wolves was displayed in the CPOW FEIS. Habitat capability changes from 1954 through the year 2140 projected a 36 percent reduction. This reduction was based on all past and projected timber harvest and assumed the harvest of all 114,260 acres of suitable timber identified by the TLMP Draft Revision Alternative P for the CPOW project area. In the Supplement, suitable timber estimates are identified that range from 27 percent to 82 percent of that predicted by the Draft Revision. Projected declines do not take into account the 23 percent hard falldown associated with project planning and implementation, nor the 7 percent additional soft falldown thought to be at high to moderate risk of not being harvested. This is outside the scope of the Supplement, but the wolf should benefit from falldown that results in less timber harvest in a given area. Less harvest should mean less impact on deer habitat capability, which should result in less of a decline in deer population than documented in a project EIS. The TLMP Draft Revision, expected to be published in December 1995, will address population viability strategies on the Tongass NF as a whole.

USDI-10 The same reasoning in response to USDI-9 applies as well to habitat capability for Sitka black-tailed deer.

USDI-11 Table 3-69 of the CPOW FEIS displays the existing road density for the CPOW project area at 1.1 mile of road per square mile. It also shows that the selected alternative would increase the road density to 1.2 miles per square mile if the access management plan found in Appendix 2 of the CPOW ROD is not implemented. When the access management plan is implemented, the road density drops to 0.7 miles per square mile (CPOW FEIS, page 3-170).

USDI-12 The CPOW FEIS discussed access management and concluded "Roads under Forest Service jurisdiction can be closed by authority of CFR 36, ch. 11, parts 212.7 and 261." (CPOW FEIS, p. 3-354). The Honker drainage road system was closed under such authority. Roads closed by the access management plan will be closed to all motorized vehicles by gate, earth barrier or vegetative closure (CPOW FEIS, p. 3-354).

USDI-13 Habitat capability reductions were documented in the CPOW FEIS. Based on estimates of suitable timber and falldown experienced in implementation of the CPOW project, those habitat capability projections would appear to overstate probable impacts.

Responses to the United States Department of Interior

- USDI-14 Developing new habitat capability models and re-analyzing habitat capabilities on the CPOW project area are beyond the scope of this Supplement.
- USDI-15 We too are concerned about the status of the Queen Charlotte goshawk. While not directly benefitting the goshawk, falldown should not have a negative impact on the species. See response to USDI-9.
- USDI-16 The potential effect of the CPOW project on Queen Charlotte goshawk habitat was documented and discussed in the CPOW FEIS. The Forest Supervisor took that into account when he made the decision documented in the CPOW ROD (July 1993). To reiterate, old-growth retention is not part of the scheduled CFL.
- USDI-17 Commercial forest lands classed as unsuitable for harvesting must fall within one or more of the suitability criteria in 36 CFR 219.14, Section (a), (1) through (4) (see response to USDI-7). The Supplement IDT recognizes that some soft falldown is at moderate to high risk of not being harvested. This is discussed in Chapter 4 of the Final Supplement.
- Population viability strategies will be an integral part of the TLMP Draft Revision due for publication by the end of the calendar year. Setting aside additional large blocks of old-growth habitat is outside the scope of this Supplement.

Appendix G

**Ten-Year Timber Sale Plan
- Ketchikan Area**

Ketchikan Area Ten-Year Timber Sale Plan

This ten-year timber sale plan is an updated version of the ten-year timber sale plan used for analysis purposes in the CPOW Supplement. That plan was dated May 11, 1995. The only difference between the May 11 version and the June 20 version displayed here (Figure G-1) is of 800 MBF, a slight reduction in the fiscal year 1996 sale program. That change would amount to approximately 30 acres less timber harvest on Prince of Wales Island. The analysis in the CPOW Supplement was not revised to reflect that small change as it amounts to only less than one percent of the timber harvest schedule on Prince of Wales Island for 1996.

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