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Million Dollar Question: How Taxpayers Pay Pulpmills to Clearcut the Tongass National Forest
[Report]

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Southeast Alaska Conservation Council

SEACC 419 Sixth Street, Suite 328 Juneau, Alaska 99801 (907) 586-6942

MEMO

To: *David Cottingham*
Re: Tongass National Forest
From: SEACC Staff
Date: 6 May, 1993

Enclosed is a recently released report by noted forest economist Randall O'Toole, which shows how the Tongass National Forest in Southeast Alaska lost a whopping \$64 million in its taxpayer-supported timber program in 1992.

In 1990, Congress attempted to force the Forest Service to charge fair market value for the public's trees and to instill some balance in the agency's timber-biased management of the Tongass by passing the Tongass Timber Reform Act. Sadly, however, the intent of Congress to fix the economic and environmental problems on the nation's largest forest was virtually ignored by the very Administration which signed the reforms into law.

Under the grip of two monopolistic long term contract holders, the Forest Service still dishes out millions of dollars every year to allow clearcut logging of the unique old growth rainforests on the Tongass. These 1992 losses on the Tongass are record-high. **The Tongass continues to surpass every other national forest in timber program losses.**

Such outrageous subsidies are leading the region toward a fate similar to the Pacific Northwest. The Forest Service recently squelched their own biologists who predicted serious declines in wildlife populations due to the logging plans designed to satisfy the contract holders. The economy of Southeast Alaska is strongly based on industries like tourism and commercial fishing which depend on protected habitats and intact ecosystems. Subsidized, excessive logging on the Tongass seriously threatens the economic stability of Southeast Alaska, as well as our fish and wildlife.

The forest's huge size, its unprecedented long term logging contracts, its contribution to a world-renowned salmon fishery, and the fact that there are still vast tracts of old growth forest left to manage properly, are only a few of the reasons why the Tongass National Forest is highly unique. We believe this forest needs strong leadership from the White House, continued effort by Congress, and tenacious involvement of the public. Without this commitment, we could lose America's last rainforest while we continue to witness an unacceptable drain on the federal treasury.

We hope that you will use the information in the enclosed report to help bring balanced management to the Tongass National Forest. Thank you.

PELICAN FORESTRY COUNCIL * FRIENDS OF BERNERS BAY, Juneau * WRANGELL RESOURCE COUNCIL * SITKA CONSERVATION SOCIETY
FALSE ISLAND-KOOK LAKE COUNCIL, Tenakee Springs * LYNN CANAL CONSERVATION, Haines * TAKU CONSERVATION SOCIETY, Juneau
NARROWS CONSERVATION COALITION, Petersburg * FRIENDS OF GLACIER BAY, Gustavus * TONGASS CONSERVATION SOCIETY, Ketchikan
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Southeast Alaska Conservation Council

SEACC 419 Sixth Street, Suite 328 Juneau, Alaska 99801 (907) 586-6942

May 6, 1993

F. Dale Robertson, Chief
U.S. Forest Service
P.O. Box 96090
Washington D.C. 20090-6090

Dear Chief Robertson:

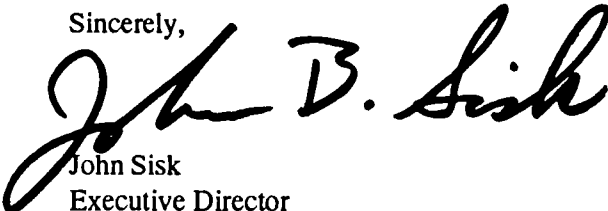
As taxpayers and promoters of responsible national forest management, the Southeast Alaska Conservation Council is happy to hear that you are planning to phase out below cost timber sales on national forests. But your recently publicized proposal has overlooked the most egregious example of below cost timber sales within the entire national forest system. The Tongass National Forest timber program cost taxpayers \$64 million last year (see enclosed report) and over \$30 million in the two proceeding years. These losses average over \$46 million in fiscal years 90-92, and they are significantly greater than any other national forest under your purview.

According to press reports, you plan to phase out logging on national forests that lose the most money. You also stated during Congressional hearings on April 27, 1993, that you plan to concentrate the phase-outs on roadless areas that are, by far, the most expensive places to log. Tongass logging is primarily in unroaded old growth ecosystems. That is the reason why the Tongass timber program is so environmentally damaging and fiscally burdensome to the American public. By not including the Tongass timber sales program in your list of below cost sales, you are renegeing on statements made to Congress. We also feel that you are overtly defying President Clinton (and taxpayers) by not following the true intent of his economic plan.

The Tongass National Forest exemplifies the fiscal and environmental problems that have been plaguing the Forest Service for years. These problems can only be solved through sincere and well-justified efforts to change the status quo. Please help give the much-needed new direction to the managers of the Tongass and all national forests.

We request that you respond fully to the enclosed report (*The \$64 Million Question* by R. O'Toole), and explain why the Tongass is not targeted in your new below-cost timber sale policy.

Sincerely,

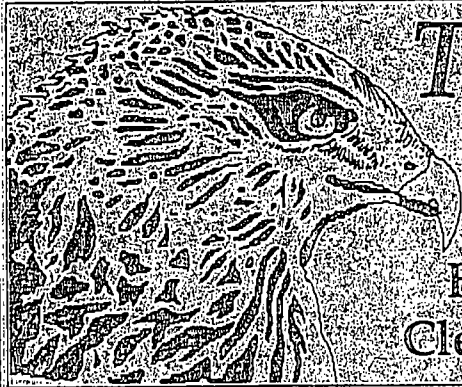


John Sisk
Executive Director

c: Mike Espy, Secretary of Agriculture
Jim Lyons, Assistant Secretary of Agriculture for Natural Resources
(over)

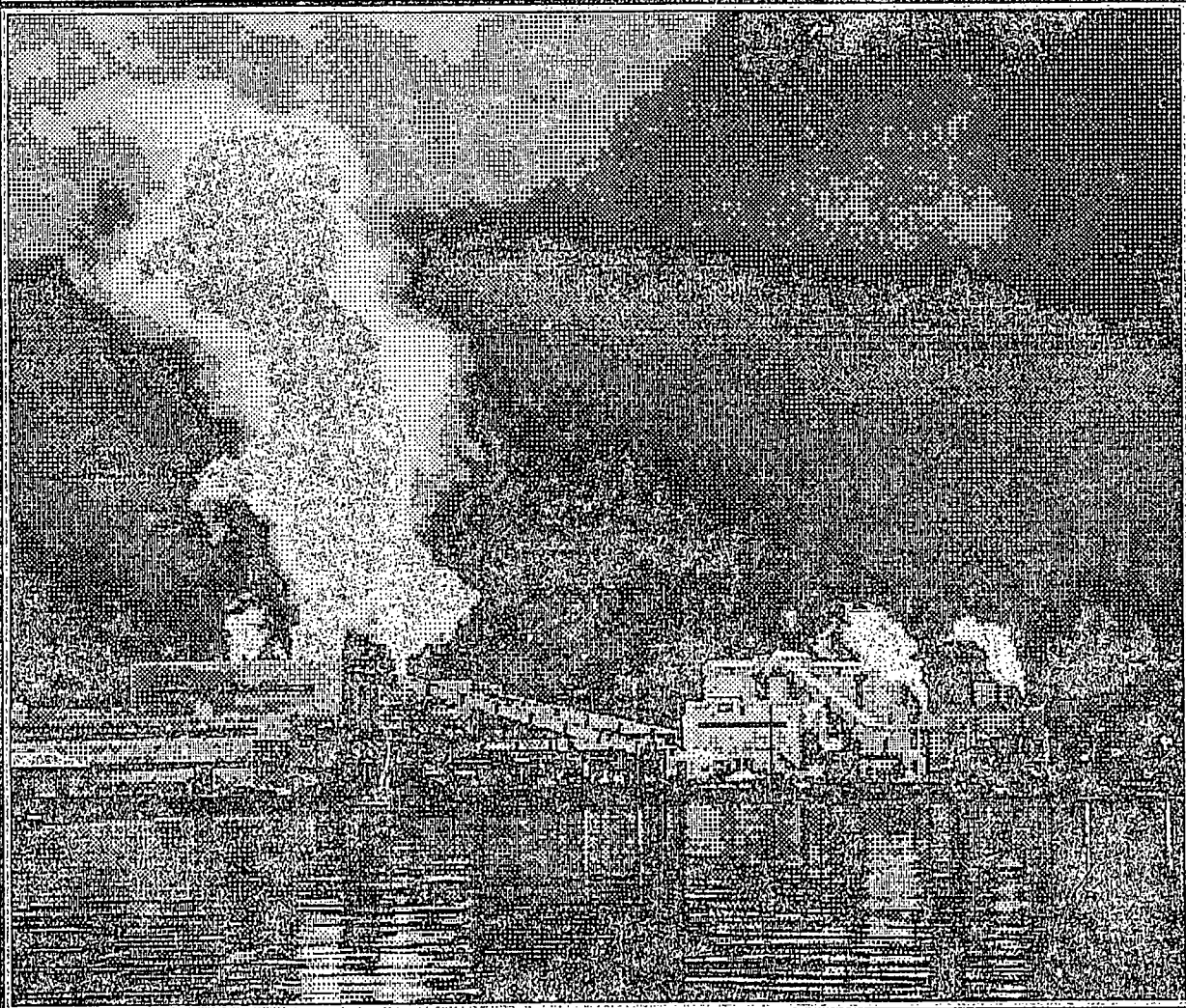
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Representative Ralph Regula
Representative Norman Dicks
Representative David Skaggs
Representative Charlie Rose
Senator Robert Byrd



The \$64 Million Question:

*How Taxpayers Pay Pulpmills to
Clearcut the Tongass National Forest*



*by Randal O'Toole
CHEC Research Paper Number 27
3758 S.E. Milwaukie
Portland, Oregon 97202
503-234-4349 March, 1993*

The \$64 Million Question:

*How Taxpayers Pay Pulpmills to
Clearcut the Tongass National Forest*

by Randal O'Toole

Cascade Holistic Economic Consultants

Portland, Oregon

March, 1993

The report was prepared by CHEC for the Southeast Alaska Conservation Council (SEACC). Preparation of the report was partially funded by the Bullitt Foundation. Opinions expressed in the report are CHEC's and may not reflect the views of SEACC or the Bullitt Foundation. Copyright 1993 by Cascade Holistic Economic Consultants.

Cover photo: Alaska Pulp Company pulp mill in Sitka.

The Tongass Index

Overall 1992 Timber Program

Gross revenues to the Treasury from the 1992 Tongass timber program.....**-\$14.3 million.**
 Total 1992 Tongass timber expenses, including payment to state**\$49.8 million.**
 Net revenues to the Treasury from the 1992 Tongass timber program.....**-\$64.1 million.**

1992 Returns from Ketchikan Pulp Company Long-Term Contract

Volume of timber cut under KPC long-term contract in 1992.....**160.9 million board feet.**
 Cash paid by KPC for timber cut under its long-term contract in 1992.....**\$121,719.**
 Cash payment by KPC per thousand board feet in 1992.....**76¢.**
 Basic cost of 1992 Ketchikan area timber sales* per thousand board feet.....**\$23.52.**
 Total cost of 1992 Ketchikan area timber program† per thousand board feet**\$79.47.**
 Cash refunds paid by the Forest Service to KPC in 1992.....**\$9.4 million.**
 Cash credit given to KPC by the Forest Service in 1992**\$9.8 million.**

Historic Returns from Ketchikan Pulp Company Long-Term Contract

Volume cut under KPC long-term contract, 1976-1992.....**2.7 billion board feet.**
 Gross payments to Treasury under KPC long-term contract, 1976-1992.....**-\$71,739.**
 Volume cut under KPC long-term contract, 1955-1975.....**3.1 billion board feet.**
 Gross payments to Treasury under KPC long-term contract, 1955-1975.....**\$6.6 million.**
 What changed in 1976 Purchaser road credits were added to KPC contract.

1992 Returns from Alaska Pulp Company Long-Term Contract

Volume of timber cut in 1992 under APC long-term contract.....**137.5 million board feet.**
 Cash paid in 1992 by APC for timber cut under its long-term contract.....**\$337,445.**
 Cash payment in 1992 by APC per thousand board feet.....**\$2.45.**
 Basic cost of 1992 Chatham & Sitka timber sales* per thousand board feet.....**\$30.70.**
 Total cost of 1992 Chatham & Sitka timber program† per thousand board feet.....**\$97.82.**
 Cash credit given to APC by the Forest Service in 1992.....**\$2.5 million.**

Historic Returns from Alaska Pulp Company Long-Term Contract

Volume cut under APC long-term contract, 1975-1992**1.9 billion board feet.**
 Gross payments to Treasury under APC long-term contract, 1975-1992.....**-\$829,175.**
 Volume cut under APC long-term contract, 1959-1974**1.1 billion board feet.**
 Gross payments to Treasury under APC long-term contract, 1959-1974.....**\$2.1 million.**
 What changed in 1975 Purchaser road credits were added to APC contract.

Recent Returns and Costs of Overall Tongass Timber Program

Volume cut by timber purchasers, 1989-1992**1,649 million board feet.**
 Gross payments to Treasury by timber purchasers, 1989-1992.....**\$9.6 million.**
 Payment to Treasury per thousand board feet**\$5.83.**
 Basic cost of 1989-1992 Tongass timber sales* per thousand board feet.....**\$26.51**
 Total cost of 1989-1992 Tongass timber program† per thousand board feet**\$84.93.**
 1992 appropriated timber road costs not counted by 1992 TSPIRS.....**\$10.0 million.**
 Purchaser credit roads counted by 1992 TSPIRS as receipts.....**\$19.0 million.**
 Purchaser credit roads counted by 1992 TSPIRS as costs.....**\$0.8 million.**

All timber volumes are Scribner board feet including both sawlogs and utility logs.

* Includes TSPIRS accounting of sale preparation, harvest administration, and resource support.

† Includes actual 1992 expenses of sale preparation, harvest administration, resource support, timber planning, silvicultural examination, transportation planning, timber road construction, reforestation, timber stand improvement, and general administration. Does not include NEPA documentation, appeals, litigation, payments to state, regional or Washington office overhead, purchaser credits, or costs paid out of the Knutson-Vandenberg, brush disposal, or cooperative road maintenance funds.

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Data in the tables and figures of this report are taken directly from Forest Service accounting records on file at the Tongass Forest Supervisors' offices and/or the Region 10 regional office. Data may not always add due to rounding. Conclusions about the Tongass' profitability, such as that the Treasury lost \$64.1 million on the Tongass timber program in 1992, are based on the Forest Service's strict cash accounting of timber expenditures and receipts. As shown in table seventeen, these conclusions differ from figures that the Forest Service makes public because the published figures rely on an accrual accounting system that does not follow generally accepted accounting principles.

Executive Summary

The Tongass National Forest timber program cost the Treasury over \$64 million in 1992, losing more money than any national forest in the history of the Forest Service. Contributing to this loss was the fact that the Tongass' *gross* timber returns to the Treasury were *minus* \$14.3 million.

The Tongass gave timber purchasers, mainly two pulp mills that hold long-term timber contracts, \$9.5 million in cash refunds and \$12.3 million in credit for more timber. The Forest Service also transferred \$1.7 million from the Treasury to its own Knutson-Vandenberg and salvage sale funds. Subtracting these from the \$9.5 million that purchasers actually paid for timber leaves Treasury receipts of minus \$14.3 million.

At the same time, the Forest Service spent \$46.5 million in tax dollars on timber sales, timber roads, timber management, and timber-related overhead. When these costs, plus the \$3.2 million payment to the state in lieu of taxes, are subtracted from the returns to the Treasury, the Tongass timber program's losses total \$64.1 million.

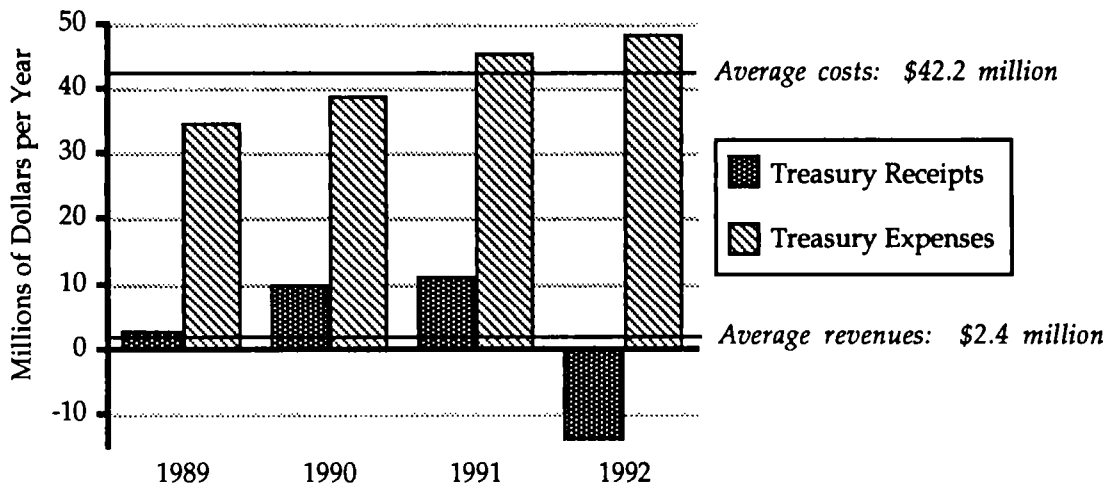
Returns and Costs to Treasury from the 1992 Tongass Timber Program

Revenues	Payments (including road and other credits) for timber	9.5 million
	Cash refunds to purchasers	-9.8 "
	Credit to purchasers for timber	-12.3 "
	Transfers to Knutson-Vandenberg and other funds	-1.7 "
	Total 1992 Treasury receipts for timber	-\$14.3 "
Costs	Appropriated sale, road, management, & overhead costs	\$46.5 "
	Payments to state in lieu of taxes	3.2 "
	Total expenses to Treasury	\$49.8 "
	Net to Treasury	-\$64.1 "

Taxpayers Lose

Forest Service officials claim that 1992 was an aberration and that the Tongass usually makes money on timber. In fact, according to Forest Service records, the Tongass spends nearly \$40 million more tax dollars than it returns to the Treasury each year.

Tongass Timber Returns and Expenses to the Treasury



Long-Term Timber Purchasers Benefit

In 1992, Ketchikan Pulp (KPC) and Alaska Pulp (APC) cut nearly 300 million board feet under their long-term contracts worth, according to the Forest Service, over \$22 million. Yet they paid under \$460,000 in cash, or just \$1.54 per thousand board feet. They also received \$21.2 million in refunds or credit toward more timber cutting.

Tongass Long-Term Contract Results for 1992

	KPC	APC	Both
Volume cut (million board feet)	160.9	137.5	298.4
Value of timber cut (millions of dollars)	\$16.1	\$6.5	22.5
Price paid in cash (millions of dollars)	0.12	0.34	.46
Cash per thousand board feet (dollars)	0.76	2.45	1.54
Refunds (millions of dollars)	8.8	0	8.8
Timber credit (millions of dollars)	9.8	2.5	12.3
Net payment for timber (millions of dollars)	-17.8	-.1	-17.9

Taxpayers Paying Pulp Mills to Cut Down Public Trees

Historic records show that the long-term purchasers have, on average, paid negative amounts to the Treasury for nearly 20 years. **Since 1975-76, APC and KPC have paid the Treasury minus \$901,000 for the 4.6 billion board feet they cut — an average of minus 19¢ per thousand board feet.**

Before 1975-76, the Forest Service deducted road-building costs from the prices it charged the long-term purchasers for timber. When road-building costs exceeded the timber value, the purchasers paid a fixed minimum rate. Actual Treasury payments averaged \$2.23 per thousand board feet.

Since 1975-76, the pulp mills have been allowed to credit road costs against the price they pay for timber — *including* payments made prior to 1975-76. This means that, when road costs exceed timber values, the Forest Service deducts funds previously paid to the Treasury and gives purchasers cash refunds or credit. **In effect, taxpayers paid the long-term purchasers nearly \$1 million to cut 4.6 billion board feet of timber.**

Tongass Timber Losses Will Continue

Forest Service claims that the Tongass timber program can make money do not account for many costs, including most road construction costs. In 1992, the agency's accounting ignored \$24.2 million worth of timber-related road construction costs. In fact, despite minimal returns to the Treasury, timber consumes 60 percent of the Tongass budget.

Unless major changes are made in the Forest Service, the Tongass will continue to lose more money on timber than any other national forest. **Tongass timber prices must more than triple from 1989-1992 levels before the Treasury has a chance of breaking even on Tongass timber.** Even then a profit is not assured because the budgeting process gives managers an incentive to lose money on environmentally destructive timber sales.

Forest Service managers need new incentives. Funding forests out of their net income and charging of recreation fees would dramatically alter the way Tongass Forest managers view their job. Instead of driving Treasury returns as low as possible, they would try to maximize such returns because only by doing so can they maximize their own budgets. The Tongass will continue to lose money until such reforms are made.

I. Introduction

At the end of fiscal year 1992, the Tongass National Forest found that its timber receipts to the U.S. Treasury totalled minus \$14,312,501 before counting any costs. How can receipts be a minus number? Where did all of the money go? Answering these questions proved a difficult sleuthing job that required visits to several Forest Service offices in Southeast Alaska in February, 1993.

Because the Tongass is many times larger than most national forests, it is managed by not one but three different forest supervisors. The Ketchikan area office is located in Ketchikan, the Chatham area office is in Sitka, and the Stikine area office is in Petersburg. I visited each of these offices to examine timber sale accounting data and budgetary information. I also visited the Juneau regional office to get information on receipts and timber sale procedures.

Most of the Tongass' timber is cut under long-term contracts held by two pulp mills, Alaska Pulp Company (APC) and Ketchikan Pulp Company (KPC), signed during the 1950s. Timber prices under these contracts are supposedly set using the same methods as prices under the short-term contracts that are the norm elsewhere. But I found that the long-term purchasers actually have several advantages over other purchasers which allow them to save millions of dollars in payments to the Forest Service.

Much Tongass timber is comparable in size to that found in Oregon or Washington national forests. But because over 60 percent of Tongass timber volume is hemlock — a low-valued species even in the Northwest — and because the Tongass is so far from markets, timber prices are much lower than those of the Pacific Northwest. Relying exclusively on Forest Service accounting data, CHEC research has shown that the Treasury loses millions of dollars each year on the Tongass timber program.

The Forest Service routinely denies such accusations. In 1991, for example, the agency claimed that the Tongass timber program produced \$13 million worth of profits. No one ever saw the profits, however, because they were mostly paid in the form of road construction by timber purchasers. Although the Forest Service regards such roads as receipts, it only counts 5 percent of them as costs. When only the actual cash returns to the Treasury are compared with actual costs to the Treasury, the Tongass lost \$34 million in 1991. This is twice the loss of any other national forest.

Losses from the 1992 timber program were spectacular even by Tongass standards. Never before has a forest actually deducted nearly \$24 million from the Treasury. Never before has a forest lost \$64 million dollars on its timber program in one year. Yet such losses are completely predictable. So long as the Forest Service budget rewards forest managers for losing money on timber sales, forests like the Tongass will lose millions of dollars each year. Only when managers are rewarded for making money and penalized for losing money will the Tongass become a money-making forest — and then at a far lower level of timber cutting.

Part II of this report will show exactly how the Forest Service deducted \$24 million from the Treasury. Part III presents an analysis for each unit of the Tongass, the Ketchikan, Chatham, and Stikine. Part IV addresses Forest Service claims that the Tongass makes money on timber or that its timber program can be justified in some other way. The report's Appendices contain a detailed chronology of the KPC contract in 1992, a glossary explaining unfamiliar terms, and a complete list of the volume of timber cut and payments made each year under the long-term contracts.

II. Where Did the Money Go?

How did the Forest Service manage to pay the Treasury a minus \$14.3 million for Tongass timber in 1992? The answer is complicated by the many funds paid for by national forest timber sales. These include:

- **The Knutson-Vandenberg fund** — The Knutson-Vandenberg (K-V) Act of 1930¹ allows the Forest Service to keep an unspecified share of timber receipts for reforestation. In 1976 Congress authorized the use of K-V funds for wildlife habitat and other "sale area improvements." Forest Service rules require that managers return 50¢ per thousand board feet to the Treasury, but they may keep the rest in the K-V fund if managers can find a way to spend it in the sale area.
- **The salvage sale fund** — Created by a 1976 law,² the salvage sale fund (SSF) is a revolving fund that allows managers to keep receipts from one salvage sale to spend arranging more salvage sales.
- **The national forest fund** — NFF is the money that actually goes to the U.S. Treasury and is supposed to include, at minimum, 50¢ per thousand board feet. This amount is based on how much it cost taxpayers to arrange timber sales in 1930 when the K-V Act was passed. Today, timber sales cost taxpayers over \$50 per thousand board feet. NFF is the taxpayers' money and is the fund that received minus \$14.3 million from the Tongass timber program in 1992.
- **Purchaser road credits** — These are not really a fund, but represent the Forest Service's estimate of the cost of roads which timber purchasers must build (to Forest Service specifications) to reach the timber. Under a 1964 law, purchaser credits (PC) can be used to pay for timber.³ Forest Service rules specify, however, that purchasers must pay a minimum amount, usually just a few dollars per thousand board feet, in cash. The rules say that this minimum can be the greater of a "base rate" set by the regional forester or 50¢ per thousand plus the "essential reforestation" costs calculated by the Knutson-Vandenberg plan.⁴

There are several other funds, including the brush disposal fund and the road maintenance fund, but these are minor and play no role in the Tongass' minus \$14.3 million receipts. The Forest Service records the deposits each sale makes to these funds monthly in a form called the "timber sale statement of account." I examined these forms for nearly every Tongass sale that had any activity during 1992.

The national forest fund received minus \$14.3 million from the Tongass in 1992 because monies paid into the fund in previous years were taken back for one of three reasons:

- The Forest Service reduced the rates paid by timber purchasers for certain sales that purchasers had already paid for in cash, and the difference between the old and new rates was either refunded in cash or used by the purchasers to pay for more timber. For example, Ketchikan Pulp Company (KPC) received two refund checks totalling \$6,293,196 and used \$4.6 million of credit to pay for other timber.
- Purchasers used purchaser road credits to pay for timber that they had previously paid for in cash. The cash was either refunded or used by the purchasers to pay for more timber. For example, KPC received a third refund check of \$3.1 million, while APC received over \$1.4 million of credit from "converting purchaser credits to cash."
- The Forest Service rewrote its Knutson-Vandenberg plans for certain sales and transferred money from the national forest fund to the K-V fund to provide for the new activities in the K-V plans. For example, as a part of the KPC long-term sale, the agency transferred \$1 million from the national forest fund to the K-V fund in June, 1992. Over \$46,000 was also transferred from the national forest fund to the salvage sale fund.

Ketchikan Pulp was the biggest beneficiary of these actions. In 1992 the company cut over 160 million board feet of timber worth, according to Forest Service estimates, \$16 million. Yet it paid less than 1 percent of that amount in cash — just \$121,719, or 76¢ per thousand board feet. Meanwhile it received refund checks of nearly \$9.4 million.

Alaska Pulp also benefited but in a less spectacular way. It cut 137.5 million board feet worth, according to Forest Service estimates, about \$6.5 million. It made cash payments of only 5 percent of that amount — \$337,445, or about \$2.45 per thousand. APC received no significant refunds.

The next biggest beneficiary was the Forest Service, which gained over \$1.6 million in K-V funds at the expense of the national forest fund. The Forest Service's salvage sale fund also gained over \$46,000 from transfers from the Treasury.

Tables one and two summarize these transactions. Deductions of nearly \$24 million were partly offset by payments into the Treasury credited to purchasers. At least some of those payments were made with credit earned from the rate redeterminations or purchaser credits converted to cash, not in actual cash.

Table One				
Where the Money Came From				
	Chatham	Ketchikan	Stikine	Total
Rate redeterminations	\$93,297	\$15,636,107	\$639,576	\$16,368,980
PC converted to cash	2,448,614	2,924,166	395,000	5,767,780
Transfers from NFF to FS	<u>517,372</u>	<u>1,000,000</u>	<u>136,372</u>	<u>1,653,744</u>
Total	\$3,059,283	\$19,649,849	\$1,081,372	\$23,790,504

Source: Timber sale statements of account on file at Tongass Forest Supervisors' offices.

Table one shows where the money came from: rate redeterminations, conversions of purchaser credits to cash, and transfers of funds from the Treasury to the Forest Service. Table two shows where the money went, including refunds to purchasers, credits toward timber cut in 1992, and the Knutson-Vandenberg and salvage sale funds.

Table Two				
Where the Money Went				
	Chatham	Ketchikan	Stikine	Total
Refunds to purchasers	\$0	\$8,843,196	\$945,000	\$9,788,196
Credit toward timber	2,541,911	9,806,653	0	12,348,564
Transfers to K-V	517,372	1,000,000	89,698	1,607,070
Transfers to SSF	<u>0</u>	<u>0</u>	<u>46,674</u>	<u>46,674</u>
Total	\$3,059,283	\$19,649,849	\$1,081,372	\$23,790,504

Source: Timber sale statements of account on file at Tongass Forest Supervisors' offices.

Negative returns to the Treasury are not unprecedented. Each year, a handful of national forests record such negative returns, mostly because of transfers from the national forest fund to the K-V or other Forest Service funds. In 1991, the Bighorn, Carson, Chequamegon, Deerlodge, Lake Tahoe Basin Management Unit, Lolo, and Wallowa-Whitman national forests all made negative returns to the Treasury.

Yet the amount of negative receipts recorded by the Tongass is unprecedented. None of the above-listed forests deducted more than \$2,000 from the national forest fund in 1991. Outside the Tongass, the largest deduction from the Treasury prior to 1992 was made in 1990 by the Idaho Panhandle Forest, which returned minus \$762,000 to the Treasury. The 1992 Tongass deduction was nearly 20 times that amount.

A. Rate Redeterminations Cost \$16.4 Million

The main reason for the negative return to the Treasury is that the Forest Service reduced the rates which purchasers paid for Tongass timber in the recent past. This reduction meant that purchasers had "overpaid," and the overpayment was taken from the U.S. Treasury and returned to purchasers in various ways. Five different types of rate redeterminations were made on the Tongass.

Identifying the rate redeterminations is complicated by a recent change in the way the long-term sales are administered. Prior to the Tongass Timber Reform Act,⁵ the Forest Service treated each long-term contract as one giant timber sale. After the act was implemented, the Forest Service divided each sale up into "offer areas." In some ways, each offer area is like a short-term timber sale. Separate timber sale statements of account are prepared for each offer area as well as for the timber cut prior to the offer areas. This report will refer to the area cut prior to TTRA as the "preoffer area."

1. Scheduled Rate Redeterminations

The original long-term contracts called for five-year operating plans. In addition to locating timber, each operating plan would calculate stumpage rates for the timber in that plan. The last KPC five-year plan ended in January 1990. However, for various reasons, the new rates were not finally determined until mid-1992.

In the meantime, the purchaser agreed to keep paying the old rates for timber it removed. When new rates were determined, they were significantly lower than the old ones and KPC was credited the difference. Most of the reduction was taken out of the national forest fund rather than the K-V or salvage sale funds.

The delay in the rate determination is unusual, as rates in the past were immediately set at the beginning of each five-year period. Forest Service officials blamed the delay on problems with complying with the National Environmental Policy Act. Since wood product prices were much higher in 1990 than 1992, it is likely that the delay resulted in much lower appraisals. This cost taxpayers millions of dollars.

2. Emergency Rate Redeterminations

Forest Service timber appraisals start with the market value of wood products and subtract the costs of logging and manufacturing to calculate the value of trees "on the stump" (stumpage). Both long- and short-term contracts allow purchasers to request emergency rate redeterminations if market prices change significantly. Both APC and KPC requested such redeterminations on their long-term contracts, and KPC requested one on its short-term contract for the Middle sale.

3. Interim Rate Adjustments

Rates determined at the beginning of each five-year contract period assume that certain areas will be cut during that period. During the period there are inevitable changes in the areas cut due to environmental, legal, or other factors that arise. At the end of the contract period, the Forest Service recalculates stumpage rates for the areas that were actually cut and bills or credits the difference to the purchaser. The Forest Service calls this a "before and after" redetermination.

Because of the Tongass Timber Reform Act and other changes in contracts, the Forest Service did an interim rate adjustment in 1992. This resulted in a significant reduction in rates. Because this was done at the same time as the emergency rate redeterminations, the exact effects of the two cannot easily be separated out.

Together, the scheduled, emergency, and interim rate redeterminations reduced charges on the KPC offer areas by \$9,692,137. Charges were reduced on the KPC preoffer area by \$5,943,970. As detailed below, some of this money ended up in a \$5.7 million cash refund to KPC and the rest was used to pay for timber cut in 1992 and 1993. The Middle sale redetermination led to a \$550,000 cash refund. APC did not fare as well: Its offer area rate reductions totalled only \$93,297 while its preoffer area rate redeterminations increased charges by \$126,062.

4. Comparability

The Tongass Timber Reform Act required the Forest Service to insure that timber prices paid by the long-term contractors were comparable to the prices paid by short-term sale purchasers. To meet this requirement, the Forest Service recalculates rates every quarter. During 1992, these recalculations increased rates on the APC offer areas by \$815,820 and on the KPC offer areas by \$10,523,009.

5. Cedar Rebates Cost \$1.8 Million

The Ketchikan Pulp Company long-term contract specifies two different rates for cedar trees cut by the purchaser. The higher rate is for trees exported overseas as raw logs. A lower rate — as much as \$115 lower but no lower than the minimum or base rates — is for timber processed locally. Under the contract, the purchaser pays the higher rate but is reimbursed the difference for any locally processed cedar. This provision was not in the Alaska Pulp Company long-term contract.

In 1992, Ketchikan Pulp received cedar rebates of \$1,827,028. Of this, \$343,312 was for cedar cut prior to implementation of the Tongass Timber Reform Act (TTRA) on March 1, 1991. This money was paid directly to KPC as a part of a cash refund of \$5.7 million. The remaining \$1,483,715 was for cedar cut in the "offer areas" required by TTRA. This money was credited to KPC's account in January 1992 and used to pay for timber cut in 1992.

B. Converting PC to Cash Cost \$5.8 Million

The Forest Service requires that timber purchasers pay a minimum amount, known as "base rates," in cash. Base rates vary by species, but on the Tongass they usually average less than \$2 per thousand board feet. All additional value can be paid for with purchaser road credits. Purchasers pay cash above base rates only if their purchaser road credits are not sufficient to cover all such payments.

The Forest Service method of crediting dollars to the national forest fund leads to some peculiar results. When the Forest Service bills purchasers, it tries to predict whether the bills will be paid in cash or with purchaser credits. Cash is credited to the National Forest, K-V, salvage sale, and other funds when purchasers are billed rather than when they pay their bills.

The Forest Service predictions are usually accurate for short-term contracts. But purchaser credits are less predictable under the long-term contracts because forest managers do not know the total amount that will be credited for roads built over the life of the contract. When new roads are designed, purchasers may pay bills with purchaser credits that the Forest Service anticipated would be paid with cash. The Forest Service calls this "converting purchaser credits to cash."

The monthly timber sale statements of account track how much cash purchasers have paid above base rates as well as how much has been paid to the national forest fund above the minimum requirement of 50¢ per thousand board feet. Any amount paid above base rates is eligible to be converted to purchaser credits. This leads to deductions from the national forest fund if the fund has earned more the minimum requirement; otherwise any converted purchaser credits must be deducted from the K-V fund or another Forest Service fund.

Tongass purchaser road credits interacted with the national forest fund in several different ways in 1992. In the APC long-term contract, the purchaser had a large balance of purchaser credits on its preoffer area that was converted to cash, meaning that it was used to pay for timber that had previously been paid for in cash. This leads to a deduction from the Treasury and an equal credit to the purchaser's account which can be used to pay for other timber.

In the KPC contract, purchaser credits were transferred from the offer areas to the preoffer area and converted to cash that had previously paid for preoffer area timber. In the short-term Outback sale, credits were transferred from another sale and converted to a cash refund. All of these conversions and transfers cost the Treasury money.

1. The APC Long-Term Contract

At the end of November, 1991, timber cutting ceased on the preoffer area and APC still had nearly \$2.5 million worth of purchaser credits in its preoffer area account. Meanwhile, the statements of account showed that the purchaser owed nearly a million dollars in cash.

In February through June of 1992, the Forest Service made a series of transactions that had the following effects:

1. Purchaser credits equal to \$2,476,622 were converted to cash. This means that the purchaser's road credit account was reduced to nearly zero while the purchaser's cash account was credited with \$2.48 million. Such a conversion was only possible because the purchaser had previously paid cash for timber that could have been paid for with purchaser credits.
2. Some of the cash credit was used to pay for \$850,000 that the purchaser owed for timber previously cut from the preoffer area.
3. The rest of the credit was transferred to the offer areas and used to pay for timber cut in 1992. APC did pay about \$307,000 in cash in the offer areas in 1992, but ended up the year with \$371,000 credit in its cash account. So some of the credits that had been converted to cash will help pay for timber cut in 1993 as well.
4. To account for the purchaser credits converted to cash, the Forest Service deducted \$1,365,987 from the Treasury.
5. In the course of these transactions, however, the Forest Service managed to add \$517,372 to its K-V fund even though the purchaser made no cash payments in the preoffer area. So only \$848,615 of the Treasury reduction is due to the purchaser credit conversions.

2. The KPC Long-Term Contract

Unlike APC, KPC had no unused purchaser credits in its preoffer area at the end of 1991. It had applied all its purchaser credits to timber payments and paid an additional \$18.5 million over base rates in cash. Under the Forest Service's administration of the contract, this cash paid above base rates in the preoffer area was eligible to be converted to purchaser credits earned in the offer areas.

In the offer areas, KPC had a surplus of \$2.3 million in purchaser credits by the end of December, 1991. In January, one of the previously described rate redeterminations led the Forest Service to add another \$4.6 million to KPC's purchaser credit balance. By the end of February, new road construction increased KPC's balance of unused purchaser credits to nearly \$8.3 million. These credits could have been eventually applied to timber cut from the offer areas.

Instead of waiting, however, the Forest Service transferred \$7,510,248 of the offer areas' purchaser credits to the preoffer area in March, 1992. There they were converted to cash — i.e., applied to timber that had previously been paid for in cash, reducing KPC's balance of cash paid above base rates. The entire amount was deducted from the national forest fund.

Over the next few months, \$4,628,334 was transferred back to the offer areas. Since it was transferred as cash, and not purchaser credits, it was applied to the base rates as well as charges above base. The base rates, which are supposed to be paid in cash and not purchaser credits, are close to \$2 per thousand board feet. But the conversion to cash made it possible for KPC to make actual cash payments of just 76¢ per thousand board feet for the 160.9 million board feet of timber it cut in 1992. The rest of the base rates were paid with the cash credit it earned from the purchaser credits that had been converted to cash.

In September, 1992, the Forest Service refunded another \$3.1 million of the former purchaser credits to KPC in cash. At the end of the year, KPC's balance on the preoffer area was zero. However, KPC still has \$8.3 million that it has paid in cash above base rates, mostly in the preoffer area. This means that it still has the opportunity to convert surplus purchaser credits to cash, thus forcing more refunds or allowing it to cut more timber at essentially no cost.

3. The Outback Sale

Outback was a large sale sold in 1989 by the Stikine area. The purchaser built roads establishing credit of \$725,000 and paid the remaining \$1.5 million in cash. Before the sale was closed, however, the purchaser transferred \$395,000 of purchaser credits from another sale into the Outback sale. This was converted to cash and the Forest Service refunded this amount in cash.

Unlike the KPC contract, the purchaser will eventually pay cash for the timber in the other sale equal to the purchaser credits transferred out. So, although this action contributed to 1992's negative receipts, it is really little more than an interest-free loan at taxpayers' expense.

4. Long-Term Contract Advantages

Although purchaser credits were first authorized by Congress in 1964, they were not added to the long-term contracts until 1975. This change in the contracts proved to be a bonanza for the purchasers and a drain on the national forest fund.

Prior to the change, the national forest fund consistently earned an average of about \$2.23 per thousand board feet (\$7.95 in 1992 dollars) from the long-term contracts (table three). Forest Service funds such as K-V earned an average of just 13¢ per thousand (62¢ in 1992 dollars). This includes 30¢ per thousand from APC and 25¢ per thousand from KPC, but an adjustment in 1974 reduced KPC's K-V fund by over \$600,000. The purchasers were required to build roads, but the cost was simply deducted from the appraised price of the timber, not credited to the purchaser's account.

Table Three
Returns from Long-Term Contracts before Purchaser Credits

	Volume mmbf	U.S. thousands of dollars	FS thousands of dollars	PC thousands of dollars	U.S. dollars per mbf	FS dollars per mbf	PC dollars per mbf
(Nominal Dollars)							
APC	1,070	2,643	320	0	2.47	0.30	0.00
KPC	3,059	6,554	217	0	2.14	0.07	0.00
Total	4,129	9,197	538	0	2.23	0.13	0.00
(1992 Dollars)							
APC	1,070	9,372	1,168	0	8.76	1.09	0.00
KPC	3,059	23,444	1,412	0	7.66	0.46	0.00
Total	4,129	32,816	2,580	0	7.95	0.62	0.00

"U.S." refers to the U.S. Treasury or national forest fund; "FS" refers to the K-V or another Forest Service fund; "PC" refers to purchaser credits. Source: Timber sale statements of account for the long-term sales.

After purchaser road credits were added to the contracts, returns to the national forest fund were virtually eliminated (table four). The Treasury actually lost money — a total of nearly \$1 million, or 19¢ per thousand board feet. This includes a loss of 44¢ per thousand in the APC contract and 3¢ per thousand in the KPC contract. In 1992 dollars, the KPC contract made a slight positive return, but the average for both is still minus 9¢ per thousand.

Table Four
Returns from Long-Term Contracts after Purchaser Credits

	Volume mmbf	U.S. thousands of dollars	FS thousands of dollars	PC thousands of dollars	U.S. dollars per mbf	FS dollars per mbf	PC dollars per mbf
(Nominal Dollars)							
APC	1,889	-829	8,437	44,168	-0.44	4.47	23.39
KPC	2,734	-72	18,626	64,320	-0.03	6.81	23.52
Total	4,623	-901	27,063	108,488	-0.19	5.85	23.47
(1992 Dollars)							
APC	1,889	-1,222	11,190	66,076	-0.65	5.92	34.99
KPC	2,734	789	23,092	92,167	0.29	8.45	33.71
Total	4,623	-433	34,283	158,244	-0.09	7.42	34.23

Source: Timber sale statements of account for the long-term sales.

Purchaser credits were not the only cause of the decline in Treasury revenues. The Forest Service increased its own share of timber receipts to nearly \$6 per thousand board feet

(\$8 in 1992 dollars). But it was the ability of purchasers to convert purchaser credits to cash during recessions that reduced returns to the national forest fund below the required minimum of 50¢ per thousand board feet.

In essence, the long-term purchasers applied purchaser credits earned after 1975 to timber cut and paid for in cash before 1975. This means that, since 1976, taxpayers have been paying APC and KPC to cut over 250 million board feet of timber per year. Such payments have averaged 19¢ per thousand board feet (9¢ in 1992 dollars).

All of the cash that APC paid above base rates prior to 1975 has been refunded. KPC has paid \$8.3 million in cash above base rates. If timber prices are low or road costs are high, KPC could earn lots of surplus purchaser credits before the end of the contract period. This would lead the Forest Service to convert more purchaser credits to cash, which could be refunded to KPC or used by KPC to buy more timber at no additional cost.

As administered by the Forest Service, purchaser credits give the long-term contractors two significant advantages over short-term sale purchasers. First, the long-term purchasers can bank purchaser credits when timber prices are low and apply them to timber cut when prices are high. Second, purchasers can trade in the purchaser credits earned when prices are low for cash paid previously and get a cash refund.

The APC contract provides an example of the first advantage. When timber prices are high, most national forest timber sales are worth considerably more than the purchaser road credits. Purchasers buy the sales, build the roads, and pay the difference between the sale value and the road cost in cash.

When market prices are low, many national forest timber sales are worth less than the purchaser credits. Purchasers are required to pay base rates in cash, and any purchaser credits that exceed the value of the remaining timber are "ineffective." Ineffective credits are lost because purchasers must pay the base rates and build the roads even if the total cost is more than the purchaser bid for the timber.

The long-term contractors usually don't have to worry about ineffective purchaser credits. When prices are down, unused purchaser credits can be banked in the purchaser's account, as they were in the APC account. When prices rise, this account can be used to pay for the timber above base rates. Short-term sale purchasers cannot bank ineffective credits from sales bought when prices are low and use them to pay for other sales bought when prices are higher.

The KPC sale is an example of the second advantage for the long-term purchasers. Like short-term purchasers, long-term purchasers may pay cash above base rates for timber. Later, they may earn purchaser credits when prices are low. In a short-term sale, such credits would be ineffective, but the long-term purchasers can apply them toward the timber cut when prices were high. The Forest Service converts the purchaser credits to cash which can be refunded or applied to the base rates for new timber cut. Although short-term purchasers can transfer credits in and convert them to cash, as was done in the Outback sale, they may do this only when the transferred-in credits are effective.

The Tongass Timber Reform Act directed the Forest Service to revise the long-term contracts so that they would be comparable in every respect to short-term sales. A 1991 review by the General Accounting Office (GAO) concluded that the Forest Service had done so in every way except with respect to purchaser credits.⁶ If the Forest Service had followed GAO recommendations, taxpayers would have saved \$5.8 million in 1992.

C. Funding the Forest Service Cost \$1.7 Million

National forest timber sale programs are strongly influenced by the fact that the Forest Service is allowed to keep a nearly unlimited share of the receipts from timber sales. Most of these receipts go into the Knutson-Vandenberg or salvage sale funds. Normally, monies are paid to these funds out of receipts as they are collected. But sometimes the Forest Service decides that the funds it collected are insufficient. It then transfers money from the Treasury back into the K-V or salvage sale fund.

1. The Knutson-Vandenberg Fund

The Knutson-Vandenberg Act of 1930 was originally passed to assure funding for reforestation after timber cutting. The law specifies that the Forest Service can charge purchasers "deposits of money *in addition to* the payments for the timber" to cover the costs of reforestation and other activities (emphasis added). As interpreted by the Forest Service, this means "in addition to 50¢ per thousand board feet," which is the minimum amount the agency requires its managers to return to the Treasury. In fact, many forest managers seem to go out of their way to insure that the U.S. Treasury receives as little above this amount as possible.⁷

Forest Service rules direct managers to write a plan in advance of each sale detailing how much K-V money they need and how they expect to spend it. Some plans call for spending far more money than the timber is worth, so only the high priority activities are funded. If a sale brings in more money than originally anticipated, managers can revise the plan and take more funds.

In this system, managers think of returns to the Treasury as "losses" to the bureaucracy, not potential profits for taxpayers. I once asked a timber sale officer how long managers had to revise K-V plans. "We can revise them up to the day the sale is closed," he replied, "and if we need to we better do it by then or the money is *lost* — it goes to the U.S. Treasury."

K-V plans typically build in a factor for overhead, including "general administration" and "program management." The share dedicated to overhead has steadily increased until, on the Tongass, it is about 40 percent of the total or 67 percent of the amount spent on the ground. (If overhead is 40 percent, then the remainder, 60 percent, is spent on the ground. Forty percent is two-thirds, or 67 percent, of 60 percent. So "40 percent of the total" and "67 percent of the amount spent on the ground" are equivalent.)

The Washington, regional, supervisor's, and district office each get a specified share. If a Tongass K-V plan that was originally written in 1988, when the overhead share was 25 percent, is revised in 1992, when the overhead share is 40 percent, the plan's costs can increase even if no new activities are proposed.

Tongass K-V plans typically assume inflation rates of 4 percent per year even though inflation is currently well under that amount. If a project planned for two years ahead is estimated to cost \$1,000, managers add \$82 to account for inflation.

The one restriction on the use of K-V funds is that (other than overhead) they must be spent in the "sale area." Until recently this was ignored by many forest managers who commonly "pooled" K-V funds and spent them wherever they were needed. One sale might earn only a few dollars for the K-V fund, so money earned by another sale would be spent on the first sale. After criticism by the General Accounting Office, the Forest

Service directed managers to make sure that funds are spent no more than one-quarter mile from the sale units from which they were collected.

This means that the amount of K-V funds a manager can keep is limited by the manager's imagination of projects that can be done within a quarter mile of the sale area. In the Pacific Northwest, where timber is particularly valuable, managers end up returning hundreds of millions of dollars to the Treasury each year. On forests like the Tongass, where prices are low, managers find ways to keep all but the minimum 50¢ per thousand on many, if not most, timber sales.

All three areas on the Tongass Forest withdrew funds previously paid to the Treasury during 1992 in order to add to their K-V funds. The Ketchikan area transferred \$1,000,000 from the Treasury to the K-V fund under the KPC long-term contract. The Chatham area made a number of transfers under the APC long-term contract which ended up netting the K-V fund \$517,372 at the expense of the Treasury. The Stikine area made transfers from the Treasury to the K-V fund totalling \$89,698 under several timber sales, including the Snowcat and Middle sales. The Stikine area made several more transfers, totalling well over \$200,000, shortly after the end of fiscal 1992.

2. The Salvage Sale Fund

The salvage sale fund, a creation of the National Forest Management Act, resembles the K-V fund in some ways but differs in many particulars. Unlike the K-V fund, it is a revolving fund in which receipts from salvage sales are used to arrange more salvage sales, thus guaranteeing a perpetual salvage sale program.

Like the K-V fund, managers write a plan for each sale that includes salvage volume. The plan estimates the costs of preparing and administering the salvage volume, engineering and design of any purchaser-built roads, and administrative overhead (currently about a third of the total on the Tongass). These costs are funded out of the salvage sale fund and must be deducted from timber receipts and placed in the salvage sale fund for future salvage sales.

Many sales earn less than their costs. To compensate, the Forest Service allows managers to make "excess collections" on sales that earn more than their costs. On the Tongass, excess collections are as much as 50 percent of the estimated costs *plus* 20 percent of any additional receipts that might go to the Treasury. Excess collections have allowed the salvage sale fund to grow at a rapid rate and help insure that returns to the Treasury are minimal.

Because salvage sales are funded out of Forest Service funds, rather than tax dollars, the Forest Service allows managers to keep all funds from sales that earn money for both the salvage sale and K-V funds — they don't even have to return 50¢ per thousand board feet to the Treasury. The Tongass does not appear to exercise this option, as managers return 50¢ per thousand from salvage sales as well as non-salvage sales.

The K-V and salvage sale funds did not play a significant role on the Tongass during the 1980s for two reasons. First, timber prices were so low that there was little money to keep. Second, the Tongass had its own personal slush fund in the \$40 million Tongass timber supply fund. This fund came out of timber receipts earned by other national forests. In 1990, that fund was eliminated by the Tongass Timber Reform Act. Timber prices are also higher, so K-V and SSF will play a much bigger role in the 1990s.

3. Giving the Treasury Its Due

Forest Service timber sale statements of account clearly specify the "minimum distribution requirement," i.e., the 50¢ per thousand board feet that must be returned to the Treasury. Since the statement also shows the amount going into the national forest fund, managers can quickly observe if any excess funds are going to the Treasury.

Many Tongass sales do indeed return just 50¢ per thousand to the Treasury. Of twenty short-term contracts that I reviewed on the Stikine area, half had returned just 50¢ per thousand by the end of 1992. All additional cash payments were paid to the K-V or salvage sale funds. The Stikine's portion of the APC long-term contract also returned only 50¢ per thousand to the Treasury.

When cash payments to the national forest fund exceed the minimum, managers frequently transfer money to a Forest Service fund before the sale closes. In 1992 or early 1993, six Stikine sales saw deductions from the national forest fund to add \$266,983 to the K-V and salvage sale funds.

Managers frequently revised K-V plans shortly before sales closed to insure collection of the maximum possible dollars. The original K-V plan for the Middle sale, for example, included expenses totalling \$35,269. After the sale was sold, the plan was revised upwards to \$77,195. When most cutting was done, but before the sale was closed, the plan was revised upwards again to \$197,871. K-V plans were revised upward in at least six other Stikine sales active in 1992, including the Loft, Outback, Snowcat, Snowpod, Old Hermit, and Missionary sales.

4. Where the Money Goes

Most Tongass K-V plans include funds for surveys of naturally regenerated areas, plantation of certain species or difficult to reforest areas, and plantation surveys. Many plans also include funds for erosion control and a few include funds for seed collection and fish and wildlife habitat mitigation or improvements. One includes funds to buy a cooler to protect seedlings before they are planted.

K-V plans for the long-term contracts are the most ambitious. In addition to \$1.3 million for reforestation, the APC plan includes \$4.4 million for precommercial thinning, \$2.6 million for fish habitat improvements and mitigation, \$1.1 million for trails and other recreation projects, \$0.3 million for soil and water improvements and mitigation, \$0.2 million for monitoring the fish habitat improvements, and minor amounts for assorted other activities such as planting crabapple trees for wildlife and rehabilitating a quarry.

The KPC plan is similar. In addition to \$2.7 million for reforestation, the plan includes \$5.9 million for precommercial thinning, \$2.3 million for "wildlife thinning," \$2.8 million for fisheries and watershed mitigation measures, \$0.4 million for research, and \$0.2 million for monitoring the fisheries activities.

The justification for these projects is often weak. A benefit-cost analysis accompanying the APC K-V plan shows that planting of trees in floodplains will lose \$320 per acre. But the planting is still scheduled because otherwise those sites would take longer than the legal maximum of five years to reforest timber after clearcutting.

A proposal for a recreation trail providing an alternate portage route concludes that the new trail is worthwhile because, it says, recreationists are willing to pay \$9 per visitor

day. But this \$9 would only be worthwhile if it were for new recreation, not recreation that had merely transferred from one route to another.

The benefit-cost analysis for fish passage improvements assumes that the improvements will increase the number of fish caught by both commercial and sports fishermen for 25 years. The value of additional fish caught over the 25 year period should be discounted at 4 percent per year, but the analyst forgot to do so and simply multiplied the first year value times 25. Discounting would have reduced the value by nearly 40 percent.

These and other errors indicate that managers cared little about accurately justifying proposed K-V projects. Instead, the goal appears to be to get as much money as possible to fund managers' wish lists. This does not mean managers are corrupt. It is simply a predictable result of a system that rewards managers with larger budgets when they lose money on timber and penalizes them with smaller budgets when they return money to the Treasury.

5. Long-Term Contract Advantages

The Tongass' application of K-V rules gives the long-term contractors an advantage over at least some short-term sale purchasers. USDA rules direct the Forest Service to define minimum rates, or "base rates," which purchasers must pay in cash. On the Tongass National Forest, those rates range from \$1 to \$3 per thousand board feet. But the rules also say that timber sale managers can increase this rate to insure that K-V reforestation costs, plus 50¢ per thousand board feet, are paid in cash.⁸

K-V reforestation costs under the long-term contracts average about \$5 per thousand board feet (most of which is spent on 10 percent of the acres). If minimum rates average less than \$2 per thousand, 50¢ of which is returned to the Treasury, then the K-V fund could fall as much as \$3.50 per thousand board feet short of paying for reforestation.

In the long-term contracts, the Forest Service solves this problem by taking more K-V funds when timber prices are high and purchasers pay more in cash. In short-term contracts, when the Forest Service sets base rates to include reforestation costs, purchasers end up paying more when prices are low but no less when prices are high.

The Forest Service does not even hesitate to allow purchasers to pay less than 50¢ per thousand board feet for timber on any given unit or in a given year. The only requirement is that base rates over the life of the contract be paid in cash. Thus the average amount paid to the Treasury by the two long-term purchasers since 1975 has been negative. As with purchaser credits, the long-term contractors have a significant advantage over short-term purchasers over the course of a business cycle.

III. Unit-by-Unit Results

A. The Ketchikan Area Cost \$19.6 Million

Over the past few years, the Ketchikan area earned far more money than the other two Tongass units combined. So it is not surprising that the rate redeterminations led the Ketchikan area to report the greatest loss to the national forest fund: \$13,033,763.

This minus \$13.0 million is entirely due to activity in the KPC long-term contract. Because of the complexity of this activity, which involved purchaser credits on the offer and preoffer areas, the Knutson-Vandenberg and salvage sale funds, and the national forest fund, appendix one includes a detailed chronology. A brief synopsis is presented in table five.

Table Five
KPC 1992 Charges and Credits

	Offer Areas	Preoffer Area	Total
Volume of timber cut (mbf)	160,709	165	160,874
Base rates for timber cut	\$332,605	\$342	\$332,947
Above base value of timber cut	5,196,675	15,782	5,212,457
Comparability adjustments	10,523,009	31,945	10,554,954
Total charges	16,052,289	48,234	16,100,523
Cash paid	121,719	0	121,719
Purchaser credits earned	9,311,955	0	9,311,955
Rate reductions	9,692,137	5,975,915	15,604,162
Total credits	19,125,811	5,975,915	25,037,836
Net credit	3,073,522	5,927,681	8,776,604
Purchaser credits transferred	-7,510,248	7,510,248	0
Cash transferred	4,554,649	-4,554,649	0
Cash refunds	0	-8,843,196	-8,843,196

Source: Timber sale statements of account for the KPC long-term sale.

As the table indicates, KPC cut 160.9 million board feet of timber worth \$16.1 million during 1992. Normally, the company would have paid \$332,947 for the "base" amount in cash and the remaining amount with a combination of cash and purchaser credits.

But in January, 1992, the Forest Service made a rate reduction of \$9.50 million in the offer areas. Of this, \$4.5 million was added to the company's cash balance and used to pay for timber cut from the offer areas.

The other \$4.0 million was added to the purchaser credit balance. In March, the purchaser credit balance, which included \$3.5 million in purchaser credits that the company had recently earned in the offer areas, was transferred to the preoffer area. There it was converted to cash — i.e., used to pay for timber that had previously been paid for in cash.

Also in early 1992, the Forest Service reduced rates on timber cut from the preoffer area, earning KPC a credit of \$5.9 million. KPC received most of this in the form of a refund check for \$5,743,196. KPC also received a \$3,100,000 refund check from the purchaser credits that it had converted to cash. The rest of the converted purchaser credits were

transferred back to the offer areas (including some transferred in fiscal 1993) to pay for timber that KPC was cutting.

As shown in table six, the \$5.96 million preoffer area rate redeterminations were deducted directly from the national forest fund, as were the \$7.50 million in purchaser credits that had been transferred from the offer areas and converted to cash. The national forest fund also lost \$1.00 million in the preoffer area which the Forest Service transferred to the K-V fund.

Meanwhile, the \$4.55 million of converted purchaser credits that was transferred back to the offer areas was used to pay for much of the timber cut by KPC. Most of the remaining payments were made with credit from offer area rate redeterminations or purchaser credits earned in 1992. As a result, KPC was able to cut all 160.9 million board feet while paying only \$121,719 in cash, far below the base rates.

Table Six
1992 Returns to the Treasury from KPC Preoffer Area

PC converted to cash	-7,510,248
Rate redeterminations	-5,960,094
KV converted from NFF	-1,000,000
Payment to NFF	16,124
Net	-14,454,218

Source: Timber sale statements of account for the KPC preoffer area.

Rate redeterminations in KPC's offer areas reduced charges by \$9,692,137 in 1992. Some of this was offset by rate increases and charges for timber cut in 1992. But a total of \$5,290,452 was deducted from the offer area's national forest funds during 1992 (table seven). Of this, \$1,841,927 was deducted directly. Most of the rest was purchaser credits that had been converted to cash — i.e., substituted for cash that had previously been deposited in the K-V fund.

Table Seven
1992 Returns from KPC Offer Areas

	NFF	SSF	K-V	RM	Total
Payments	5,959,816	2,530,765	1,758,069	160,297	10,408,947
Deductions	-5,290,452	-1,353,226	-64,332	0	-6,708,010
Net	669,363	1,177,539	1,693,737	160,297	3,700,936

Source: Timber sale statements of account for the KPC offer areas.

Overall, charges to KPC added more money to the offer areas' national forest funds than deductions removed. But the net gain to the offer areas' national forest fund during 1992 was only \$669,363. Moreover, most of the payments into the national forest fund came from purchaser credits that had been converted to cash in the preoffer area.

Table Eight
1992 Returns from Ketchikan Area Sales

	Offer	Preoffer	Short-Term	Total
NFF	669,363	-14,454,218	751,182	-13,033,673
KV	1,693,737	1,000,000	96,847	2,790,584
SSF	1,177,539	0	353,149	1,530,688

Source: Timber sale statements of account for the KPC long-term sale and statement of fiscal year 1992 receipts.

While the Forest Service readily deducted money from the national forest fund, it deducted money from the K-V or salvage sale funds only reluctantly. Rate redeterminations and purchaser credit conversions to cash did force the Forest Service to deduct \$1.35 million from the salvage sale fund and \$64,000 from the K-V fund. But by year end, the offer areas added \$1.18 million to the salvage sale fund and \$1.69 million to K-V. When short-term sales are included, the K-V fund gained \$2.79 million and the salvage sale fund gained \$1.53 million (table eight).

In total, then, KPC received refund checks of \$8.84 million from the Ketchikan area and enough credit to cut \$16.26 million worth of timber while paying only \$121,719 in cash. Some of this timber was paid for with purchaser credits earned in 1992, but much was paid for with the credit from the rate redeterminations. In addition, KPC ended the year with \$1.2 million more cash credited to its account than it began with.

Table Nine
Where the Ketchikan Area Money Went

Refund check for preoffer area rate redetermination	\$5,743,196
Refund check for purchaser credits converted to cash	3,100,000
Applied as payment for 1992 KPC timber	8,681,571
Added to KPC's account to pay for 1993 timber	1,125,082
Transfers of funds from the Treasury to K-V	1,000,000

Source: Timber sale statements of account for the KPC long-term sale.

B. The Chatham Area Cost \$3.1 Million

The Chatham area cost the national forest fund \$1,259,160 in 1992. This was entirely due to purchaser credit conversions to cash in the APC long-term contract. Conversions in APC's preoffer area reduced the national forest fund by \$1,357,479. Payments in the offer areas added \$60,782 to the national forest fund, so the long-term contract netted the fund minus \$1,315,676.

The difference between this and the overall national forest fund was made up by other sales. In contrast to the national forest fund, the Chatham's K-V fund ended up gaining \$1.50 million. Most of this — \$1.46 million — came from the long-term sale area.

Table Ten
1992 Treasury Returns from APC Long-Term Contract

	Preoffer Area	Chatham Offer Areas	Stikine Offer Area	Total
Timber scaled (mbf)	1,675	97,415	38,449	137,539
Payments to NFF	\$24,508	\$118,196	\$19,224	\$161,928
PC converted to cash	-1,381,987	-76,393	0	-1,458,380
Net NFF	-1,357,479	41,803	19,224	-1,296,452

Source: Timber sale statements of account for the APC long-term sale.

C. The Stikine Area Cost \$1.1 Million

The Stikine area's 1992 contribution to the national forest fund was minus \$19,668. Unlike the Ketchikan and Chatham areas, the Stikine's negative payments to the Treasury were due entirely to short-term timber sales. Although some Stikine timber is included in the APC long-term contract, most of the Stikine's timber is cut under short-term contracts.

In 1992, timber was cut from over twenty Stikine timber sales, but only two had negative returns to the Treasury. One of them, the Middle sale, was purchased by Ketchikan Pulp in June, 1989. The other, the Outback sale, was purchased by Seley in September, 1989. Together, these two sales earned minus \$500,000 for the Treasury in 1992, overwhelming the positive returns from all the other Stikine sales. Meanwhile, APC's offer area in the Stikine returned less than \$20,000 to the national forest fund.

Table Eleven
1992 Returns from Stikine Timber Sales

	NFF	K-V	SSF	PC
Middle Sale	-268,225	36,980	0	28,462
Outback Sale	-232,495	-10,094	0	0
APC Offer Area	19,224	22,352	13,553	2,030,363
Other Sales	461,828	94,257	391,061	1,334,106
Total	-19,668	143,495	404,614	3,392,931

Source: Timber sale statements of account for the designated sales and statement of fiscal year 1992 receipts.

The Outback sale cost the Treasury because of an accounting procedure known as "transfer of purchaser credits." This takes place when a purchaser builds roads for one timber sale and applies the credits to a second sale. For example, suppose the purchaser builds the roads in one sale in 1990 and cuts the timber in 1991. The credits it earns in 1990 stay on the purchaser's balance sheet for a whole year before the timber is cut. But if the purchaser is cutting timber from a second sale in 1990, it can use the credits on that sale and then pay cash when it cuts the timber from the first sale in 1991. Ultimately, the purchaser has to pay for all the timber it cuts.

There is normally little reason to question this practice. In the Outback sale, however, the purchaser happened to have cut and paid for most of the timber before 1992. Then, in 1992, it transferred in \$395,000 of purchaser credits from another sale. Rather than use this money to pay for timber cut in 1992, it obtained a cash refund of money paid prior to 1992. Because some of this was refunded from the K-V fund, the net effect on the Treasury was minus \$232,495.

The Middle sale was even more unusual for a Tongass short-term sale. KPC bid an average of nearly \$140 per thousand board feet for the 10.8 million board foot sale, for a total of \$1,508,774 or \$327,000 more than the second-high bidder (Seley) and \$380,000 more than a third high bidder (The Mill). Midway through the sale, KPC requested an emergency rate redetermination, leading the Forest Service to reduce the rates to an average of just \$41 per thousand board feet. The lower rates applied only to timber cut after the rate redetermination.

Ultimately, KPC paid \$869,198 for the timber, or an average of \$80 per thousand. Over half, or \$494,722, was paid with purchaser credits. Since KPC had already paid for much of the timber at the higher rates, the Forest Service gave it a cash refund of \$550,000 in May, 1992. Since KPC also made some cash payments for the Middle sale in 1992, the net effect on the Treasury was minus \$268,255.

Together, then, these two sales cost the Treasury \$500,750. Of course, in both cases this was money that had been paid to the Treasury in 1991 or earlier. But other 1992 sale returns to the Treasury totalled to just \$481,082, leading to overall returns to the Treasury of minus \$19,668. Meanwhile, the Stikine added \$3.39 million to its K-V fund and \$0.40 million to its salvage sale fund.

IV. Is the Tongass a Below-Cost Forest?

Since 1989, the Forest Service has claimed that its accounting system, the "timber sale program information reporting system" (TSPIRS), proves that the Tongass makes money on timber. Because of the negative receipts, however, even TSPIRS concludes that the forest lost money in 1992. Yet forest officials claim that this is a one-time only occurrence.

They also say that capital expenses such as roads and reforestation costs should not be treated like operating costs, and that the forest's operating revenues exceed its operating expenses. Finally, they say that the Forest Service isn't in business to make money, and that the jobs and other benefits produced by the Tongass more than make up for any costs.

None of these claims stand up to close scrutiny. This is not the first time that the long-term contracts led to large deductions from the Treasury, and it probably won't be the last time. The Tongass' timber budget far exceeds any realistic expectation of its receipts, and TSPIRS merely covers this up by ignoring many important costs. Moreover, the timber jobs are so heavily subsidized that, in many cases, it would be cheaper to pay people not to work.

A. Not the First Time

Nineteen ninety-two was not the first year that the Tongass earned negative receipts for the Treasury; in 1983 the forest returned minus \$3.7 million. The long-term contracts have also repeatedly earned negative receipts for the Treasury. The KPC long-term contract forced deductions from the national forest fund in 1976, 1981, and 1984. The APC contract led to smaller deductions in 1975, 1981, and 1982 (table twelve). Overall contributions to the national forest fund were positive in those years only because of the short-term sales.

Table Twelve
Returns to the National Forest Fund in Selected Years

Year	KPC	APC	Total*
1975	\$258,506	-\$484,866	5,096,196
1976	-94,297	50,402	1,090,842
1981	-5,270,838	-194,852	3,696,326
1982	6,375,313	-1,258,509	2,486,464
1984	-6,859,597	1,445,809	3,552,077

* Includes short-term sale receipts.

Source: Timber sale statements of account for the long-term sales and statements of receipts for the total.

The causes of these negative returns were similar to those of 1992: rate redeterminations and transfers of purchaser credits. However, 1992's losses are unprecedented in scale and in their effect on the national forest fund.

Table thirteen indicates that the Treasury has received an average of just \$1.12 per thousand board feet (\$4.18 in 1992 dollars) for the 5.79 billion board feet cut by KPC and just 61¢ per thousand (\$2.75 in 1992 dollars) for the 2.96 billion board feet cut by APC. Overall, the 8.75 billion board feet cut under the long-term contracts has earned the Treasury only 95¢ per thousand board feet.

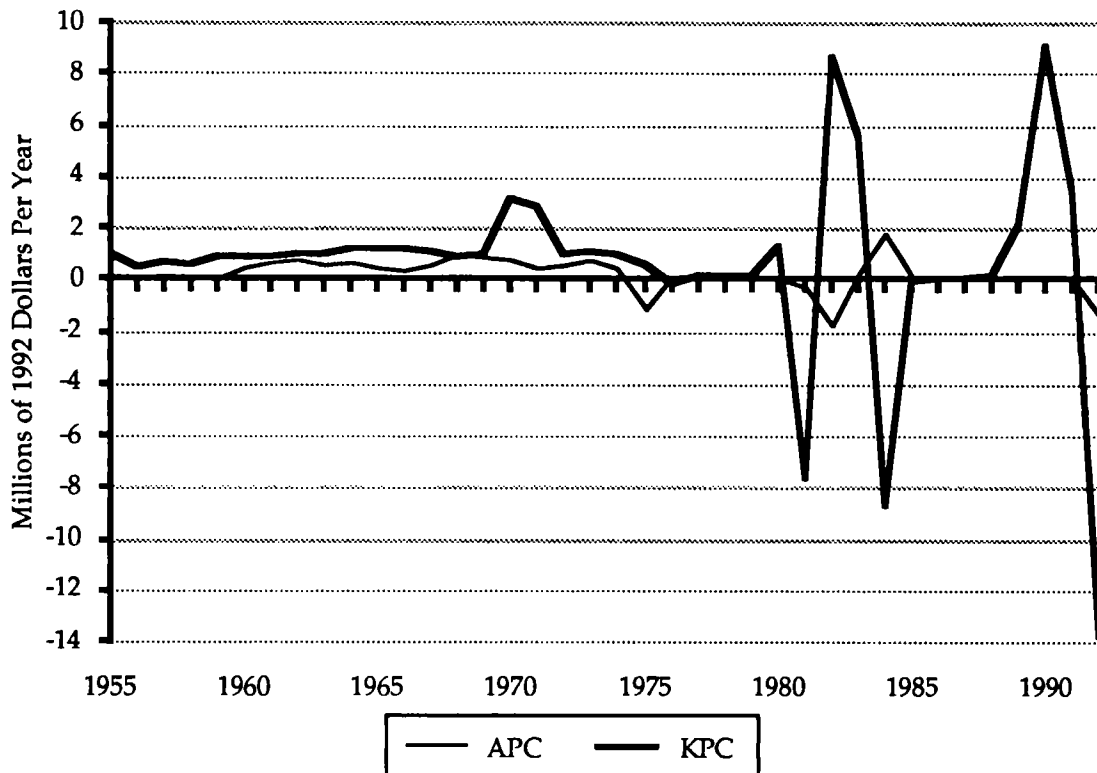
Table Thirteen
Total Returns from Long-Term Contracts

	Volume mmbf	U.S. thousands of dollars	FS thousands of dollars	PC thousands of dollars	U.S. dollars per mbf	FS dollars per mbf	PC dollars per mbf
(Nominal Dollars)							
APC	2,959	1,813	8,758	44,168	0.61	2.96	14.93
KPC	5,793	6,482	18,843	64,320	1.12	3.25	11.10
Total	8,752	8,296	27,601	108,488	0.95	3.15	12.40
(1992 Dollars)							
APC	2,959	8,150	12,358	66,076	2.75	4.18	22.33
KPC	5,793	24,233	24,505	92,167	4.18	4.23	15.91
Total	8,752	32,383	36,863	158,244	3.70	4.21	18.08

"U.S." refers to the U.S. Treasury or national forest fund; "FS" refers to the K-V or another Forest Service fund; "PC" refers to purchaser credits. Source: Timber sale statements of account for the long-term sales.

Figure one graphically shows the long-term purchasers' payments to the Treasury over time. Since purchaser credits were added to the contracts, APC and KPA each received cash back from the Treasury four times. Total payments by both purchasers are now nearly \$1 million less than they were in 1975. As the next section indicates, KPC could potentially reduce its total payments to the Treasury by another \$3.9 million.

Figure One
Gross Returns to the Treasury from the Long-Term Sales



Since 1975, the Treasury has paid APC and KPC nearly \$1 million more than they have paid the Treasury. This does not count costs of timber sales, which would be off the scale. Source: Timber sale statements of account for the long-term sales.

Appendix three lists the complete history of returns to the Treasury (including the national forest fund and other minor funds), the Forest Service (including K-V, salvage sale, and other funds), and purchaser credits by each of the long-term contractors.

B. Not the Last Time

Despite Forest Service efforts to appear optimistic, the Tongass has not seen the end of red ink. Rates may be redetermined at any time and this could lead to more negative receipts to the Treasury. The KPC preoffer area in particular still has several million dollars of cash paid above base rates, and a downturn in the market could lead to a redetermination which causes the Forest Service to refund more purchaser credits that have been converted to cash.

In addition, there are several actions by the long-term purchasers aimed at getting significant refunds on payments made over the past decade. These include:

- APC is challenging the Forest Service's declaration that certain purchaser credits earned before June 30, 1982, were rendered ineffective by a rate redetermination. The Forest Service billed APC several million dollars which APC thinks it did not have to pay or could have paid with other purchaser credits. If APC wins this case, the Forest Service would have to reimburse it about \$4.5 million.
- KPC filed a claim in 1989 challenging the Forest Service's calculations of an upward rate redetermination for timber cut over seven months in 1988 and 1989. If KPC wins this case the Forest Service would have to reimburse it over \$6.1 million.
- Most recently, KPC filed a claim challenging the unilateral contract revisions made by the Forest Service in response to the Tongass Timber Reform Act. KPC is asking for \$16.9 million, plus interest, for settlement of this claim.

Including interest, these claims total some \$30 million. KPC could get up to \$8.3 million out of the cash it has paid above base, which would require deductions from the national forest fund as well as the K-V and salvage sale fund. The Forest Service could pay \$3.9 million of this out of the national forest fund without violating the requirement that at least 50¢ per thousand be paid to the U.S. Treasury. The remainder, including all of APC's claim, would have to be paid by crediting the purchasers' accounts and letting them cut timber at no additional cost.

C. The Tongass' Budget Is Driven by Timber

While visiting the Tongass Forest Supervisors' offices to gather information on timber receipts, I also reviewed the 1992 Tongass Forest budget. I found that the forest spends nearly 60 percent of its funds on the timber and roads programs. This includes a high percentage of the funds that are nominally allocated to inland fisheries, cultural resources, and other non-timber programs.

The Forest Service accounting system designates funds in two different ways. The first, called the *fund code*, indicates the programs to which funds are allocated. These include such things as sale preparation, anadromous fisheries, wilderness management, or trails. Fund codes are four letters long (e.g., NFSP is national forest timber sale preparation, CNFC is construction of facilities) and are equivalent to the line items appropriated by Congress.

The second designation, called the *work activity code*, indicates how the funds are actually spent. The first letter of a work activity code designates a program or resource: A is recreation, E is timber, and so forth. But the codes can include up to eight more letters or numbers designating such things as resource inventories, project designs, support to another resource, or construction.

This system makes it possible to see what share of wildlife funds, for example, is being used to support timber sales. Wildlife has the fund code NFWL, while support to timber has the activity code ET113.

Table fourteen shows 1992 Tongass expenses using the fund codes. Although there are more than 50 different fund codes, table five combines several into each category. For example, "recreation" includes recreation, cultural resources, and wilderness, while "timber sales" includes sale preparation, harvest administration, silvicultural examination, and timber resource planning.

Table Fourteen
1992 Expenses by Fund Code

	Stikine	Chatham	Ketchikan	Total	Percent
Recreation	\$1,649,571	\$2,595,567	\$2,001,469	\$6,246,607	9%
Fish & wildlife	1,528,296	2,644,396	2,247,217	6,419,909	9%
Soil & water	528,399	694,206	754,998	1,977,603	3%
Timber sales	3,688,555	2,971,666	6,932,994	13,593,215	19%
Reforestation ¹	117,257	533,692	325,521	976,469	1%
Minerals	15,129	566,577	298,224	879,930	1%
Gen. purpose roads ²	609,944	140,935	1,720,580	2,471,459	3%
Recreation roads	216,664	35,169	9,370	261,203	0%
Timber roads	2,576,344	2,673,542	3,957,254	9,207,139	13%
Road maintenance	325,685	284,913	646,590	1,257,188	2%
Trails ³	599,554	833,017	552,585	1,985,157	3%
KV, BD, SSF, RM ⁴	1,378,744	3,398,154	5,159,195	9,936,093	14%
Facilities ⁵	304,269	313,843	5,103,543	5,721,655	8%
General admin.	1,589,536	2,182,780	2,437,791	6,210,107	9%
Tongass TSF ⁶	585,582	209,800	1,916,383	2,711,766	4%
Other ⁷	774,228	958,920	1,025,003	2,758,152	4%
Total	\$16,487,758	\$21,037,178	\$35,088,717	\$72,613,652	100%

1. Includes timber stand improvement and reforestation trust fund but not K-V reforestation.

2. General purpose, recreation, and timber roads are construction and reconstruction costs only, not maintenance.

3. Includes both trail construction and maintenance.

4. Knutson-Vandenberg, brush disposal, salvage sale, and cooperative work (road maintenance) funds.

5. Includes both facilities construction and maintenance.

6. Carryover from prior years' deposits to the Tongass timber supply fund.

7. Includes such things as fire protection and suppression, hazardous waste disposal, real estate, quarter maintenance, vegetation management, and restoration of improvements.

Source: Unit financial statements on file at forest supervisors' offices.

The fund codes suggest that only 19 percent of the Tongass budget is spent on timber sales, while another 14 percent is spent on reforestation and timber roads. However, the fund codes don't say how much of the K-V fund, for example, was spent on timber, or how much of the recreation or wildlife funds were spent to support timber sales.

Table fifteen, which shows expenses by work activity code, paints a very different picture. It indicates that 38 percent of Tongass funds are spent on timber. If, as table fourteen indicates, 77 percent of the Tongass road budget is for timber (probably an underestimate), then table fifteen shows total direct timber and timber-related road expenses of \$39.0 million.

Table Fifteen					
1992 Expenses by Work Activity					
	Stikine	Chatham	Ketchikan	Total	Percent
Recreation	\$1,849,364	\$3,141,197	\$6,962,615	\$11,953,176	16%
Fish & wildlife	1,436,008	2,257,935	2,124,189	5,818,132	8%
Soil & water	418,255	652,358	443,970	1,514,583	2%
Timber	6,157,806	7,379,365	13,722,896	27,260,068	38%
Roads	4,166,031	3,426,142	7,709,571	15,301,744	21%
Minerals	12,757	529,143	277,915	819,815	1%
General admin.	1,629,734	2,298,773	2,801,258	6,729,765	9%
Other	817,802	1,352,265	1,046,303	3,216,370	4%
Total	\$16,487,758	\$21,037,178	\$35,088,717	\$72,613,652	100%

Source: Unit financial statements on file at forest supervisors' offices.

Adding timber's share of general administration brings the total to \$42.7 million, or nearly 60 percent of the total Tongass budget. In addition, some of the "other" activities, such as brush disposal and a portion of land line location, support timber sales even though they are not given an "E" work activity code.

Thus, while the fund codes suggest that as little as a third of the Tongass Forest budget is dedicated to timber, the work activity codes reveal that the actual amount is nearly 60 percent. The difference is due to money spent on timber activities out of non-timber fund codes.

For example, nearly all of the salvage sale, brush disposal, and road maintenance funds as well as half of the K-V fund are spent on timber. The remaining K-V funds were spent on anadromous fish (36 percent), wildlife (13 percent), and watershed (1 percent). In addition, table sixteen shows that significant chunks of the budgets for cultural resources, inland fisheries, and other non-timber activities are dedicated to timber. All of the "timber" dollars in table sixteen, of course, are included in the "timber" row in table fifteen.

With these high timber expenses, the Tongass would have lost money on timber even if it had not deducted \$14.3 million from the Treasury in 1992. The most timber receipts ever recorded by the Tongass was \$36.6 million in 1991, which falls \$6.1 million short of the 1992 timber expenses. The 1991 receipts included \$22.7 million of purchaser road credits, and thus were not paid in cash at all. Another \$3.2 million was kept by the Forest Service, leaving only \$10.8 million for the U.S. Treasury.

The \$42.7 million in 1992 timber expenses were only partly paid out of tax dollars. The salvage sale fund, Knutson-Vandenberg fund, and road maintenance fund paid for \$8.4 million, leaving \$34.3 million paid out of the Treasury. Subtracting this from the minus \$14.3 million receipts paid to the Treasury leaves a net loss to the Treasury of \$48.6 million.

This is before payment of the 25 percent fund to the state, of which \$3.2 million was due to timber. Since the 25 percent fund is a payment made in lieu of property taxes, and any private owner considers a tax as a cost, this should be considered a cost of the

timber program. The above numbers also do not count timber-related overhead expenses at the regional and Washington office level, which in 1991 totalled to \$10.8 million.

Table Sixteen
Portion of Selected Fund Codes Spent on Timber

	Timber	Total	% Timber
Salvage sale fund	\$7,557,850	\$7,902,482	96%
K-V fund	827,734	1,774,253	47%
Tongass TSA*	580,670	2,711,766	22%
Anadromous fisheries	185,199	3,545,608	5%
Inland fisheries	184,896	359,043	51%
T&E species	371,938	641,353	58%
Wildlife	623,986	1,873,905	33%
Cultural resources	1,090,368	1,330,195	82%
Recreation	359,640	3,662,981	10%
Trail maintenance	175,000	274,907	64%
Soil & water operations	747,597	1,592,427	47%
Minerals	30,263	879,930	3%
Total	\$12,735,141	\$26,548,850	48%

* The remaining 78 percent of the Tongass timber supply fund was spent on roads (75 percent) and general administration (3 percent).

Source: Unit financial statements on file at forest supervisors' offices.

Thus, the Tongass timber program cost federal taxpayers over \$60 million in 1992. This is a loss of \$162 per thousand board feet cut, or a subsidy of \$38,000 for each direct job attributable to the timber program.

D. TSPIRS Overestimates Revenues, Ignores Costs

In response to debate over below-cost timber sales, the Forest Service developed a "timber sale program information reporting system" (TSPIRS) that purports to compare the annual receipts and costs of each forest's timber program. In 1989 through 1991, TSPIRS reported that the Tongass made money (unless otherwise noted, all references to years refer to federal fiscal years beginning October 1 of the previous calendar year). In 1991, for example, TSPIRS says that the Tongass earned \$29.6 million from timber purchasers but spent only \$16.6 million on timber sales and timber management.

TSPIRS, however, plays fast and loose with many of the numbers. The most important problem with TSPIRS is that it counts all receipts, rather than just those returned to the U.S. Treasury. For example, of the \$29.6 million in 1991 receipts, \$15.1 was "paid" in the form of road construction and another \$3.2 was retained in the K-V, salvage sale, and other Forest Service funds. The Treasury received only \$11.2 million.⁹

Returns to the Treasury are the most appropriate measure of national forest receipts. The Forest Service is funded by taxpayers, and taxpayers deserve an accounting system that informs them what they are getting for their investments.

The second problem with TSPIRS is that it uses an accrual system, rather than a cash system, of accounting for costs. The accrual accounting system greatly underestimates costs in the early stages of a long-term project. TSPIRS accrues historic reforestation costs over 100 years and counts only 1 percent against the revenues each year. After

100 years of accrual, the costs counted by TSPIRS will match actual expenditures. Until then, TSPIRS greatly underestimates reforestation costs.

While TSPIRS includes all K-V revenues as timber receipts, it amortizes reforestation costs over 100 years. TSPIRS also counts only those K-V funds that are spent on reforestation or timber stand improvement. K-V funds spent on mitigating the impacts of timber sales on fish or wildlife are ignored. The effects of inflation and the fact that the Tongass has not been spending money on reforestation for an entire rotation are ignored. Because of all these factors, TSPIRS counts only 17 percent of total reforestation costs and only 1.3 percent of total K-V costs.

Similarly, counting the \$15.1 million of 1991 purchaser road credits as receipts would not be bad if they were also counted as costs. But TSPIRS only counted \$0.7 million, or less than 5 percent, of the purchaser road credits as costs. This is because TSPIRS' accrual system, despite Forest Service claims to the contrary, does not meet generally accepted accounting principles.

TSPIRS divides roads into four different costs: bridges, culverts, surface, and subsurface or "prism." (Prism costs include all the earth movements and added road costs other than bridges, culverts, and surface.) Bridges are amortized over 50 years, culverts over 30 years, and surfaces over 10 years. This means, for example, that all historic investments in bridges are totalled each year and one-fiftieth of the total is counted as this year's costs and subtracted from the total forwarded to the next year.

This is not a terribly bad system for bridges, culverts, and surface costs, but it does have two flaws. First, it fails to account for the fact that a dollar spent in 1970 is worth much more than a dollar spent in 1990. By ignoring inflation, TSPIRS underestimates costs. Second, the Tongass has not been building roads for 50 years, so TSPIRS has not accrued enough costs to accurately estimate bridge costs when the 50-year mark is reached. Together, these two problems underestimate bridge, culvert, and surface costs by about two-thirds.

But the most important problem with TSPIRS's road accounting is that it completely ignores the road prism costs. The Forest Service says that the prism "adds to the capital value of the forest" and so need not be counted against receipts. Since 85 percent of Tongass purchaser road credits are defined as prism costs, they are completely ignored.

Calling prism costs a "capital" cost that need not be counted is like saying that spending \$5,000 to fill a backyard swimming pool with concrete adds to the capital value of a house. In reality, a capital investment is only as valuable as the returns it produces. Since all the purchaser road costs are doing is producing timber whose value is negative even when road costs are ignored, the asset value of Tongass road prisms is nil.

The whole idea of amortization for roads and reforestation is that capital costs, once in place, will begin producing profits at little additional cost. This makes no sense for roads and reforestation. Reforestation must follow timber cutting every year. Roads, once built, must be reconstructed every few years, often at a cost approaching the original construction costs. There is no reason to expect that either of these costs will decline in the future below current annual levels. Thus, when assessing net receipts CHEC counts actual costs, not some sort of amortized or accrued costs.

TSPIRS has two other major problems. First, it counts overhead costs at the supervisor, regional, and Washington office levels. But it only assigns supervisor overhead costs to each forest's balance sheet. The Tongass' share of regional and Washington office costs, weighted by volume of timber cut, add up to more than \$10 million per year.

Second, TSPIRS displays the 25 percent fund payment to states, but most Forest Service press releases do not count this cost against timber receipts. The 25 percent fund was created to compensate municipal governments for the loss in property taxes that they would collect if the national forests were privately owned. Since no private landowner considers property taxes anything but a cost, it is unreasonable for TSPIRS not to count them as a cost.

Altogether, the difference between TSPIRS and actual net revenues to the Treasury was \$47.1 million in 1991. Where TSPIRS indicated a profit of \$13.0 million, the Treasury actually spent \$34.0 million more than it received.

Table seventeen presents TSPIRS results and CHEC's calculations of actual costs and returns to the U.S. Treasury in 1989 through 1992. While TSPIRS claims a net income of \$28 million over the four years, the Treasury actually lost a total of \$159 million on Tongass timber, equal to an average loss of \$96 per thousand board feet cut.

For 1992, TSPIRS shows a \$10.1 million loss for the Tongass (not counting a \$9.9 million "extraordinary expense" that is not shown in table seventeen). The Forest Service says that this loss was unusual and that the Tongass will go back to being a "profitable" (according to TSPIRS) forest in 1993. In reality, TSPIRS will continue to cover up losses by ignoring road prisms, overhead, and other important costs even as the Tongass continues to be as unprofitable for taxpayers as ever.

E. Higher Timber Prices Will Not Rescue the Tongass

The Forest Service claims that increasing timber prices will make up some of the Tongass' past losses. How much would timber prices have to increase to make the Tongass profitable? This question must be answered in two steps. First, how high must prices be to cover costs to the Treasury? Second, how high must prices be before forest managers begin returning any funds to the Treasury rather than keeping them in the K-V and other Forest Service funds?

The first question is easily answered. In 1991 the Tongass spent an average of \$85 per thousand board feet in tax dollars on timber sales, roads, reforestation, and timber-related overhead. (This is 23 times the \$3.70 per thousand that the long-term purchasers have paid, on average, to the Treasury since the contracts began.) Returns to the Treasury must be at least one-third greater than this because 25 percent of all returns go to the state.

The second question is more difficult to answer because the Knutson-Vandenberg Act and other laws place no limit on the share of timber receipts that forest managers may keep. This takes any incentive from the Forest Service to return funds to the Treasury; rather, the agency is rewarded when it loses the most amount of money.

Table Seventeen
1989–1992 TSPIRS Results and Net Returns to U.S. Treasury
(millions of dollars except where noted)

	1989		1990		1991		1992		1989–1992	
	TSPIRS	U.S.	TSPIRS	U.S.	TSPIRS	U.S.	TSPIRS	U.S.	TSPIRS	U.S.
Total revenues	21.1	21.1	36.6	36.6	29.6	29.6	11.5	11.5	98.8	98.8
Purchaser credits	17.2	17.2	20.2	20.2	15.1	15.1	19.0	19.0	71.4	71.4
Retained by FS ¹		1.1		6.5		3.4		6.8	0	17.8
To U.S. Treasury ¹		2.8		10.0		11.2		-14.3	0	9.6
Revenues counted ²	21.1	2.8	36.6	10.0	29.6	11.2	11.5	-14.3	98.8	9.6
Sale expenses ³	7.9	7.2	9.5	4.8	9.0	13.3	13.5	18.4	39.8	43.7
Road expenses ⁴	2.8	9.2	3.3	12.7	3.2	7.1	3.6	12.8	13.0	41.9
Management costs ⁵	0.5	0.8	1.4	1.0	0.3	0.9	0.3	1.2	2.5	3.9
Overhead costs ⁶	3.1	11.9	3.0	10.9	3.4	14.2	3.6	13.6	13.1	50.6
Other costs ⁷	0.6	0.6	0.8	0.5	0.8	0.7	0.5	0.5	2.7	2.4
Payments to state ⁸		5.0		8.9		9.2		3.2		26.2
Total expenses	14.9	34.7	18.0	38.8	16.6	45.3	21.6	49.8	71.1	168.6
Net	6.2	-32.0	18.6	-28.8	13.0	-34.1	-10.1	-64.1	27.8	-159.0
Volume (mbf)	444,606		470,711		363,708		369,697		1,648,722	
Net in \$/mbf	13.99	-71.92	39.61	-61.27	35.76	-93.79	-10.57	-168.99	20.60	-95.47

"TSPIRS" columns show the results of the Forest Service accounting system; "U.S." columns show actual revenues and costs to the U.S. Treasury.

1. TSPIRS doesn't reveal how much money the Forest Service keeps and how much is returned to the Treasury, so these items are shown as blanks.
2. TSPIRS counts all revenues, including K-V funds, purchaser credits, and other receipts that the Treasury does not keep. Only revenues that the Treasury keeps are shown under U.S.
3. TSPIRS sale costs differ from U.S. because TSPIRS counts some costs that are paid out of receipts and amortizes other costs.
4. TSPIRS ignores road "prism" costs, which make up over 75 percent of Tongass road costs.
5. TSPIRS management costs (which include reforestation and timber stand improvement) differ from U.S. because TSPIRS counts some costs that are paid out of receipts and amortizes all costs over a 100 year period.
6. TSPIRS totals overhead spent by the Washington and regional offices but does not count it against individual forest sale programs. "U.S." numbers show the Tongass' share weighted by volume of timber cut.
7. "Other" is mainly depreciation on buildings and other non-road facilities.
8. Published accounts of TSPIRS usually ignore payments to states.

Numbers may differ from previous tables in this report because TSPIRS uses accrual accounting while most numbers in the rest of this report are based on cash accounting. Data may not add due to rounding. Source: TSPIRS results from worksheet TPIR01 for given years. "U.S." results for 1989 from "Recalculating the 1989 Figures," Forest Watch 10(10): p. S-3; for 1990 from Growing Timber Deficits (Portland, OR: CHEC, 1991), p. 19; for 1991 from The Citizens' Guide to the Forest Service Budget (Portland, OR: CHEC, 1992), pp. 36–37; for 1992 from TSPIRS data.

The only requirement in the Knutson-Vandenberg Act is that funds must be spent in the timber sale area. Brush disposal and road maintenance funds are also spent only on the timber sale from which they were collected. The salvage sale fund is limited to salvageable timber anywhere on a national forest.

What is the limit of the Forest Service's ability to spend timber receipts within a sale area? In 1991, the Tongass kept \$43 in K-V funds for every acre cut and \$311 in K-V, salvage sale, brush disposal, and road maintenance funds for every acre cut. It also credited purchasers \$1,408 in road credits for every acre cut. The road credits are the highest in the National Forest System, but the other numbers aren't spectacular by Forest Service standards.

Nearly one-third of the national forests keep over \$500 per acre in the K-V or another Forest Service fund. Twenty-three forests keep over \$1,000 per acre. The Siuslaw and Six Rivers forests each keep over \$3,000 per acre in their K-V funds and over \$5,000 per acre in all their funds.¹⁰

Up to a certain point, the amount a national forest keeps is closely linked to the value of its timber: the more valuable the timber, the more it keeps. After timber prices reach a certain level, forest managers apparently cannot find enough things to do with the money to consume it all, so they return their surpluses to the Treasury. Twenty (out of 122) national forests produce over 80 percent of all the timber returns to the Treasury; they are the ones that earn so much that they cannot spend all the receipts.

Twenty national forests keep more than \$1,200 in timber receipts per acre cut, so it is fair to assume that the Tongass could quadruple its K-V and other funds to about \$1,200 per acre before its managers began making major returns to the Treasury. This is equivalent to \$36 per thousand board feet. This must be increased by one-third to produce returns to the Treasury since the state gets 25 percent of the K-V and salvage sale funds.

To cover costs to the Treasury, then, revenues must equal \$85 per thousand board feet for appropriated costs, \$36 per thousand for K-V and other Forest Service funds, and \$33 per thousand for purchaser road credits, all increased by one-third to account for the state 25 percent fund. This is a total of \$217 per thousand board feet. Even then there is no guarantee that Tongass managers will keep only \$1,200 per acre (\$36 per thousand board feet) in the K-V and other funds, especially considering that some forests keep much more.

In 1992, the price Tongass timber purchasers paid, including purchaser credits, averaged less than \$35 per thousand board feet. From 1989 through 1992 it averaged \$66 per thousand (in 1992 dollars). This means that prices must increase 540 percent above 1992 levels and 230 percent above 1989–1992 levels before the Tongass has a chance of breaking even.

Forest Service economists point to an increase in timber prices due to reductions in timber sales in the Pacific Northwest. But those reductions have, for the most part, already taken place, so the price increases should have mostly taken effect. Indeed, timber prices in most parts of the country did increase in 1991, though nowhere near enough to make the Tongass a profitable timber forest. Tongass timber prices cannot be reasonably expected to more than triple in the next few years, much less hextuple.

In fact, unless there is a major shift in national forest policy, the losses on the Tongass timber program will continue through the end of the decade and beyond. A shift in policy would require changes in the budgeting process to give managers incentives to sell timber only when it makes money, instead of the current system which rewards managers for losing money.

F. Taxpayers Subsidize Half of Workers' Income

Below-cost timber sales are sometimes justified on the basis that they create jobs. This is a lame excuse; the Forest Service could create jobs by dumping money out of airplanes onto a remote glacier, but that doesn't mean that dumping money out of airplanes is worthwhile.

Many people are confused about jobs questions because our political system places so much emphasis on jobs. For a politician, jobs are a benefit because they may translate into votes. For everyone else, jobs are a cost: No one wants to work 24 hours per day. The benefit comes from the net income earned by a job, not the job itself. The best jobs produce the most net income per hour or year of work.

To calculate net income, any subsidies from taxpayers or others must be subtracted from the income earned by a worker. Since subsidies to the Tongass are high, the net income earned by Tongass timber workers must be very low.

Some 2,000 people, including millworkers, loggers, and Forest Service employees, owe their jobs to Tongass timber. According to the Alaska Department of Labor, Southeast Alaska had an average of 2,800 sawmill, pulpmill, and logging jobs in 1980 through 1990. Half the timber cut in or imported for processing in Southeast Alaska during that period was cut from the Tongass Forest.¹¹ Thus, the Tongass provided an average of 1,400 mill and logging jobs each year. Adding 600 Forest Service employees increases this to about 2,000.

Many job estimates add a "multiplier" for secondary jobs. But such multipliers should be ignored when accounting for subsidies. Secondary jobs can be created by dumping money from an airplane onto a glacier: Some people (the primary workers) will cross the glacier to collect the money. Others (the secondary workers) will sell goods and services to the primary workers. But the fact that there are secondary workers doesn't justify dumping money onto a glacier. The only justification would be if the net income to the primary workers is high. (Of course, the net income from collecting money dumped by the government on a glacier would be zero.)

In 1990, employment in Southeast Alaska census areas averaged 34,200 people.¹² Thus, although certain areas such as Sitka and Ketchikan may be more dependent than other areas, only about 6 percent Southeast Alaska workers as a whole are directly dependent on Tongass timber.

Table seventeen shows that in 1989 through 1992 net Tongass timber returns to the Treasury averaged minus \$40 million per year. When divided by 2,000 workers this equals an average federal subsidy of \$20,000 per year or about \$10 per hour.

According to the Alaska Department of Labor, the 1991 wage rate for loggers in Southeast Alaska averaged about \$20 per hour. The state did not list mill workers as a separate occupation, but power equipment operators earned an average of \$21.25 per

hour, power generating plant operators earned \$14.81 per hour, and machinery maintenance workers earned \$14.53 per hour.¹³

If these are representative of Tongass timber workers, few earned a net income of more than \$10 per hour. The average Forest Service salary is also less than \$40,000 per year. Thus, on the average, over half of all wages and salaries paid to timber workers and government employees dependent on the Tongass timber program were subsidized by federal taxpayers.

G. Payments to the State

The Tongass' negative payment to the Treasury in 1992 also had a negative effect on the 25 percent fund that is paid to Alaska for distribution to boroughs. Since the state also gets 25 percent of purchaser credits and the K-V and salvage sale fund, the 1992 payment is not zero. But it is considerably less than in 1990 or 1991.

In 1990 and 1991, payments to the state were \$9.5 million per year, up from \$5.4 million in 1989. However, they fell to just \$3.3 million in 1992. The decline is almost entirely due to the recalculations of KPC timber prices; transfers of funds between the national forest fund and K-V or purchaser credits have little effect on the 25 percent fund. But KPC's cash refunds and ability to buy timber with previously earned purchaser credits converted to cash cost the state as well as the federal treasury.

In part, the state lost because of the advantage that KPC has over short-term purchasers: the ability to apply what would otherwise be ineffective purchaser credits against timber prices. But the fluctuations in returns to the state also reflect the major swings in the wood products industry, which is a major victim of the business cycle. Making the long-term sales equivalent to short-term contracts will not insulate the state from this business cycle.

Boroughs and cities that rely on the 25 percent fund will be much better off if they have a steadier source of funding. Today, timber produces 98 percent of the income that goes into the 25 percent fund. But this could change if the Forest Service were allowed to charge fair market value for recreation fees. Since recreation is much less affected by the business cycle, this would both increase payments to the state and reduce the fluctuations from one year to the next.

Recreation permits could be sold on an annual or short-term basis and could be easily monitored by forest managers if sold in the form of visible permits. Based on the number of recreationists reported by the Tongass in 1991, if fees averaged \$3 per day for most recreation and \$5 per day for wilderness recreation, the Tongass would collect over \$10.4 million per year in recreation fees.¹⁴ While the \$2.6 million state share is less than the state gets from timber, it would not fluctuate as much as timber and would grow considerably over time.

V. Conclusions

The \$14.3 million negative returns to the Treasury made by the Tongass timber program in 1992 underscores the overall negative returns from Tongass timber sales. The forest has been losing millions of dollars per year on its timber program ever since the long-term contracts were first signed in the 1950s.

Forest Service claims that Tongass timber sales made money in recent years are belied by the fact that only a tiny amount of that money made it to the U.S. Treasury. The APC contract returned less than \$1 per thousand board feet to the Treasury each year from 1989 through 1991. From 1989 through 1992, the 443 million board feet cut under the APC long-term contract earned the Treasury minus \$2.59 per thousand board feet.

The KPC contract returned more, but nearly all of those returns were refunded in 1992. From 1989 through 1992, the 720 million board feet cut under KPC's long-term contract earned less than \$214,000 for the Treasury, or just 30¢ per thousand board feet.

Payments to the Treasury may increase if the current economic recovery is sustained. But they are likely to be cancelled out in the next recession as they were in 1981, 1984, and 1992. The profits claimed by the Forest Service translate to nothing more than money-losing reforestation investments, measures to mitigate the effects of timber cutting on fish and wildlife, and roads to nowhere.

Although spectacular, the losses earned by the Tongass in 1992 are not surprising considering the Forest Service budgetary process, which rewards managers for losing money on timber sales. That process has an important failing: No one involved in the process acts as a guardian of the U.S. Treasury. Members of Congress who allocate the funds have an incentive to waste money because it helps them get reelected. Forest Service officials have an incentive to waste money because it gets them larger budgets.

The Clinton Administration proposes to phase out below-cost timber sales over several years. However, a close examination of the proposal indicates that so far the administration is proposing little more than the Forest Service's proposed below-cost sales policy, which the agency considered but did not adopt during the Bush administration. This policy would reduce timber sales only on those forests that lose money according to both TSPIRS reports 1 and 2 (the financial and economic reports) over a three-year period. This includes fewer than two dozen forests, and the Tongass is not one of them. Thus, the policy would have no effect on the Tongass timber program.

Specific problems on the Tongass may be partially remedied by changing the long-term contracts to make the purchaser credit and minimum rate provisions comparable to short-term contracts. Even if the long-term contracts are cancelled, the Forest Service will only find another way to lose money on Tongass timber. The most serious problems on the Tongass and other forests will be fixed only by revamping the budgetary process.

This means that forest managers should be funded out of the net income their forest earns, not out of tax dollars and gross timber receipts.¹⁵ This will give them an incentive to sell timber only if it makes money. It also means that forest managers should be allowed to charge fair market value for recreation. This will give them incentives to emphasize resources other than just timber. Only reforms that address incentives will significantly reduce below-cost and environmentally destructive timber sales. The Tongass will continue to lose money until these reforms are made.

References

1. The Knutson-Vandenberg Act of 1930 (16 U.S.C. 576–576b).
2. The National Forest Management Act of 1976 (16 U.S.C. 427a).
3. The National Forest Roads and Trails Act of 1964 (16 U.S.C. 537).
4. 36 CFR 223.61.
5. The Tongass Timber Reform Act of 1990 (Public Law Number 101-626).
6. General Accounting Office, *Contractual Modification of the Tongass Timber Reform Act* (Washington, DC: GAO, 1991), 30 pp.
7. Karen Knudson and Randal O'Toole, *Good Intentions: The Case for Repealing the Knutson-Vandenberg Fund* (Portland, OR: CHEC, 1992), 30 pp.
8. 36 CFR 223.61.
9. All discussions of 1991 TSPIRS results are from CHEC, *The Citizens' Guide to the Forest Service Budget* (Portland, OR: CHEC, 1992), pp. 36–37.
10. Calculations in this section are based on data in *The Citizens' Guide to the Forest Service Budget*, pp. 34–37.
11. Brian Rae, "Alaska's Timber Industry Faces an Uncertain Future," *Alaska Economic Trends* 11(6):1–8.
12. "Employment and Earnings Report for Alaska, 2nd Quarter 1991," Alaska Department of Labor Research and Analysis, volume 12, #2.
13. Alaska Department of Labor, *Alaska Wage Rates 1991* (Juneau, AK: State of Alaska, 1992), p. 24.
14. Karen Knudson and Randal O'Toole, *Other People's Money: The Case for Reforming the 25 Percent Fund* (Portland, OR: CHEC, 1992), p. 41.
15. Randal O'Toole, *Reforming the Forest Service* (Covelo, CA: Island Press, 1988), 247 pp.

Data in the tables and figures of this report are taken directly from Forest Service accounting records on file at the Tongass Forest Supervisors' offices and/or the Region 10 regional office. Data may not always add due to rounding. Conclusions about the Tongass' profitability, such as that the Treasury lost \$64.1 million on the Tongass timber program in 1992, are based on the Forest Service's strict cash accounting of timber expenditures and receipts. As shown in table seventeen, these conclusions differ from figures that the Forest Service makes public because the published figures rely on an accrual accounting system that does not follow generally accepted accounting principles.

Appendix One

Chronology of Ketchikan Refunds

March 1, 1989 — Beginning of new five-year period under the contract. Normally, the rates would be revised at this time, but the revision is delayed. The company continues to pay the old rates pending the revision.

February 28, 1991 — Ketchikan Pulp has cut 5,535,992 thousand board feet from the contract area, having paid \$59,962,610 in purchaser credits (PC) and \$34,007,671 in cash. Of this cash, \$19,058,197 went to the national forest fund (NFF), the rest to the Knutson-Vandenberg fund (K-V), salvage sale fund (SSF), and minor funds. However, the minimum to NFF is only \$2,767,996, and the rest is subject to reductions if either purchaser credits are converted to cash or NFF is converted to K-V.

March 1, 1991 — Under the Tongass Timber Reform Act, the contract is revised so that all cutting will take place on "offer areas." Five offer areas are set up, with more planned. KPC still has a cash balance of \$987,529 on the preoffer area.

September 30, 1991 — A total of 96.1 million board feet has been cut from the five offer areas by the end of this fiscal year. KPC pays for this with \$4,013,133 of PC and \$1,211,382 of cash (\$894,269 to NFF, \$417,113 to SSF). KPC also has a balance of \$344,022 PC not yet credited against timber. Only 1.4 million board feet was cut from the preoffer area for which KPC is charged \$81,431. Most of the rest of KPC's cash balance is transferred to the offer areas.

November 30, 1991 — KPC has cut 34.876 million board feet so far in the fiscal year, for which it is charged \$3.8 million, an average of more than \$100 per thousand board feet. However, in the only cash payment it will make in 1992, it pays just \$121,719 in cash. Some of the rest is paid with PC, but KPC still runs up a bill of over \$1 million. But before it needs to pay this bill, rates suddenly fall to base, or a little over \$2 per thousand board feet. This reduction is retroactive to March 1, 1989, when the current five-year period began. The price of over 400 million board feet of timber that KPC cut from 3-1-89 to 3-1-91 is reduced by \$7 to \$18 per thousand board feet. This gives KPC a \$4,418,774 credit on timber cut outside the offer areas. A nominal 165 thousand board feet is measured from the preoffer area, the only cutting in this area during FY 1992 and probably the last cutting ever.

December, 1991 — The Forest Service does more calculations and 360 million board feet is reduced by another \$4 to \$12, for an additional credit of \$1,251,671. KPC continues to cut in offer areas without paying any cash, nominally incurring a total bill of over \$1.5 million.

January, 1992 — In response to KPC's emergency rate redetermination request, the Forest Service now recalculates prices paid in the offer areas. Some prices go up, others down, and KPC nets a credit of \$6,655,561. This includes cedar rebates of \$1,377,611. Another credit of \$67,364 is earned in the preoffer areas. KPC now has a huge cash balance in both the offer and preoffer areas. In addition, because \$4.6 million of the reduced rates is in above-base PC, KPC has a PC balance in the offer areas of \$6,644,404 by the end of January.

February 20, 1992 — The Forest Service writes KPC a check for \$5,743,196 to refund money paid in the preoffer area. This reduces NFF by a similar amount.

February 28, 1992 — KPC's PC balance in the offer areas reaches \$8,299,777.

March 31, 1992 — KPC transfers \$7,510,248 of PC from the offer areas to the preoffer area. There it is converted to cash, that is, KPC substitutes purchaser credit for cash it had previously paid on timber cut in the preoffer area.

April 30, 1992 — KPC transfers \$4,370,149 of the "cash" from the preoffer areas to the offer areas to pay for the timber it is cutting in those areas. Normally, KPC could

not charge PC against base rates, but by transferring it to the preoffer area and converting it to cash, it can use it to pay base rates. Rate corrections increase charges to KPC on timber cut from offer areas by \$5,558,762, but this is paid for by the cash from preoffer areas. KPC also gets cedar rebates of \$106,104 in the offer areas.

June, 1992 — NFF in the preoffer area is still not down to the minimum, so the Forest Service converts \$1,000,000 of it to K-V. All K-V costs had been paid for under the 1984-89 plan, but this is applied to the 1989-94 plan.

July, 1992 — Rate adjustments in the offer areas increase charges to KPC by \$2,023,182. This is easily paid for by PC plus the cash balance transferred from the preoffer areas. But just to make sure KPC transfers another \$184,500 from the preoffer area. Timber prices climb to \$30 to \$40 per thousand board feet.

September 22, 1992 — The Forest Service writes KPC a check for \$3,100,000 for the rest of the PC converted to cash.

September 30, 1992 — During fiscal 1992, KPC cut 160.9 million board feet from the offer areas and paid only \$121,719 in cash. It was refunded \$8,843,196 from the preoffer area (partly because of purchaser credits earned in the offer areas). It ends the year with a cash balance of \$1,309,545 and a PC balance of \$212,606. Meanwhile, the Treasury has "earned" \$669,363 on the offer areas but paid out \$14,454,218 on the preoffer area (including \$1 million to K-V) for a net of minus \$13,784,855.

November, 1992 — The last \$73,685 in cash balance from the preoffer area is transferred to the offer areas. This more or less closes out the preoffer area. However, KPC paid several million over base rates in the preoffer area, so if prices fall to base rates again it may have the opportunity to convert more PC to cash.

Appendix Two

Glossary

Because of the complexity of this subject, this glossary includes terms and abbreviations that may be encountered either in this report or in another report on this subject.

- APC — Alaska Pulp Company, operates pulp mill in Sitka.
- appraisal — an attempt to determine the fair market value of a good.
- base rates — the minimum rate that purchasers must pay for timber in cash.
- BD — brush disposal fund.
- board foot — a volume of wood equal to the amount necessary to make a piece of lumber 1"x12"x12".
- brush disposal fund — a fund created by a 1916 law allowing the Forest Service to keep a share of timber receipts to spend on disposing of brush after timber cutting to ease reforestation.
- cash above base balance — the total amount a purchaser has paid for a sale in cash over and above the minimum cash requirement of about \$2 per thousand board feet. This minimum cash requirement, known as base rates, is more than the minimum distribution requirement because it includes money going into the K-V fund.
- cedar rebates — under the KPC contract, a refund of money for cedar processed in the U.S.
- comparability adjustment — an attempt to adjust rates under the long-term contract to rates comparable to those that would be paid by short-term timber purchasers.
- converting purchaser credits to cash — an accounting step in which timber that has previously been paid for in cash is paid instead with purchaser credits. This results in a deduction of funds from the U.S. Treasury and a credit of funds to the purchaser's account.
- emergency rate redetermination — a rate redetermination needed when wood product prices have increased or decreased to the point where the original appraisal is no longer valid.
- essential reforestation cost — the estimated cost of reforesting a timber sale area that purchasers are supposed to pay in cash. This cost is usually added to the 50¢ per thousand board feet that must be returned to the Treasury to get the minimum rate that must be paid for timber in cash.
- fair market value — the price a buyer and seller would agree upon provided neither is compelled to buy or sell.
- fiscal year — the federal fiscal year starts on October 1 and ends September 30.
- fund code — one of 50 to 75 four-letter codes signifying line items in the Forest Service budget as appropriated by Congress.
- independent contracts — a term sometimes used to refer to short-term contracts or contracts held by purchasers other than APC or KPC.
- K-V — Knutson-Vandenberg.
- Knutson-Vandenberg fund — a fund created by a 1930 law allowing the Forest Service to keep a share of timber receipts to spend on reforestation. In 1976 the law was amended to allow expenditure of K-V funds on wildlife and other "sale area improvements."
- KPC — Ketchikan Pulp Company, a wholly owned subsidiary of Louisiana-Pacific which operates a pulp mill in Ketchikan.
- long-term contracts — the two fifty-year contracts for Tongass timber signed in the 1950s and currently held by APC and KPC.
- minimum distribution requirement — the minimum amount of cash that must be paid to the Treasury for non-salvage timber, i.e., 50¢ per thousand board feet.

national forest fund — a fund including all cash receipts to the national forests that go to the Treasury. On the Tongass, most such receipts are paid for timber.

negative receipts to the Treasury — deductions of funds previously paid to the Treasury to account for rate redeterminations, conversions of purchaser credits to cash, or conversions to the K-V or other Forest Service fund.

NFF — national forest fund.

NFMA — National Forest Management Act of 1976.

PC (sometimes PRC) — purchaser credits or purchaser road credits.

purchaser credits — the estimated cost of building roads which, once the roads are built, the timber purchaser can credit against the price bid for the timber.

rate redetermination — a recalculation of timber prices that a purchaser must pay.

residual value — the basic Forest Service appraisal system, in which the costs of logging and manufacturing are deducted from the estimated value of wood products to be made for trees. The remainder is the purchaser's estimated willingness to pay for the timber. The appraisal process makes no attempt to calculate the price a seller would be willing to accept.

RM — road maintenance fund.

road maintenance fund — a fund created by a 1964 law allowing the Forest Service to keep a share of timber receipts to spend on road maintenance.

sale area improvement plan (also known as a K-V plan) — a plan prepared in advance of a timber sale listing the activities which forest managers want to do in the sale area and their cost.

salvage sale fund — a fund created by a 1976 law allowing the Forest Service to keep a share of salvage sale receipts to spend on preparing more salvage sales.

short-term contracts — timber sale contracts whose duration is less than ten years and usually less than five years.

SSF — salvage sale fund.

stumpage — the price paid for timber when it is "on the stump," i.e., not yet cut.

timber sale report (also known as form 2400-17) — a report prepared for each timber sale listing the volume of wood in the sale by species, the advertised rate and high bid price, and the names of the bidders.

timber sale statement of account — a computer printout prepared every month for every active timber sale listing the volume of wood scaled the previous month, the price that must be paid for the wood, the additions to the national forest fund, K-V fund, and other funds from payment for the wood, and the purchaser's cash and purchaser credit balance statement.

TSSA — timber sale statement of account.

TTRA — Tongass Timber Reform Act of 1990.

25 percent fund — returns to county governments, via the states, in lieu of property taxes that are equal to 25 percent of almost all forest receipts, including purchaser road credits, the K-V fund, and the salvage sale fund.

work activity code — a Forest Service accounting code consisting of two letters and one to eight numbers indicating how funds are actually spent.

Appendix Three

Historic Returns from Long-Term Contracts

Volume Cut and Payments on APC Long-Term Contract (dollars not adjusted for inflation)

Year	Volume Cut <i>mbf</i>	U.S. Treasury	Forest Service <i>dollars</i>	Purchaser Credits	U.S. Treasury	Forest Service <i>dollars/mbf</i>	Purchaser Credits
1959	1,506	3,685	452	0	2.45	0.30	0.00
1960	52,600	101,738	15,780	0	1.93	0.30	0.00
1961	79,526	158,411	23,858	0	1.99	0.30	0.00
1962	85,205	172,327	25,561	0	2.02	0.30	0.00
1963	68,768	135,354	20,630	0	1.97	0.30	0.00
1964	75,437	171,945	22,631	0	2.28	0.30	0.00
1965	52,416	103,167	15,725	0	1.97	0.30	0.00
1966	41,909	86,918	12,573	0	2.07	0.30	0.00
1967	66,619	136,106	19,986	0	2.04	0.30	0.00
1968	97,740	287,189	29,322	0	2.94	0.30	0.00
1969	97,264	251,231	29,179	0	2.58	0.30	0.00
1970	78,786	222,545	23,636	0	2.82	0.30	0.00
1971	51,528	143,682	15,458	0	2.79	0.30	0.00
1972	69,878	192,680	20,963	0	2.76	0.30	0.00
1973	74,099	276,855	22,230	0	3.74	0.30	0.00
1974	76,826	198,769	22,148	0	2.59	0.29	0.00
1975	115,728	-484,866	300,711	3,188,057	-4.19	2.60	27.55
1976	100,809	50,402	110,584	1,076,982	0.50	1.10	10.68
1977	132,957	70,234	157,618	3,332,172	0.53	1.19	25.06
1978	109,491	62,738	121,488	3,845,719	0.57	1.11	35.12
1979	127,296	73,401	137,588	4,778,255	0.58	1.08	37.54
1980	109,568	56,964	685,463	3,070,255	0.52	6.26	28.02
1981	179,432	-194,852	643,413	3,278,676	-1.09	3.59	18.27
1982	90,842	-1,258,509	482,401	7,129,293	-13.85	5.31	78.48
1983	48,427	221,637	1,266,320	0	4.58	26.15	0.00
1984	54,215	1,445,809	554,864	0	26.67	10.23	0.00
1985	52,533	119,530	1,190,360	0	2.28	22.66	0.00
1986	82,093	53	512,951	0	0.00	6.25	0.00
1987	109,108	1,436	161,818	0	0.01	1.48	0.00
1988	133,571	153,789	145,623	0	1.15	1.09	0.00
1989	87,793	60,010	132,065	0	0.68	1.50	0.00
1990	102,534	949	201,569	1,725,051	0.01	1.97	16.82
1991	114,706	86,228	123,250	5,991,091	0.90	1.29	62.62
1992	137,539	-1,294,131	1,509,351	6,752,773	-13.06	15.23	68.15
Total	2,958,750	1,813,426	8,757,569	44,168,324			
Average					0.61	2.96	14.93
(adjusted for inflation to 1992 dollars)							
Total	2,958,750	8,150,300	12,358,322	66,076,330			
Average					2.75	4.18	22.33

Volume Cut and Payments on KPC Long-Term Contract
(dollars not adjusted for inflation)

Year	Volume Cut mbf	U.S. Treasury	Forest Service dollars	Purchaser Credits	U.S. Treasury	Forest Service dollars/mbf	Purchaser Credits
1955	16,144	183,256	29,348	0	11.35	1.82	0.00
1956	147,385	86,962	13,355	0	0.59	0.09	0.00
1957	88,947	147,943	22,237	0	1.66	0.25	0.00
1958	70,689	119,738	17,672	0	1.69	0.25	0.00
1959	112,971	189,325	28,243	0	1.68	0.25	0.00
1960	117,264	198,089	29,316	0	1.69	0.25	0.00
1961	107,352	186,753	26,838	0	1.74	0.25	0.00
1962	136,430	230,186	34,108	0	1.69	0.25	0.00
1963	144,397	243,445	36,099	0	1.69	0.25	0.00
1964	168,124	284,313	42,031	0	1.69	0.25	0.00
1965	180,121	304,318	45,030	0	1.69	0.25	0.00
1966	184,211	310,825	46,053	0	1.69	0.25	0.00
1967	162,885	274,616	40,721	0	1.69	0.25	0.00
1968	149,897	248,363	37,474	0	1.66	0.25	0.00
1969	163,710	277,224	40,928	0	1.69	0.25	0.00
1970	141,916	969,359	35,479	0	6.83	0.25	0.00
1971	167,561	928,541	41,890	0	5.54	0.25	0.00
1972	190,967	318,172	47,742	0	1.67	0.25	0.00
1973	245,650	411,012	61,400	0	1.67	0.25	0.00
1974	227,787	383,121	-649,580	0	1.68	-2.85	0.00
1975	134,403	258,506	191,106	0	1.92	1.42	0.00
1976	174,883	-94,297	280,318	8,723,842	-0.54	1.60	49.88
1977	156,077	82,364	253,136	3,367,025	0.53	1.62	21.57
1978	185,484	97,704	300,953	3,483,281	0.53	1.62	18.78
1979	181,521	93,073	307,670	2,606,115	0.51	1.69	14.36
1980	205,858	828,135	3,124,873	6,136,018	4.02	15.18	29.81
1981	122,860	-5,270,838	-951,581	4,342,247	-42.90	-7.75	35.34
1982	119,006	6,375,313	3,531,046	2,145,728	53.57	29.67	18.03
1983	117,653	4,226,568	-119,884	2,951,822	35.92	-1.02	25.09
1984	146,585	-6,859,597	414,908	90,696	-46.80	2.83	0.62
1985	140,621	-19,808	657,047	41,879	-0.14	4.67	0.30
1986	127,704	79,457	402,993	0	0.62	3.16	0.00
1987	158,763	10,532	344,661	32,516	0.07	2.17	0.20
1988	177,138	165,949	269,378	0	0.94	1.52	0.00
1989	204,716	1,985,836	172,375	14,854,512	9.70	0.84	72.56
1990	195,704	8,601,783	3,798,648	8,257,427	43.95	19.41	42.19
1991	158,765	3,402,608	1,968,103	2,929,501	21.43	12.40	18.45
1992	160,874	-13,776,521	3,871,277	4,357,155	-85.64	24.06	27.08
Total	5,793,022	6,482,327	18,843,411	64,319,765			
Average					1.12	3.25	11.10
<i>(adjusted for inflation to 1992 dollars)</i>							
Total	5,793,022	24,232,987	24,504,589	92,167,335			
Average					4.18	4.23	15.91
<i>(Both contracts, not adjusted for inflation)</i>							
Total	8,751,771	8,295,753	27,600,980	108,488,089			
Average					0.95	3.15	12.40
<i>(Both contracts, adjusted to 1992 dollars)</i>							
Total	8,751,771	32,383,287	36,862,911	158,243,665			
Average					3.70	4.21	18.08

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